

MODIFIED
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,

ExxonMobil Oil Corporation

is authorized to discharge from a facility located at

ExxonMobil Everett Terminal
52 Beacham Street
Everett, MA 02149

to receiving water named

Island End River/Mystic River Watershed (MA71)

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

This permit was originally signed on September 29, 2008 and became effective on January 1, 2009 (“2009 Permit”), to the extent described in the Notice of Uncontested and Severable Conditions, dated November 20, 2008, issued by the Regional Administrator of Region 1 of the United States Environmental Protection Agency (“Notice”). The 2009 Permit superseded the prior permit issued on March 6, 2000, to the extent described in the Notice.

The modifications to this permit, contained herein, shall become effective on the first day of the calendar month immediately following 60 days after signature.

This permit and the authorization to discharge shall expire at midnight on **January 1, 2014**.

This permit consists of 15 pages in Part I, including effluent limitations and monitoring requirements, 25 pages in Part II, including General Conditions and Definitions, and 10 pages in Attachment A, Marine Acute Toxicity Test Procedure and Protocol.

Signed this 12th day of October, 2011

/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. Definitions

- a. *Conventional oil water separator* refers to the secondary gravity-type separator in the ExxonMobil Everett Terminal treatment works.
- b. *Continuous treatment system* refers to the treatment system that is designed to remove pollutants from dry weather and stormwater flows up to its design capacity of 280 gpm in the ExxonMobil Everett Terminal treatment works.
- c. *Corrugated plate separator* refers to the main separator with a design capacity of 4,000 gpm in the ExxonMobil Everett Terminal treatment works.
- d. *Minimum Level (ML)* shall mean the level at which the entire analytical system gives recognizable mass spectra and/or acceptable calibration points. This level corresponds to the lowest point at which the calibration curve is determined based on analyses for the pollutant of concern in reagent water. The ML for a gas chromatographic-mass spectrometry method or inductively coupled plasma-mass spectrometry method is based on both mass spectra and acceptable calibration points. The ML for methods that do not use mass spectrometry for pollutant confirmation and/or have no published ML in the method documentation is based on the method detection limit (MDL) and minimum level (ML) determinations as described in Section 9.3.1.1 of "Protocol for EPA Approval of New Methods for Organic and Inorganic Analysis in Wastewater and Drinking Water" (EPA 821-B-98-003, March 1999).
- e. *"10-year 24-hour precipitation event"* shall mean a rainfall event with a probable recurrence interval of once in ten years. This information is available from National Oceanic & Atmospheric Administration, U.S. Department of Commerce. The 10-year 24-hour rainfall in Boston is estimated at 4.6 inches [Figure 2, Natural Resources Conservation Service Technical Release 55 (TR-55) - Urban Hydrology for Small Watersheds (1986)].

2. During the period beginning from the effective date and lasting through expiration, the permittee is authorized to discharge corrugated plate separator effluent from **Serial Number Outfall 01A** to the culvert at Island End River. The discharge is comprised of storm water, groundwater, hydrostatic test water, boiler condensate, fire testing water, truck wash water, effluent pond water and continuous treatment system filter backwash water. Such discharge shall: 1) be limited and monitored by the permittee as specified below; and 2) not cause a violation of the State Water Quality Standards of the receiving water.

Effluent Characteristic	Units	Discharge Limitation		Monitoring Requirements ⁽¹⁾	
		Average Monthly	Maximum Daily	Measurement Frequency ⁽²⁾	Sample Type
Flow Rate ⁽³⁾	MGD	Report	Report	Continuous	Meter
Total Suspended Solids (TSS)	mg/l	30	100	1/Month	Grab
Oil and Grease (O&G)	mg/l	----	15	1/Month	Grab
pH ⁽⁴⁾	S.U.	----	6.5 to 8.5	1/Month	Grab
Available Cyanide ⁽⁵⁾	µg/L	----	Report	Quarterly	Grab
Total Mercury ⁽⁶⁾	µg/L	----	Report	Quarterly	Grab
<u>Polycyclic Aromatic Hydrocarbons (PAHs) ⁽⁷⁾⁽⁸⁾</u>					
Group I:					
Benzo(a)anthracene	µg/L	----	0.031	Quarterly	Grab
Benzo(a)pyrene	µg/L	----	0.031	Quarterly	Grab
Benzo(b)fluoranthene	µg/L	----	0.031	Quarterly	Grab
Benzo(k)fluoranthene	µg/L	----	0.031	Quarterly	Grab
Chrysene	µg/L	----	0.031	Quarterly	Grab
Dibenzo(a,h)anthracene	µg/L	----	0.031	Quarterly	Grab
Indeno(1,2,3-cd)pyrene	µg/L	----	0.031	Quarterly	Grab
Group II:					
Acenaphthene	µg/L	----	0.031	Quarterly	Grab
Acenaphthylene	µg/L	----	0.031	Quarterly	Grab
Anthracene	µg/L	----	0.031	Quarterly	Grab
Benzo(ghi)perylene	µg/L	----	0.031	Quarterly	Grab
Fluoranthene	µg/L	----	0.031	Quarterly	Grab
Fluorene	µg/L	----	0.031	Quarterly	Grab
Naphthalene	µg/L	----	0.031	Quarterly	Grab
Phenanthrene	µg/L	----	0.031	Quarterly	Grab
Pyrene	µg/L	----	0.031	Quarterly	Grab
Total PAHs	µg/L	----	50	Quarterly	Grab
<u>Volatile Organic Compounds (VOCs)</u>					
Benzene	µg/L	----	40	Quarterly	Grab
Toluene	µg/L	----	Report	Quarterly	Grab
Ethylbenzene	µg/L	----	Report	Quarterly	Grab
Total Xylenes	µg/L	----	Report	Quarterly	Grab
Ethanol	µg/L	----	Report	Quarterly	Grab
Methyl Tertiary-Butyl Ether (MTBE) ⁽⁹⁾	µg/L	----	Report	Quarterly	Grab

Footnotes:

1. All sampling shall be representative of the effluent that is discharged through outfall 01A to the culvert at Island End River. All samples shall be analyzed using the analytical methods found in 40 CFR Part 136, or alternative methods approved by EPA in accordance with the procedures in 40 CFR Part 136. Total Xylenes and MTBE can be analyzed using EPA Method 602. Ethanol can be analyzed using EPA Method 1671.
2. Sampling frequency of 1/month is defined as the sampling of one (1) significant rain event in each calendar month. Monthly sampling is only required if there is discharge from outfall 01A during a calendar month. Sampling frequency of quarterly is defined as the sampling of one (1) event in each quarter. Quarters are defined as the interval of time between the months of: January through March, inclusive; April through June, inclusive; July through September, inclusive; and October through December, inclusive. **Quarterly sampling shall be performed concurrently with the monthly monitoring event.** The permittee shall submit to EPA and MassDEP the results of any additional testing of the parameters established for outfall 01A if conducted in accordance with EPA approved methods consistent with the provisions of 40 CFR § 122.41(l)(4)(ii).
3. For Flow Rate, the permittee shall report the maximum daily flow rate of water discharged by the facility during the reporting period. The maximum daily flow rate, which is to be measured in the units of millions of gallons per day (MGD), shall be based upon the totalizer flow results or an approved equivalent flow measuring device.
4. See Part I.A.6., Page 9.
5. Available cyanide shall be analyzed using a detection limit less than or equal to 2.0 µg/l. After submitting ten (10) consecutive quarterly sampling results that are each below the available cyanide detection limit, the permittee may submit a written request to EPA for approval to eliminate required testing for available cyanide. The permittee is required to continue testing for this pollutant at the frequency specified in the permit until notice is received by certified mail from EPA that the permittee's request has been approved and the available cyanide testing requirement eliminated.
6. Total mercury shall be analyzed using a detection limit less than or equal to 2.0 µg/l. After submitting ten (10) consecutive quarterly sampling results that are each below the total mercury detection limit, the permittee may submit a written request to EPA for approval to eliminate required testing for total mercury. The permittee is required to continue testing for this pollutant at the frequency specified in the permit until notice is received by certified mail from EPA that the permittee's request has been approved and the total mercury testing requirement eliminated.
7. Compliance/non-compliance for Polycyclic Aromatic Hydrocarbons (PAHs) for discharges at outfall 01A shall be 10 µg/l for individual PAHs.
8. Analytical methods used to measure PAHs shall use minimum levels no greater than the minimum levels identified in Part I.A.20 on page 10.
9. MTBE shall be analyzed using a minimum level less than or equal to 5 µg/l. After submitting ten (10) consecutive quarterly sampling results that are each below the MTBE minimum level, the permittee may submit a written request to EPA for approval to eliminate required testing for MTBE. The permittee is required to continue testing for this pollutant at the frequency specified in the permit until notice is received by certified mail from EPA that the permittee's request has been approved and the MTBE testing requirement eliminated.

3. During the period beginning from the effective date and lasting through expiration, the permittee is authorized to discharge conventional oil water separator effluent from **Serial Number Outfall 01B** to the culvert at Island End River. The discharge is comprised of storm water, groundwater, hydrostatic test water, boiler condensate, fire testing water, truck wash water and effluent pond water. Such discharge shall: 1) be limited and monitored by the permittee as specified below; and 2) not cause a violation of the State Water Quality Standards of the receiving water.

Effluent Characteristic	Units	Discharge Limitation		Monitoring Requirements ⁽¹⁾	
		Average Monthly	Maximum Daily	Measurement Frequency ⁽²⁾	Sample Type
Flow Rate ⁽³⁾	MGD	Report	Report	Continuous	Meter
Total Suspended Solids (TSS)	mg/l	Report	Report	Each Discharge	Grab
Oil and Grease (O&G)	mg/l	----	Report	Each Discharge	Grab
pH ⁽⁴⁾	S.U.	----	Report	Each Discharge	Grab

Footnotes:

1. All sampling shall be representative of the effluent that is discharged through outfall 01B to the culvert at Island End River. All samples shall be analyzed using the analytical methods found in 40 CFR Part 136, or alternative methods approved by EPA in accordance with the procedures in 40 CFR Part 136.
2. A "Discharge Event" is defined as single or multiple discharges associated with a precipitation event. A discharge event will end after 72-hours have elapsed since the previous storm event. The permittee shall record the date and duration (in hours) of the discharge event(s) sampled, daily rainfall measurements or estimates (in inches) of the storm event that generated the sampled runoff, and the end of the previous measurable (greater than 0.1 inch rainfall) storm event. The permittee shall submit to EPA and MassDEP the results of any additional testing of the parameters established for outfall 01B if conducted in accordance with EPA approved methods consistent with the provisions of 40 CFR § 122.41(l)(4)(ii).
3. For Flow Rate, the permittee shall report the maximum daily flow rate of water discharged by the facility during the reporting period. The maximum daily flow rate, which is to be measured in the units of millions of gallons per day (MGD), shall be based upon the totalizer flow results or an approved equivalent flow measuring device.
4. See Part I.A.6., Page 9.

4. During the period beginning from the effective date and lasting through expiration, the permittee is authorized to discharge continuous treatment system effluent from **Serial Number Outfall 01C** to the culvert at Island End River. The discharge is comprised of storm water, groundwater, hydrostatic test water, boiler condensate, fire testing water, truck wash water, effluent pond water, and continuous treatment system filter backwash water. Such discharge shall: 1) be limited and monitored by the permittee as specified below; and 2) not cause a violation of the State Water Quality Standards of the receiving water.

Effluent Characteristic	Units	Discharge Limitation		Monitoring Requirements ⁽¹⁾	
		Average Monthly	Maximum Daily	Measurement Frequency ⁽²⁾	Sample Type
Flow Rate ⁽³⁾	MGD	Report	Report	Continuous	Meter
Total Suspended Solids (TSS)	mg/l	30	100	1/Month	Grab
Oil and Grease (O&G)	mg/l	----	5	1/Month	Grab
pH ⁽⁴⁾	S.U.	----	6.5 to 8.5	1/Month	Grab
Available Cyanide ⁽⁵⁾	µg/L	----	Report	Quarterly	Grab
<u>Metals</u>					
Total Aluminum	mg/L	----	Report	Quarterly	Grab
Total Cadmium	mg/L	----	Report	Quarterly	Grab
Total Chromium	mg/L	----	Report	Quarterly	Grab
Total Copper	mg/L	----	Report	Quarterly	Grab
Total Lead	mg/L	----	Report	Quarterly	Grab
Total Mercury ⁽⁶⁾	mg/L	----	Report	Quarterly	Grab
Total Nickel	mg/L	----	Report	Quarterly	Grab
Total Zinc	mg/L	----	Report	Quarterly	Grab
<u>Whole Effluent Toxicity (WET)^(7,8)</u>					
LC ₅₀	%	----	>50	2/year	Grab
Total Solids	mg/L	----	Report	2/year	Grab
Ammonia	mg/L	----	Report	2/year	Grab
Total Organic Carbon	mg/L	----	Report	2/year	Grab

Effluent Characteristic	Units	Discharge Limitation		Monitoring Requirements ⁽¹⁾	
		Average Monthly	Maximum Daily	Measurement Frequency ⁽²⁾	Sample Type
<u>Polycyclic Aromatic Hydrocarbons (PAHs)⁽⁹⁾</u>					
Group I:					
Benzo(a)anthracene	µg/L	----	0.018	1/Month	Grab
Benzo(a)pyrene	µg/L	----	0.018	1/Month	Grab
Benzo(b)flouranthene	µg/L	----	0.018	1/Month	Grab
Benzo(k)fluoranthene	µg/L	----	0.018	1/Month	Grab
Chrysene	µg/L	----	0.018	1/Month	Grab
Dibenzo(a,h)anthracene	µg/L	----	0.018	1/Month	Grab
Indeno(1,2,3-cd)pyrene	µg/L	----	0.018	1/Month	Grab
Group II:					
Acenaphthene	µg/L	----	0.031	1/Month	Grab
Acenaphthylene	µg/L	----	0.031	1/Month	Grab
Anthracene	µg/L	----	0.031	1/Month	Grab
Benzo(ghi)perylene	µg/L	----	0.031	1/Month	Grab
Fluoranthene	µg/L	----	0.031	1/Month	Grab
Fluorene	µg/L	----	0.031	1/Month	Grab
Naphthalene	µg/L	----	0.031	1/Month	Grab
Phenanthrene	µg/L	----	0.031	1/Month	Grab
Pyrene	µg/L	----	0.031	1/Month	Grab
<u>Volatile Organic Compounds (VOCs)</u>					
Benzene	µg/l	----	5	1/Month	Grab
Toluene	µg/l	----	Report	1/Month	Grab
Ethylbenzene	µg/l	----	Report	1/Month	Grab
Total Xylenes	µg/l	----	Report	1/Month	Grab
BTEX ⁽¹⁰⁾	µg/l	----	100	1/Month	Grab
Methyl Tertiary-Butyl Ether (MTBE) ⁽¹¹⁾	µg/l	----	70	1/Month	Grab

Footnotes:

1. All sampling shall be representative of the effluent that is discharged through outfall 01C to the culvert at Island End River. All samples shall be analyzed using the analytical methods found in 40 CFR Part 136, or alternative methods approved by EPA in accordance with the procedures in 40 CFR Part 136. Total Xylenes and MTBE can be analyzed using EPA Method 602.
2. Sampling frequency of 1/month is defined as the sampling of once each calendar month. Sampling frequency of quarterly is defined as the sampling of one (1) event in each quarter. Quarters are defined as the interval of time between the months of: January through March, inclusive; April through June, inclusive; July through September, inclusive; and October through December, inclusive. **Quarterly sampling shall be performed concurrently with the monthly monitoring event.** The permittee shall submit to EPA and MassDEP the results of any additional testing of the parameters established for outfall 01C if conducted in accordance with EPA approved methods consistent with the provisions of 40 CFR §122.41(l)(4)(ii).
3. For Flow Rate, the permittee shall report the maximum daily flow rate of water discharged by the

facility during the reporting period. The maximum daily flow rate, which is to be measured in the units of millions of gallons per day (MGD), shall be based upon the totalizer flow results or an approved equivalent flow measuring device.

4. See Part I.A.6, Page 9.
5. Available cyanide shall be analyzed using a detection limit less than or equal to 2.0 µg/l. After submitting ten (10) consecutive quarterly sampling results that are each below the available cyanide detection limit, the permittee may submit a written request to EPA for approval to eliminate required testing for available cyanide. The permittee is required to continue testing for this pollutant at the frequency specified in the permit until notice is received by certified mail from EPA that the permittee's request has been approved and the available cyanide testing requirement eliminated.
6. Total mercury shall be analyzed using a detection limit less than or equal to 2.0 µg/l. After submitting ten (10) consecutive quarterly sampling results that are each below the total mercury detection limit, the permittee may submit a written request to EPA for approval to eliminate required testing for total mercury. The permittee is required to continue testing for this pollutant at the frequency specified in the permit until notice is received by certified mail from EPA that the permittee's request has been approved and the total mercury testing requirement eliminated.
7. LC50 (Lethal Concentration 50 Percent) is the concentration of wastewater (effluent) causing mortality to 50 percent (%) of the test organisms. Therefore, a 50% limit means that a sample of 50% effluent shall cause no more than a 50% mortality rate. The limit is considered to be a maximum daily limit.
8. The permittee shall conduct 48-Hour Static Acute Whole Effluent Toxicity (WET) test on effluent samples from Outfall 01C two times a year, in March and September, using one specie, Mysid Shrimp (*Americamysis Bahía*, formerly known as *Mysidopsis Bahía*) and following the protocol in Attachment A (Marine Acute Toxicity Test Procedure and Protocol dated September 1996), provided, however, that in lieu of the method referenced in Part II of Attachment A, the permittee shall use EPA Method 2007.0 as identified in 40 CFR Part 136. Toxicity test results are to be submitted within 30 days after the sampling date with the routine Discharge Monitoring Reports (DMRs). Results of wet chemistry analyses conducted on WET test samples may be submitted to meet quarterly metals monitoring requirements. In that case, metals data would be submitted in the discharge monitoring report and in the WET test written report.
9. Compliance/non-compliance for Polycyclic Aromatic Hydrocarbons (PAHs) for discharges at outfall 01C will be based on the minimum level (ML) of analysis, as defined in Part 1.A.1. See Part I.A.20, Page 10 for the required MLs.
10. BTEX shall be reported as the sum of the detectable concentrations of benzene, toluene, ethylbenzene and xylenes.
11. MTBE shall be analyzed using a minimum level less than or equal to 5 µg/l. After submitting ten (10) consecutive quarterly sampling results that are each below the MTBE minimum level, the permittee may submit a written request to EPA for approval to eliminate required testing for MTBE. The permittee is required to continue testing for this pollutant at the frequency specified in the permit until notice is received by certified mail from EPA that the permittee's request has been approved and the MTBE testing requirement eliminated.

Part 1.A. (Continued)

5. The discharges either individually or in combination shall not cause or contribute to a violation of State Water Quality Standards of the receiving waters.
6. The pH of the effluent shall not be less than 6.5 or greater than 8.5 at any time unless these values are exceeded as a result of natural causes.
7. The discharge shall not cause objectionable discoloration of the receiving waters.
8. The discharge shall not contain a visible oil sheen, foam, or floating solids at any time.
9. The discharge shall not contain materials in concentrations or combinations which are hazardous or toxic to human health, aquatic life of the receiving surface waters or which would impair the uses designated by its classification.
10. There shall be no discharge of tank bottom water and/or bilge water alone or in combination with storm water discharge or other wastewater.
11. There shall be no discharge of floor wash water from the interior of the facility maintenance garage.
12. The discharge shall not impart color, taste, turbidity, toxicity, radioactivity or other properties which cause those waters to be unsuitable for the designated uses and characteristics ascribed to their use.
13. Notwithstanding specific conditions of this permit, the effluent must not lower the quality of any classified body of water below such classification, or lower the existing quality of any body of water if the existing quality is higher than the classification.
14. The permittee shall inspect, operate, and maintain the continuous treatment system, conventional oil water separator and the corrugated plate separator at the facility to ensure that the Effluent Limitations and Monitoring Requirements and other conditions contained in this permit are met. The permittee shall ensure that all components of the facility's Storm Water Pollution Prevention Plan, including those that specifically address the operation and maintenance of the separator(s) and other components of the storm water conveyance system, are complied with.
15. Chemicals (e.g., disinfecting agents, detergents, emulsifiers, etc.) and bioremedial agents including microbes shall not be added to the collection and treatment systems without prior approval by the U.S. Environmental Protection Agency (EPA) and the Massachusetts Department of Environmental Protection (MassDEP).
16. There shall be no discharge of any sludge and/or bottom deposits that has been physically removed from any storage tank(s), basin(s), and/or diked area(s) to the receiving waters. Examples of storage tanks and/or basins include, but are not limited to: primary catch basins, stilling basins, oil water separators, petroleum product storage tanks, baffled storage tanks collecting spills, and tank truck loading rack sumps.
17. No truck washing or hydrostatic testing shall occur during a storm event or following an overflow event or following a discharge event through outfall 01B until the potential for discharge through outfall 01B has ceased.
18. EPA may modify this permit in accordance with EPA regulations in 40 Code of Federal Regulations (CFR) § 122.62 and § 122.63 to incorporate more stringent effluent limitations, increase the frequency of analyses, or impose additional sampling and analytical requirements.
19. The appearance of any size sheen attributable to the discharge from this facility shall be reported

immediately by the permittee to the National Response Center in accordance with Section 311 of the Clean Water Act (CWA). This requirement is in addition to any reporting requirements related to EPA or MassDEP contained in this National Pollutant Discharge Elimination System (NPDES) permit.

20. PAH analysis shall include the following compounds and their respective minimum levels (as defined in part I.A.1) as identified in parenthesis for each compound. benzo(a)anthracene (<0.05 µg/L), benzo(a)pyrene (<0.05 µg/L), benzo(b)fluoranthene (<0.05 µg/L), benzo(k)fluoranthene (<0.05 µg/L), chrysene (<0.5 µg/L), dibenzo(a,h)anthracene (<0.10 µg/L), indeno(1,2,3-cd)pyrene (<0.10 µg/L), and naphthalene (5.00 µg/L), acenaphthene (<5.00 µg/L), acenaphthylene (<5.00 µg/L), anthracene (<2.0 µg/L), benzo(ghi)perylene (<0.2 µg/L), fluoranthene (<0.50 µg/L), fluorene (<0.5 µg/L), naphthalene (<5.00 µg/L), phenanthrene (<2.00 µg/L), and pyrene (<1.00 µg/L).
21. The permittee shall attach a copy of the laboratory case narrative to the respective Discharge Monitoring Report Form submitted to EPA and MassDEP for each sampling event reported. The laboratory case narrative shall include a copy of the laboratory data sheets for each analysis (identifying the test method, the analytical results, and the detection limits for each analyte) and provide a brief discussion of whether all appropriate QA/QC procedures were met and were within acceptable limits.
22. 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”:
 - i One hundred micrograms per liter (100 µg/l);
 - ii Two hundred micrograms per liter (200 µg/l) for acrolein and acrylonitrile; five hundred micrograms per liter (500 µg/l) for 2,4-dinitrophenol; and one milligram per liter (1 mg/L) for antimony;
 - iii 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
 - iv Any other notification level established by the Director in accordance with 40C.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”:
 - i Five hundred micrograms per liter (500 µg/L);
 - ii One milligram per liter (1 mg/L) for antimony;
 - iii 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).
 - iv Any other notification level established by the Director in accordance with 40C.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.
23. Wastewater Treatment System Flow
 - a. The continuous treatment system shall be designed, constructed, maintained and operated to treat the volume of storm water, groundwater and other associated wastewaters up to and including 280 gpm through outfall 01C.

- b. The collection, storage and treatment systems shall be designed, constructed, maintained and operated to treat the total equivalent volume of storm water, groundwater, hydrostatic test water, boiler condensate, fire testing water, truck wash water, effluent pond water and continuous treatment system filter backwash water which would result from a 10-year 24-hour precipitation event, which volume shall be discharged through outfall 01C and outfall 01A. All wet weather and dry weather discharges less than or equal to the design capacity of the continuous treatment system [280 gpm] shall be treated through the continuous treatment system and discharged at outfall 01C. The flow through the corrugated plate separator shall not exceed 4,000 gpm.
- c. Discharge from outfall 01B shall be limited to situations when the combined capacity of the facility to collect, store, treat and discharge wastewater through outfalls 01A and 01C is exceeded. As a result, it is expected that discharges through outfall 01B will occur only in extreme weather events.
- d. The permittee shall certify that the facility's collection storage and treatment systems have been designed, constructed, maintained and operated to meet the requirements of this permit. The certification shall be signed in accordance with the requirements identified in 40 CFR § 122.22. A copy of this certification shall be sent to EPA and MassDEP within sixty (60) days of the effective date of the Permit.
- e. Written notification and approval by EPA and the MassDEP shall be required, should the permittee propose changes to the storm water conveyance, storage or treatment systems which have the potential to cause the maximum design flow rate through any portion of the collection, storage and treatment systems to be increased.

24. 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.

25. Hydrostatic Test Water Discharges

- a. The hydrostatic test water shall be monitored as described below and discharged through outfalls 01A and 01C to the culvert at Island End River.
- b. At a minimum, four (4) representative samples shall be taken of the hydrostatic test water: one (1) grab sample of the influent test water; and three (3) serial-grab samples of the hydrostatic test water effluent. The influent grab sample shall be taken approximately midway through the fill segment of the hydrostatic test procedure. The three (3) effluent serial-grab samples shall be taken over the duration of the entire discharge segment of the hydrostatic test procedure. The first effluent serial-grab sample shall be taken during the initial phase of discharge; the second around the midpoint; and the third near the end of the discharge. The effluent serial-grab samples shall be obtained before discharge into the treatment works and/or mixing with any storm water or other non-storm water flow.

These influent and effluent samples shall be analyzed for the following parameters:

Characteristic	Units	Sample Type
Total Suspended Solids (TSS)	mg/l	Grab
Oil and Grease (O&G)	mg/l	Grab
pH	S.U.	Grab
Dissolved Oxygen (DO)	mg/l	Grab
Total Residual Chlorine	mg/l	Grab
Benzene	µg/l	Grab
Toluene	µg/l	Grab
Ethylbenzene	µg/l	Grab
Total Xylenes	µg/l	Grab
Methyl Tertiary-Butyl Ether	µg/l	Grab
<u>PAHs</u>		
Benzo(a)anthracene	µg/l	Grab
Benzo(a)pyrene	µg/l	Grab
Benzo(b)fluoranthene	µg/l	Grab
Benzo(k)fluoranthene	µg/l	Grab
Chrysene	µg/l	Grab
Dibenzo(a,h)anthracene	µg/l	Grab
Indeno(1,2,3-cd)pyrene	µg/l	Grab
Acenaphthene	µg/l	Grab
Acenaphthylene	µg/l	Grab
Anthracene	µg/l	Grab
Benzo(ghi)perylene	µg/l	Grab
Fluoranthene	µg/l	Grab
Fluorene	µg/l	Grab
Naphthalene	µg/l	Grab
Phenanthrene	µg/l	Grab
Pyrene	µg/l	Grab

- c. Testing for total residual chlorine is only required when potable water or a similar source of water which is likely to contain a residual chlorine concentration is used for hydrostatic testing. Testing for MTBE is only required if the tank undergoing testing was recently (i.e., within three years of the proposed testing date) used to store gasoline containing MTBE.
- d. During discharge (i.e., approximately at the same time the three effluent grab samples are taken), the flow exiting the treatment system should be observed in order to prevent the inadvertent release of hydrocarbons to the receiving water(s). In the event that there is evidence of such a release (e.g., visible oil sheen and/or noticeable increase in turbidity of discharge water), the permittee shall immediately halt the discharge of hydrostatic test water and take steps to correct the problem.
- e. Any changes to these procedures must be approved by EPA and the MassDEP prior to their implementation.
- f. The permittee shall submit a letter/report to EPA and MassDEP, summarizing the results of the hydrostatic test within forty-five (45) days of completion of the test. This report shall contain: the

date(s) during which the hydrostatic testing occurred; the estimated volume of hydrostatic test water discharged; a copy of the laboratory data sheets for each analyses, providing the test method, the detection limits for each analyte, and a brief discussion of whether all appropriate QA/QC procedures were met and were within acceptable limits; and a comparison of the overall test results with the effluent limitations for outfall 01C in this permit.

- g. The U.S. Environmental Protection Agency shall reserve the right to re-open the permit, in accordance with 40 CFR § 122.62(a)(2), to limit hydrostatic test water discharges in the event that sampling results indicate that such discharge has a reasonable potential to cause or contribute to a violation of Massachusetts Water Quality Standards in the Island End River.

B. STORM WATER POLLUTION PREVENTION PLAN

1. The permittee shall develop, implement, and maintain a Storm Water Pollution Prevention Plan (SWPPP) designed to reduce, or prevent, the discharge of pollutants in storm water to the receiving waters identified in this permit. The SWPPP shall be a written document and consistent with the terms of this permit. The permittee shall comply with the terms of its SWPPP.
2. The SWPPP shall be completed or updated and signed by the Permittee within 90 days after the effective date of this Permit. The Permittee shall certify that the SWPPP has been completed or updated and that it meets the requirements of the permit. The certification shall be signed in accordance with the requirements identified in 40 CFR § 122.22. A copy of this initial certification shall be sent to EPA and MassDEP within one hundred and twenty (120) days of the effective date of the Permit.
3. The SWPPP shall be consistent with the provisions for SWPPPs included in the most current version of the Multi-Sector General Permits for Storm Water Discharges Associated with Industrial Activities. (The current MSGP was issued September 29, 2008 – see 73 FR 56572). The SWPPP shall include best management practices (BMPs) for on-site activities that will minimize the discharge of pollutants in storm water to waters of the United States.
4. The SWPPP shall be prepared in accordance with good engineering practices, identify potential sources of pollution that may reasonably be expected to affect the quality of the storm water discharges, and describe and ensure implementation of practices which will be used to reduce the pollutants and assure compliance with this permit. Specifically, the SWPPP shall contain the elements listed below:
 - a. A pollution prevention team responsible for developing, implementing, maintaining, revising and ensuring compliance with the SWPPP.
 - b. A site description which includes a list of activities at the facility; a site map showing drainage areas and direction of storm water flows; receiving waters and outfall location; areas of the facility where industrial materials or activities are exposed to storm water including the location of industrial activities, storage, disposal, material handling; and all structural controls.
 - c. A summary of all pollutant sources which includes all areas where spills have occurred or could occur. For each source, identify the expected drainage and the corresponding pollutant.
 - d. A summary of any existing storm water discharge sampling data.
 - e. A description of all storm water controls, both structural and non-structural. BMPs must include good housekeeping measures, preventative maintenance programs, spill prevention and response procedures, runoff management practices, and proper handling of deicing materials. The SWPPP

shall describe how the BMPs are appropriate for the facility. All BMPs shall be properly maintained and be in effective operating conditions.

5. All areas of the facility where industrial materials or activities are exposed to storm water shall be inspected, at least on a quarterly basis. Inspections shall occur beginning the 1st quarter after the effective date of the permit. EPA considers quarters as follows: January to March; April to June; July to September; and October to December.
6. The permittee shall amend and update the SWPPP within 30 days for any changes at the facility affecting the SWPPP. Changes which may affect the SWPPP include, but are not limited to, the following activities: a change in design, construction, operation, or maintenance, which has a significant effect on the potential for the discharge of pollutants to the waters of the United States; a release of a reportable quantity of pollutants as described in 40 CFR Part 302; or a determination by the permittee or EPA that the SWPPP appears to be ineffective in achieving the general objectives of controlling pollutants in storm water discharges associated with industrial activity. Any amended or new versions of the SWPPP shall be re-certified by the Permittee. Such re-certifications also shall be signed in accordance with the requirements identified in 40 CFR § 122.22
7. The permittee shall certify at least annually that the previous year's inspections and maintenance activities were conducted, results were recorded, records were maintained, and that the facility is in compliance with the SWPPP. If the facility is not in compliance with any aspect of the SWPPP, the annual certification shall state the non-compliance and the remedies which are being undertaken. Such annual certifications also shall be signed in accordance with the requirements identified in 40 CFR § 122.22. A copy of this annual certification shall be sent to EPA and MassDEP on, or before, every anniversary of the effective date of the permit. The permittee shall keep a copy of the current SWPPP and all SWPPP certifications (the initial certification, re-certifications, and annual certifications) signed during the effective period of this permit at the facility and shall make them available for inspection by EPA and MassDEP.

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 reports and evaluations required herein, shall be submitted to EPA at the following address:

U.S. Environmental Protection Agency
Water Technical Unit (SMR-04)
5 Post Office Square – Suite 100
Boston, Massachusetts 02109-3912

Signed and dated Discharge Monitoring Report Form(s) and all other reports required by this permit shall also be submitted to the State at the following addresses:

Massachusetts Department of Environmental Protection
Northeast Regional Office
Bureau of Waste Prevention
205 B Lowell Street
Wilmington, MA 01887

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

D. STATE PERMIT CONDITIONS

1. This Discharge Permit is issued jointly by the EPA and the MassDEP under Federal and State law, respectively. As such, all the terms and conditions of this permit are hereby incorporated into and constitute a discharge permit issued by the Commissioner of the MassDEP pursuant to M.G.L. Chap.21, §43.
2. 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 a 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.

NPDES PART II STANDARD CONDITIONS
(January, 2007)

TABLE OF CONTENTS

A. GENERAL CONDITIONS	Page
1. <u>Duty to Comply</u>	2
2. <u>Permit Actions</u>	2
3. <u>Duty to Provide Information</u>	2
4. <u>Reopener Clause</u>	3
5. <u>Oil and Hazardous Substance Liability</u>	3
6. <u>Property Rights</u>	3
7. <u>Confidentiality of Information</u>	3
8. <u>Duty to Reapply</u>	4
9. <u>State Authorities</u>	4
10. <u>Other laws</u>	4
B. OPERATION AND MAINTENANCE OF POLLUTION CONTROLS	
1. <u>Proper Operation and Maintenance</u>	4
2. <u>Need to Halt or Reduce Not a Defense</u>	4
3. <u>Duty to Mitigate</u>	4
4. <u>Bypass</u>	4
5. <u>Upset</u>	5
C. MONITORING AND RECORDS	
1. <u>Monitoring and Records</u>	6
2. <u>Inspection and Entry</u>	7
D. REPORTING REQUIREMENTS	
1. <u>Reporting Requirements</u>	7
a. Planned changes	7
b. Anticipated noncompliance	7
c. Transfers	7
d. Monitoring reports	8
e. Twenty-four hour reporting	8
f. Compliance schedules	9
g. Other noncompliance	9
h. Other information	9
2. <u>Signatory Requirement</u>	9
3. <u>Availability of Reports</u>	9
E. DEFINITIONS AND ABBREVIATIONS	
1. <u>Definitions for Individual NPDES Permits including Storm Water Requirements</u>	9
2. <u>Definitions for NPDES Permit Sludge Use and Disposal Requirements</u>	17
3. <u>Commonly Used Abbreviations</u>	23

NPDES PART II STANDARD CONDITIONS
(January, 2007)

PART II. A. GENERAL REQUIREMENTS

1. Duty to Comply

The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the Clean Water Act (CWA) and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application.

- a. The permittee shall comply with effluent standards or prohibitions established under Section 307(a) of the sludge use or disposal established under Section 405(d) of the CWA within the time provided in the regulations that establish these standards or prohibitions, even if the permit has not yet been modified to incorporate the requirements.
- b. The CWA provides that any person who violates Section 301, 302, 306, 307, 308, 318, or 405 of the CWA or any permit condition or limitation implementing any of such sections in a permit issued under Section 402, or any requirement imposed in a pretreatment program approved under Section 402 (a)(3) or 402 (b)(8) of the CWA is subject to a civil penalty not to exceed \$25,000 per day for each violation. Any person who negligently violates such requirements is subject to a fine of not less than \$2,500 nor more than \$25,000 per day of violation, or by imprisonment for not more than 1 year, or both. Any person who knowingly violates such requirements is subject to a fine of not less than \$5,000 nor more than \$50,000 per day of violation, or by imprisonment for not more than 3 years, or both.
- c. Any person may be assessed an administrative penalty by the Administrator for violating Section 301, 302, 306, 307, 308, 318, or 405 of the CWA, or any permit condition or limitation implementing any of such sections in a permit issued under Section 402 of the CWA. Administrative penalties for Class I violations are not to exceed \$10,000 per violation, with the maximum amount of any Class I penalty assessed not to exceed \$25,000. Penalties for Class II violations are not to exceed \$10,000 per day for each day during which the violation continues, with the maximum amount of any Class II penalty not to exceed \$125,000.

Note: See 40 CFR §122.41(a)(2) for complete “Duty to Comply” regulations.

2. Permit Actions

This permit may be modified, revoked and reissued, or terminated for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or notifications of planned changes or anticipated noncompliance does not stay any permit condition.

3. Duty to Provide Information

The permittee shall furnish to the Regional Administrator, within a reasonable time, any information which the Regional Administrator may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. The permittee shall also furnish to the Regional Administrator, upon request, copies of records required to be kept by this permit.

NPDES PART II STANDARD CONDITIONS

(January, 2007)

4. Reopener Clause

The Regional Administrator reserves the right to make appropriate revisions to this permit in order to establish any appropriate effluent limitations, schedules of compliance, or other provisions which may be authorized under the CWA in order to bring all discharges into compliance with the CWA.

For any permit issued to a treatment works treating domestic sewage (including “sludge-only facilities”), the Regional Administrator or Director shall include a reopener clause to incorporate any applicable standard for sewage sludge use or disposal promulgated under Section 405 (d) of the CWA. The Regional Administrator or Director may promptly modify or revoke and reissue any permit containing the reopener clause required by this paragraph if the standard for sewage sludge use or disposal is more stringent than any requirements for sludge use or disposal in the permit, or contains a pollutant or practice not limited in the permit.

Federal regulations pertaining to permit modification, revocation and reissuance, and termination are found at 40 CFR §122.62, 122.63, 122.64, and 124.5.

5. Oil and Hazardous Substance Liability

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from responsibilities, liabilities or penalties to which the permittee is or may be subject under Section 311 of the CWA, or Section 106 of the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA).

6. Property Rights

The issuance of this permit does not convey any property rights of any sort, nor any exclusive privileges.

7. Confidentiality of Information

- a. In accordance with 40 CFR Part 2, any information submitted to EPA pursuant to these regulations may be claimed as confidential by the submitter. Any such claim must be asserted at the time of submission in the manner prescribed on the application form or instructions or, in the case of other submissions, by stamping the words “confidential business information” on each page containing such information. If no claim is made at the time of submission, EPA may make the information available to the public without further notice. If a claim is asserted, the information will be treated in accordance with the procedures in 40 CFR Part 2 (Public Information).
- b. Claims of confidentiality for the following information will be denied:
 - (1) The name and address of any permit applicant or permittee;
 - (2) Permit applications, permits, and effluent data as defined in 40 CFR §2.302(a)(2).
- c. Information required by NPDES application forms provided by the Regional Administrator under 40 CFR §122.21 may not be claimed confidential. This includes information submitted on the forms themselves and any attachments used to supply information required by the forms.

NPDES PART II STANDARD CONDITIONS
(January, 2007)

8. Duty to Reapply

If the permittee wishes to continue an activity regulated by this permit after its expiration date, the permittee must apply for and obtain a new permit. The permittee shall submit a new application at least 180 days before the expiration date of the existing permit, unless permission for a later date has been granted by the Regional Administrator. (The Regional Administrator shall not grant permission for applications to be submitted later than the expiration date of the existing permit.)

9. State Authorities

Nothing in Part 122, 123, or 124 precludes more stringent State regulation of any activity covered by these regulations, whether or not under an approved State program.

10. Other Laws

The issuance of a permit does not authorize any injury to persons or property or invasion of other private rights, nor does it relieve the permittee of its obligation to comply with any other applicable Federal, State, or local laws and regulations.

PART II. B. OPERATION AND MAINTENANCE OF POLLUTION CONTROLS

1. Proper Operation and Maintenance

The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of this permit and with the requirements of storm water pollution prevention plans. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems only when the operation is necessary to achieve compliance with the conditions of the permit.

2. Need to Halt or Reduce Not a Defense

It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

3. Duty to Mitigate

The permittee shall take all reasonable steps to minimize or prevent any discharge or sludge use or disposal in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment.

4. Bypass

a. Definitions

- (1) *Bypass* means the intentional diversion of waste streams from any portion of a treatment facility.

NPDES PART II STANDARD CONDITIONS

(January, 2007)

- (2) *Severe property damage* means substantial physical damage to property, damage to the treatment facilities which causes them to become inoperable, or substantial and permanent loss of natural resources which can be reasonably expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.

b. Bypass not exceeding limitations

The permittee may allow any bypass to occur which does not cause effluent limitations to be exceeded, but only if it also is for essential maintenance to assure efficient operation. These bypasses are not subject to the provision of Paragraphs B.4.c. and 4.d. of this section.

c. Notice

- (1) Anticipated bypass. If the permittee knows in advance of the need for a bypass, it shall submit prior notice, if possible at least ten days before the date of the bypass.
- (2) Unanticipated bypass. The permittee shall submit notice of an unanticipated bypass as required in paragraph D.1.e. of this part (Twenty-four hour reporting).

d. Prohibition of bypass

Bypass is prohibited, and the Regional Administrator may take enforcement action against a permittee for bypass, unless:

- (1) Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage;
- (2) There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventative maintenance; and
- (3)
 - i) The permittee submitted notices as required under Paragraph 4.c. of this section.
 - ii) The Regional Administrator may approve an anticipated bypass, after considering its adverse effects, if the Regional Administrator determines that it will meet the three conditions listed above in paragraph 4.d. of this section.

5. Upset

- a. Definition. *Upset* means an exceptional incident in which there is an unintentional and temporary noncompliance with technology-based permit effluent limitations because of factors beyond the reasonable control of the permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.
- b. Effect of an upset. An upset constitutes an affirmative defense to an action brought for noncompliance with such technology-based permit effluent limitations if the requirements of paragraph B.5.c. of this section are met. No determination made during

NPDES PART II STANDARD CONDITIONS

(January, 2007)

administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review.

- c. Conditions necessary for a demonstration of upset. A permittee who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs, or other relevant evidence that:
 - (1) An upset occurred and that the permittee can identify the cause(s) of the upset;
 - (2) The permitted facility was at the time being properly operated;
 - (3) The permittee submitted notice of the upset as required in paragraphs D.1.a. and 1.e. (Twenty-four hour notice); and
 - (4) The permittee complied with any remedial measures required under B.3. above.
- d. Burden of proof. In any enforcement proceeding the permittee seeking to establish the occurrence of an upset has the burden of proof.

PART II. C. MONITORING REQUIREMENTS

1. Monitoring and Records

- a. Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity.
- b. Except for records for monitoring information required by this permit related to the permittee's sewage sludge use and disposal activities, which shall be retained for a period of at least five years (or longer as required by 40 CFR Part 503), the permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this permit, and records of all data used to complete the application for this permit, for a period of at least 3 years from the date of the sample, measurement, report or application except for the information concerning storm water discharges which must be retained for a total of 6 years. This retention period may be extended by request of the Regional Administrator at any time.
- c. Records of monitoring information shall include:
 - (1) The date, exact place, and time of sampling or measurements;
 - (2) The individual(s) who performed the sampling or measurements;
 - (3) The date(s) analyses were performed;
 - (4) The individual(s) who performed the analyses;
 - (5) The analytical techniques or methods used; and
 - (6) The results of such analyses.
- d. Monitoring results must be conducted according to test procedures approved under 40 CFR Part 136 or, in the case of sludge use or disposal, approved under 40 CFR Part 136 unless otherwise specified in 40 CFR Part 503, unless other test procedures have been specified in the permit.
- e. The CWA provides that any person who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained under this permit shall, upon conviction, be punished by a fine of not more than \$10,000, or by

NPDES PART II STANDARD CONDITIONS

(January, 2007)

imprisonment for not more than 2 years, or both. If a conviction of a person is for a violation committed after a first conviction of such person under this paragraph, punishment is a fine of not more than \$20,000 per day of violation, or by imprisonment of not more than 4 years, or both.

2. Inspection and Entry

The permittee shall allow the Regional Administrator or an authorized representative (including an authorized contractor acting as a representative of the Administrator), upon presentation of credentials and other documents as may be required by law, to:

- a. Enter upon the permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this permit;
- b. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
- c. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and
- d. Sample or monitor at reasonable times, for the purposes of assuring permit compliance or as otherwise authorized by the CWA, any substances or parameters at any location.

PART II. D. REPORTING REQUIREMENTS

1. Reporting Requirements

- a. Planned Changes. The permittee shall give notice to the Regional Administrator as soon as possible of any planned physical alterations or additions to the permitted facility. Notice is only required when:
 - (1) The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source in 40 CFR§122.29(b); or
 - (2) The alteration or addition could significantly change the nature or increase the quantities of the pollutants discharged. This notification applies to pollutants which are subject neither to the effluent limitations in the permit, nor to the notification requirements at 40 CFR§122.42(a)(1).
 - (3) The alteration or addition results in a significant change in the permittee's sludge use or disposal practices, and such alteration, addition or change may justify the application of permit conditions different from or absent in the existing permit, including notification of additional use or disposal sites not reported during the permit application process or not reported pursuant to an approved land application plan.
- b. Anticipated noncompliance. The permittee shall give advance notice to the Regional Administrator of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements.
- c. Transfers. This permit is not transferable to any person except after notice to the Regional Administrator. The Regional Administrator may require modification or revocation and reissuance of the permit to change the name of the permittee and

NPDES PART II STANDARD CONDITIONS

(January, 2007)

incorporate such other requirements as may be necessary under the CWA. (See 40 CFR Part 122.61; in some cases, modification or revocation and reissuance is mandatory.)

- d. Monitoring reports. Monitoring results shall be reported at the intervals specified elsewhere in this permit.
 - (1) Monitoring results must be reported on a Discharge Monitoring Report (DMR) or forms provided or specified by the Director for reporting results of monitoring of sludge use or disposal practices.
 - (2) If the permittee monitors any pollutant more frequently than required by the permit using test procedures approved under 40 CFR Part 136 or, in the case of sludge use or disposal, approved under 40 CFR Part 136 unless otherwise specified in 40 CFR Part 503, or as specified in the permit, the results of the monitoring shall be included in the calculation and reporting of the data submitted in the DMR or sludge reporting form specified by the Director.
 - (3) Calculations for all limitations which require averaging or measurements shall utilize an arithmetic mean unless otherwise specified by the Director in the permit.
- e. Twenty-four hour reporting.
 - (1) The permittee shall report any noncompliance which may endanger health or the environment. Any information shall be provided orally within 24 hours from the time the permittee becomes aware of the circumstances.

A written submission shall also be provided within 5 days of the time the permittee becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.
 - (2) The following shall be included as information which must be reported within 24 hours under this paragraph.
 - (a) Any unanticipated bypass which exceeds any effluent limitation in the permit. (See 40 CFR §122.41(g).)
 - (b) Any upset which exceeds any effluent limitation in the permit.
 - (c) Violation of a maximum daily discharge limitation for any of the pollutants listed by the Regional Administrator in the permit to be reported within 24 hours. (See 40 CFR §122.44(g).)
 - (3) The Regional Administrator may waive the written report on a case-by-case basis for reports under Paragraph D.1.e. if the oral report has been received within 24 hours.

NPDES PART II STANDARD CONDITIONS (January, 2007)

- f. Compliance Schedules. Reports of compliance or noncompliance with, any progress reports on, interim and final requirements contained in any compliance schedule of this permit shall be submitted no later than 14 days following each schedule date.
- g. Other noncompliance. The permittee shall report all instances of noncompliance not reported under Paragraphs D.1.d., D.1.e., and D.1.f. of this section, at the time monitoring reports are submitted. The reports shall contain the information listed in Paragraph D.1.e. of this section.
- h. Other information. Where the permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to the Regional Administrator, it shall promptly submit such facts or information.

2. Signatory Requirement

- a. All applications, reports, or information submitted to the Regional Administrator shall be signed and certified. (See 40 CFR §122.22)
- b. The CWA provides that any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this permit, including monitoring reports or reports of compliance or noncompliance shall, upon conviction, be punished by a fine of not more than \$10,000 per violation, or by imprisonment for not more than 2 years per violation, or by both.

3. Availability of Reports.

Except for data determined to be confidential under Paragraph A.8. above, all reports prepared in accordance with the terms of this permit shall be available for public inspection at the offices of the State water pollution control agency and the Regional Administrator. As required by the CWA, effluent data shall not be considered confidential. Knowingly making any false statements on any such report may result in the imposition of criminal penalties as provided for in Section 309 of the CWA.

PART II. E. DEFINITIONS AND ABBREVIATIONS

1. Definitions for Individual NPDES Permits including Storm Water Requirements

Administrator means the Administrator of the United States Environmental Protection Agency, or an authorized representative.

Applicable standards and limitations means all, State, interstate, and Federal standards and limitations to which a “discharge”, a “sewage sludge use or disposal practice”, or a related activity is subject to, including “effluent limitations”, water quality standards, standards of performance, toxic effluent standards or prohibitions, “best management practices”, pretreatment standards, and “standards for sewage sludge use and disposal” under Sections 301, 302, 303, 304, 306, 307, 308, 403, and 405 of the CWA.

NPDES PART II STANDARD CONDITIONS

(January, 2007)

Application means the EPA standard national forms for applying for a permit, including any additions, revisions, or modifications to the forms; or forms approved by EPA for use in “approved States”, including any approved modifications or revisions.

Average means the arithmetic mean of values taken at the frequency required for each parameter over the specified period. For total and/or fecal coliforms and Escherichia coli, the average shall be the geometric mean.

Average monthly discharge limitation means the highest allowable average of “daily discharges” over a calendar month calculated as the sum of all “daily discharges” measured during a calendar month divided by the number of “daily discharges” measured during that month.

Average weekly discharge limitation means the highest allowable average of “daily discharges” measured during the calendar week divided by the number of “daily discharges” measured during the week.

Best Management Practices (BMPs) means schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the pollution of “waters of the United States.” BMPs also include treatment requirements, operating procedures, and practices to control plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage.

Best Professional Judgment (BPJ) means a case-by-case determination of Best Practicable Treatment (BPT), Best Available Treatment (BAT), or other appropriate technology-based standard based on an evaluation of the available technology to achieve a particular pollutant reduction and other factors set forth in 40 CFR §125.3 (d).

Coal Pile Runoff means the rainfall runoff from or through any coal storage pile.

Composite Sample means a sample consisting of a minimum of eight grab samples of equal volume collected at equal intervals during a 24-hour period (or lesser period as specified in the section on Monitoring and Reporting) and combined proportional to flow, or a sample consisting of the same number of grab samples, or greater, collected proportionally to flow over that same time period.

Construction Activities - The following definitions apply to construction activities:

- (a) Commencement of Construction is the initial disturbance of soils associated with clearing, grading, or excavating activities or other construction activities.
- (b) Dedicated portable asphalt plant is a portable asphalt plant located on or contiguous to a construction site and that provides asphalt only to the construction site that the plant is located on or adjacent to. The term dedicated portable asphalt plant does not include facilities that are subject to the asphalt emulsion effluent limitation guideline at 40 CFR Part 443.
- (c) Dedicated portable concrete plant is a portable concrete plant located on or contiguous to a construction site and that provides concrete only to the construction site that the plant is located on or adjacent to.

NPDES PART II STANDARD CONDITIONS

(January, 2007)

- (d) Final Stabilization means that all soil disturbing activities at the site have been complete, and that a uniform perennial vegetative cover with a density of 70% of the cover for unpaved areas and areas not covered by permanent structures has been established or equivalent permanent stabilization measures (such as the use of riprap, gabions, or geotextiles) have been employed.
- (e) Runoff coefficient means the fraction of total rainfall that will appear at the conveyance as runoff.

Contiguous zone means the entire zone established by the United States under Article 24 of the Convention on the Territorial Sea and the Contiguous Zone.

Continuous discharge means a “discharge” which occurs without interruption throughout the operating hours of the facility except for infrequent shutdowns for maintenance, process changes, or similar activities.

CWA means the Clean Water Act (formerly referred to as the Federal Water Pollution Control Act or Federal Water Pollution Control Act Amendments of 1972) Pub. L. 92-500, as amended by Pub. L. 95-217, Pub. L. 95-576, Pub. L. 96-483, and Pub. L. 97-117; 33 USC §§1251 et seq.

Daily Discharge means the discharge of a pollutant measured during the calendar day or any other 24-hour period that reasonably represents the calendar day for purposes of sampling. For pollutants with limitations expressed in units of mass, the “daily discharge” is calculated as the total mass of the pollutant discharged over the day. For pollutants with limitations expressed in other units of measurements, the “daily discharge” is calculated as the average measurement of the pollutant over the day.

Director normally means the person authorized to sign NPDES permits by EPA or the State or an authorized representative. Conversely, it also could mean the Regional Administrator or the State Director as the context requires.

Discharge Monitoring Report Form (DMR) means the EPA standard national form, including any subsequent additions, revisions, or modifications for the reporting of self-monitoring results by permittees. DMRs must be used by “approved States” as well as by EPA. EPA will supply DMRs to any approved State upon request. The EPA national forms may be modified to substitute the State Agency name, address, logo, and other similar information, as appropriate, in place of EPA’s.

Discharge of a pollutant means:

- (a) Any addition of any “pollutant” or combination of pollutants to “waters of the United States” from any “point source”, or
- (b) Any addition of any pollutant or combination of pollutants to the waters of the “contiguous zone” or the ocean from any point source other than a vessel or other floating craft which is being used as a means of transportation (See “Point Source” definition).

This definition includes additions of pollutants into waters of the United States from: surface runoff which is collected or channeled by man; discharges through pipes, sewers, or other conveyances owned by a State, municipality, or other person which do not lead

NPDES PART II STANDARD CONDITIONS

(January, 2007)

to a treatment works; and discharges through pipes, sewers, or other conveyances leading into privately owned treatment works.

This term does not include an addition of pollutants by any “indirect discharger.”

Effluent limitation means any restriction imposed by the Regional Administrator on quantities, discharge rates, and concentrations of “pollutants” which are “discharged” from “point sources” into “waters of the United States”, the waters of the “contiguous zone”, or the ocean.

Effluent limitation guidelines means a regulation published by the Administrator under Section 304(b) of CWA to adopt or revise “effluent limitations”.

EPA means the United States “Environmental Protection Agency”.

Flow-weighted composite sample means a composite sample consisting of a mixture of aliquots where the volume of each aliquot is proportional to the flow rate of the discharge.

Grab Sample – An individual sample collected in a period of less than 15 minutes.

Hazardous Substance means any substance designated under 40 CFR Part 116 pursuant to Section 311 of the CWA.

Indirect Discharger means a non-domestic discharger introducing pollutants to a publicly owned treatment works.

Interference means a discharge which, alone or in conjunction with a discharge or discharges from other sources, both:

- (a) Inhibits or disrupts the POTW, its treatment processes or operations, or its sludge processes, use or disposal; and
- (b) Therefore is a cause of a violation of any requirement of the POTW’s NPDES permit (including an increase in the magnitude or duration of a violation) or of the prevention of sewage sludge use or disposal in compliance with the following statutory provisions and regulations or permits issued thereunder (or more stringent State or local regulations): Section 405 of the Clean Water Act (CWA), the Solid Waste Disposal Act (SWDA) (including Title II, more commonly referred to as the Resources Conservation and Recovery Act (RCRA), and including State regulations contained in any State sludge management plan prepared pursuant to Subtitle D of the SDWA), the Clean Air Act, the Toxic Substances Control Act, and the Marine Protection Research and Sanctuaries Act.

Landfill means an area of land or an excavation in which wastes are placed for permanent disposal, and which is not a land application unit, surface impoundment, injection well, or waste pile.

Land application unit means an area where wastes are applied onto or incorporated into the soil surface (excluding manure spreading operations) for treatment or disposal.

Large and Medium municipal separate storm sewer system means all municipal separate storm sewers that are either: (i) located in an incorporated place (city) with a population of 100,000 or more as determined by the latest Decennial Census by the Bureau of Census (these cities are listed in Appendices F and 40 CFR Part 122); or (ii) located in the counties with unincorporated urbanized

NPDES PART II STANDARD CONDITIONS

(January, 2007)

populations of 100,000 or more, except municipal separate storm sewers that are located in the incorporated places, townships, or towns within such counties (these counties are listed in Appendices H and I of 40 CFR 122); or (iii) owned or operated by a municipality other than those described in Paragraph (i) or (ii) and that are designated by the Regional Administrator as part of the large or medium municipal separate storm sewer system.

Maximum daily discharge limitation means the highest allowable “daily discharge” concentration that occurs only during a normal day (24-hour duration).

Maximum daily discharge limitation (as defined for the Steam Electric Power Plants only) when applied to Total Residual Chlorine (TRC) or Total Residual Oxidant (TRO) is defined as “maximum concentration” or “Instantaneous Maximum Concentration” during the two hours of a chlorination cycle (or fraction thereof) prescribed in the Steam Electric Guidelines, 40 CFR Part 423. These three synonymous terms all mean “a value that shall not be exceeded” during the two-hour chlorination cycle. This interpretation differs from the specified NPDES Permit requirement, 40 CFR § 122.2, where the two terms of “Maximum Daily Discharge” and “Average Daily Discharge” concentrations are specifically limited to the daily (24-hour duration) values.

Municipality means a city, town, borough, county, parish, district, association, or other public body created by or under State law and having jurisdiction over disposal of sewage, industrial wastes, or other wastes, or an Indian tribe or an authorized Indian tribe organization, or a designated and approved management agency under Section 208 of the CWA.

National Pollutant Discharge Elimination System means the national program for issuing, modifying, revoking and reissuing, terminating, monitoring and enforcing permits, and imposing and enforcing pretreatment requirements, under Sections 307, 402, 318, and 405 of the CWA. The term includes an “approved program”.

New Discharger means any building, structure, facility, or installation:

- (a) From which there is or may be a “discharge of pollutants”;
- (b) That did not commence the “discharge of pollutants” at a particular “site” prior to August 13, 1979;
- (c) Which is not a “new source”; and
- (d) Which has never received a finally effective NPDES permit for discharges at that “site”.

This definition includes an “indirect discharger” which commences discharging into “waters of the United States” after August 13, 1979. It also includes any existing mobile point source (other than an offshore or coastal oil and gas exploratory drilling rig or a coastal oil and gas exploratory drilling rig or a coastal oil and gas developmental drilling rig) such as a seafood processing rig, seafood processing vessel, or aggregate plant, that begins discharging at a “site” for which it does not have a permit; and any offshore rig or coastal mobile oil and gas exploratory drilling rig or coastal mobile oil and gas developmental drilling rig that commences the discharge of pollutants after August 13, 1979, at a “site” under EPA’s permitting jurisdiction for which it is not covered by an individual or general permit and which is located in an area determined by the Regional Administrator in the issuance of a final permit to be in an area of biological concern. In determining whether an area is an area of biological concern, the Regional Administrator shall consider the factors specified in 40 CFR §§125.122 (a) (1) through (10).

NPDES PART II STANDARD CONDITIONS (January, 2007)

An offshore or coastal mobile exploratory drilling rig or coastal mobile developmental drilling rig will be considered a “new discharger” only for the duration of its discharge in an area of biological concern.

New source means any building, structure, facility, or installation from which there is or may be a “discharge of pollutants”, the construction of which commenced:

- (a) After promulgation of standards of performance under Section 306 of CWA which are applicable to such source, or
- (b) After proposal of standards of performance in accordance with Section 306 of CWA which are applicable to such source, but only if the standards are promulgated in accordance with Section 306 within 120 days of their proposal.

NPDES means “National Pollutant Discharge Elimination System”.

Owner or operator means the owner or operator of any “facility or activity” subject to regulation under the NPDES programs.

Pass through means a Discharge which exits the POTW into waters of the United States in quantities or concentrations which, alone or in conjunction with a discharge or discharges from other sources, is a cause of a violation of any requirement of the POTW’s NPDES permit (including an increase in the magnitude or duration of a violation).

Permit means an authorization, license, or equivalent control document issued by EPA or an “approved” State.

Person means an individual, association, partnership, corporation, municipality, State or Federal agency, or an agent or employee thereof.

Point Source means any discernible, confined, and discrete conveyance, including but not limited to any pipe ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, landfill leachate collection system, vessel, or other floating craft, from which pollutants are or may be discharged. This term does not include return flows from irrigated agriculture or agricultural storm water runoff (see 40 CFR §122.2).

Pollutant means dredged spoil, solid waste, incinerator residue, filter backwash, sewage, garbage, sewage sludge, munitions, chemical wastes, biological materials, radioactive materials (except those regulated under the Atomic Energy Act of 1954, as amended (42 U.S.C. §§2011 et seq.)), heat, wrecked or discarded equipment, rock, sand, cellar dirt and industrial, municipal, and agricultural waste discharged into water. It does not mean:

- (a) Sewage from vessels; or
- (b) Water, gas, or other material which is injected into a well to facilitate production of oil or gas, or water derived in association with oil and gas production and disposed of in a well, if the well is used either to facilitate production or for disposal purposes is approved by the authority of the State in which the well is located, and if the State determines that the injection or disposal will not result in the degradation of ground or surface water resources.

NPDES PART II STANDARD CONDITIONS
(January, 2007)

Primary industry category means any industry category listed in the NRDC settlement agreement (Natural Resources Defense Council et al. v. Train, 8 E.R.C. 2120 (D.D.C. 1976), modified 12 E.R.C. 1833 (D. D.C. 1979)); also listed in Appendix A of 40 CFR Part 122.

Privately owned treatment works means any device or system which is (a) used to treat wastes from any facility whose operation is not the operator of the treatment works or (b) not a “POTW”.

Process wastewater means any water which, during manufacturing or processing, comes into direct contact with or results from the production or use of any raw material, intermediate product, finished product, byproduct, or waste product.

Publicly Owned Treatment Works (POTW) means any facility or system used in the treatment (including recycling and reclamation) of municipal sewage or industrial wastes of a liquid nature which is owned by a “State” or “municipality”.

This definition includes sewers, pipes, or other conveyances only if they convey wastewater to a POTW providing treatment.

Regional Administrator means the Regional Administrator, EPA, Region I, Boston, Massachusetts.

Secondary Industry Category means any industry which is not a “primary industry category”.

Section 313 water priority chemical means a chemical or chemical category which:

- (1) is listed at 40 CFR §372.65 pursuant to Section 313 of the Emergency Planning and Community Right-To-Know Act (EPCRA) (also known as Title III of the Superfund Amendments and Reauthorization Act (SARA) of 1986);
- (2) is present at or above threshold levels at a facility subject to EPCRA Section 313 reporting requirements; and
- (3) satisfies at least one of the following criteria:
 - (i) are listed in Appendix D of 40 CFR Part 122 on either Table II (organic priority pollutants), Table III (certain metals, cyanides, and phenols), or Table V (certain toxic pollutants and hazardous substances);
 - (ii) are listed as a hazardous substance pursuant to Section 311(b)(2)(A) of the CWA at 40 CFR §116.4; or
 - (iii) are pollutants for which EPA has published acute or chronic water quality criteria.

Septage means the liquid and solid material pumped from a septic tank, cesspool, or similar domestic sewage treatment system, or a holding tank when the system is cleaned or maintained.

Sewage Sludge means any solid, semisolid, or liquid residue removed during the treatment of municipal wastewater or domestic sewage. Sewage sludge includes, but is not limited to, solids removed during primary, secondary, or advanced wastewater treatment, scum, septage, portable toilet pumpings, Type III Marine Sanitation Device pumpings (33 CFR Part 159), and sewage sludge products. Sewage sludge does not include grit or screenings, or ash generated during the incineration of sewage sludge.

NPDES PART II STANDARD CONDITIONS
(January, 2007)

Sewage sludge use or disposal practice means the collection, storage, treatment, transportation, processing, monitoring, use, or disposal of sewage sludge.

Significant materials includes, but is not limited to: raw materials, fuels, materials such as solvents, detergents, and plastic pellets, raw materials used in food processing or production, hazardous substance designated under section 101(14) of CERCLA, any chemical the facility is required to report pursuant to EPCRA Section 313, fertilizers, pesticides, and waste products such as ashes, slag, and sludge that have the potential to be released with storm water discharges.

Significant spills includes, but is not limited to, releases of oil or hazardous substances in excess of reportable quantities under Section 311 of the CWA (see 40 CFR §110.10 and §117.21) or Section 102 of CERCLA (see 40 CFR § 302.4).

Sludge-only facility means any “treatment works treating domestic sewage” whose methods of sewage sludge use or disposal are subject to regulations promulgated pursuant to Section 405(d) of the CWA, and is required to obtain a permit under 40 CFR §122.1(b)(3).

State means any of the 50 States, the District of Columbia, Guam, the Commonwealth of Puerto Rico, the Virgin Islands, American Samoa, the Trust Territory of the Pacific Islands.

Storm Water means storm water runoff, snow melt runoff, and surface runoff and drainage.

Storm water discharge associated with industrial activity means the discharge from any conveyance which is used for collecting and conveying storm water and which is directly related to manufacturing, processing, or raw materials storage areas at an industrial plant. (See 40 CFR §122.26 (b)(14) for specifics of this definition.

Time-weighted composite means a composite sample consisting of a mixture of equal volume aliquots collected at a constant time interval.

Toxic pollutants means any pollutant listed as toxic under Section 307 (a)(1) or, in the case of “sludge use or disposal practices” any pollutant identified in regulations implementing Section 405(d) of the CWA.

Treatment works treating domestic sewage means a POTW or any other sewage sludge or wastewater treatment devices or systems, regardless of ownership (including federal facilities), used in the storage, treatment, recycling, and reclamation of municipal or domestic sewage, including land dedicated for the disposal of sewage sludge. This definition does not include septic tanks or similar devices.

For purposes of this definition, “domestic sewage” includes waste and wastewater from humans or household operations that are discharged to or otherwise enter a treatment works. In States where there is no approved State sludge management program under Section 405(f) of the CWA, the Regional Administrator may designate any person subject to the standards for sewage sludge use and disposal in 40 CFR Part 503 as a “treatment works treating domestic sewage”, where he or she finds that there is a potential for adverse effects on public health and the environment from poor sludge quality or poor sludge handling, use or disposal practices, or where he or she finds that such designation is necessary to ensure that such person is in compliance with 40 CFR Part 503.

NPDES PART II STANDARD CONDITIONS

(January, 2007)

Waste Pile means any non-containerized accumulation of solid, non-flowing waste that is used for treatment or storage.

Waters of the United States means:

- (a) All waters which are currently used, were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of tide;
- (b) All interstate waters, including interstate “wetlands”;
- (c) All other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, “wetlands”, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds the use, degradation, or destruction of which would affect or could affect interstate or foreign commerce including any such waters:
 - (1) Which are or could be used by interstate or foreign travelers for recreational or other purpose;
 - (2) From which fish or shellfish are or could be taken and sold in interstate or foreign commerce; or
 - (3) Which are used or could be used for industrial purposes by industries in interstate commerce;
- (d) All impoundments of waters otherwise defined as waters of the United States under this definition;
- (e) Tributaries of waters identified in Paragraphs (a) through (d) of this definition;
- (f) The territorial sea; and
- (g) “Wetlands” adjacent to waters (other than waters that are themselves wetlands) identified in Paragraphs (a) through (f) of this definition.

Waste treatment systems, including treatment ponds or lagoons designed to meet the requirements of the CWA (other than cooling ponds as defined in 40 CFR §423.11(m) which also meet the criteria of this definition) are not waters of the United States.

Wetlands means those areas that are inundated or saturated by surface or ground water at a frequency and duration to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas.

Whole Effluent Toxicity (WET) means the aggregate toxic effect of an effluent measured directly by a toxicity test. (See Abbreviations Section, following, for additional information.)

2. Definitions for NPDES Permit Sludge Use and Disposal Requirements.

Active sewage sludge unit is a sewage sludge unit that has not closed.

NPDES PART II STANDARD CONDITIONS

(January, 2007)

Aerobic Digestion is the biochemical decomposition of organic matter in sewage sludge into carbon dioxide and water by microorganisms in the presence of air.

Agricultural Land is land on which a food crop, a feed crop, or a fiber crop is grown. This includes range land and land used as pasture.

Agronomic rate is the whole sludge application rate (dry weight basis) designed:

- (1) To provide the amount of nitrogen needed by the food crop, feed crop, fiber crop, cover crop, or vegetation grown on the land; and
- (2) To minimize the amount of nitrogen in the sewage sludge that passes below the root zone of the crop or vegetation grown on the land to the ground water.

Air pollution control device is one or more processes used to treat the exit gas from a sewage sludge incinerator stack.

Anaerobic digestion is the biochemical decomposition of organic matter in sewage sludge into methane gas and carbon dioxide by microorganisms in the absence of air.

Annual pollutant loading rate is the maximum amount of a pollutant that can be applied to a unit area of land during a 365 day period.

Annual whole sludge application rate is the maximum amount of sewage sludge (dry weight basis) that can be applied to a unit area of land during a 365 day period.

Apply sewage sludge or sewage sludge applied to the land means land application of sewage sludge.

Aquifer is a geologic formation, group of geologic formations, or a portion of a geologic formation capable of yielding ground water to wells or springs.

Auxiliary fuel is fuel used to augment the fuel value of sewage sludge. This includes, but is not limited to, natural gas, fuel oil, coal, gas generated during anaerobic digestion of sewage sludge, and municipal solid waste (not to exceed 30 percent of the dry weight of the sewage sludge and auxiliary fuel together). Hazardous wastes are not auxiliary fuel.

Base flood is a flood that has a one percent chance of occurring in any given year (i.e. a flood with a magnitude equaled once in 100 years).

Bulk sewage sludge is sewage sludge that is not sold or given away in a bag or other container for application to the land.

Contaminate an aquifer means to introduce a substance that causes the maximum contaminant level for nitrate in 40 CFR §141.11 to be exceeded in ground water or that causes the existing concentration of nitrate in the ground water to increase when the existing concentration of nitrate in the ground water exceeds the maximum contaminant level for nitrate in 40 CFR §141.11.

Class I sludge management facility is any publicly owned treatment works (POTW), as defined in 40 CFR §501.2, required to have an approved pretreatment program under 40 CFR §403.8 (a) (including any POTW located in a state that has elected to assume local program responsibilities pursuant to 40 CFR §403.10 (e) and any treatment works treating domestic sewage, as defined in 40 CFR § 122.2,

NPDES PART II STANDARD CONDITIONS

(January, 2007)

classified as a Class I sludge management facility by the EPA Regional Administrator, or, in the case of approved state programs, the Regional Administrator in conjunction with the State Director, because of the potential for sewage sludge use or disposal practice to affect public health and the environment adversely.

Control efficiency is the mass of a pollutant in the sewage sludge fed to an incinerator minus the mass of that pollutant in the exit gas from the incinerator stack divided by the mass of the pollutant in the sewage sludge fed to the incinerator.

Cover is soil or other material used to cover sewage sludge placed on an active sewage sludge unit.

Cover crop is a small grain crop, such as oats, wheat, or barley, not grown for harvest.

Cumulative pollutant loading rate is the maximum amount of inorganic pollutant that can be applied to an area of land.

Density of microorganisms is the number of microorganisms per unit mass of total solids (dry weight) in the sewage sludge.

Dispersion factor is the ratio of the increase in the ground level ambient air concentration for a pollutant at or beyond the property line of the site where the sewage sludge incinerator is located to the mass emission rate for the pollutant from the incinerator stack.

Displacement is the relative movement of any two sides of a fault measured in any direction.

Domestic septage is either liquid or solid material removed from a septic tank, cesspool, portable toilet, Type III marine sanitation device, or similar treatment works that receives only domestic sewage. Domestic septage does not include liquid or solid material removed from a septic tank, cesspool, or similar treatment works that receives either commercial wastewater or industrial wastewater and does not include grease removed from a grease trap at a restaurant.

Domestic sewage is waste and wastewater from humans or household operations that is discharged to or otherwise enters a treatment works.

Dry weight basis means calculated on the basis of having been dried at 105 degrees Celsius (°C) until reaching a constant mass (i.e. essentially 100 percent solids content).

Fault is a fracture or zone of fractures in any materials along which strata on one side are displaced with respect to the strata on the other side.

Feed crops are crops produced primarily for consumption by animals.

Fiber crops are crops such as flax and cotton.

Final cover is the last layer of soil or other material placed on a sewage sludge unit at closure.

Fluidized bed incinerator is an enclosed device in which organic matter and inorganic matter in sewage sludge are combusted in a bed of particles suspended in the combustion chamber gas.

Food crops are crops consumed by humans. These include, but are not limited to, fruits, vegetables, and tobacco.

NPDES PART II STANDARD CONDITIONS
(January, 2007)

Forest is a tract of land thick with trees and underbrush.

Ground water is water below the land surface in the saturated zone.

Holocene time is the most recent epoch of the Quaternary period, extending from the end of the Pleistocene epoch to the present.

Hourly average is the arithmetic mean of all the measurements taken during an hour. At least two measurements must be taken during the hour.

Incineration is the combustion of organic matter and inorganic matter in sewage sludge by high temperatures in an enclosed device.

Industrial wastewater is wastewater generated in a commercial or industrial process.

Land application is the spraying or spreading of sewage sludge onto the land surface; the injection of sewage sludge below the land surface; or the incorporation of sewage sludge into the soil so that the sewage sludge can either condition the soil or fertilize crops or vegetation grown in the soil.

Land with a high potential for public exposure is land that the public uses frequently. This includes, but is not limited to, a public contact site and reclamation site located in a populated area (e.g., a construction site located in a city).

Land with low potential for public exposure is land that the public uses infrequently. This includes, but is not limited to, agricultural land, forest and a reclamation site located in an unpopulated area (e.g., a strip mine located in a rural area).

Leachate collection system is a system or device installed immediately above a liner that is designed, constructed, maintained, and operated to collect and remove leachate from a sewage sludge unit.

Liner is soil or synthetic material that has a hydraulic conductivity of 1×10^{-7} centimeters per second or less.

Lower explosive limit for methane gas is the lowest percentage of methane gas in air, by volume, that propagates a flame at 25 degrees Celsius and atmospheric pressure.

Monthly average (Incineration) is the arithmetic mean of the hourly averages for the hours a sewage sludge incinerator operates during the month.

Monthly average (Land Application) is the arithmetic mean of all measurements taken during the month.

Municipality means a city, town, borough, county, parish, district, association, or other public body (including an intermunicipal agency of two or more of the foregoing entities) created by or under State law; an Indian tribe or an authorized Indian tribal organization having jurisdiction over sewage sludge management; or a designated and approved management agency under section 208 of the CWA, as amended. The definition includes a special district created under state law, such as a water district, sewer district, sanitary district, utility district, drainage district, or similar entity, or an integrated waste management facility as defined in section 201 (e) of the CWA, as amended, that has as one of its principal responsibilities the treatment, transport, use or disposal of sewage sludge.

NPDES PART II STANDARD CONDITIONS (January, 2007)

Other container is either an open or closed receptacle. This includes, but is not limited to, a bucket, a box, a carton, and a vehicle or trailer with a load capacity of one metric ton or less.

Pasture is land on which animals feed directly on feed crops such as legumes, grasses, grain stubble, or stover.

Pathogenic organisms are disease-causing organisms. These include, but are not limited to, certain bacteria, protozoa, viruses, and viable helminth ova.

Permitting authority is either EPA or a State with an EPA-approved sludge management program.

Person is an individual, association, partnership, corporation, municipality, State or Federal Agency, or an agent or employee thereof.

Person who prepares sewage sludge is either the person who generates sewage sludge during the treatment of domestic sewage in a treatment works or the person who derives a material from sewage sludge.

pH means the logarithm of the reciprocal of the hydrogen ion concentration; a measure of the acidity or alkalinity of a liquid or solid material.

Place sewage sludge or sewage sludge placed means disposal of sewage sludge on a surface disposal site.

Pollutant (as defined in sludge disposal requirements) is an organic substance, an inorganic substance, a combination of organic and inorganic substances, or pathogenic organism that, after discharge and upon exposure, ingestion, inhalation, or assimilation into an organism either directly from the environment or indirectly by ingestion through the food chain, could on the basis of information available to the Administrator of EPA, cause death, disease, behavioral abnormalities, cancer, genetic mutations, physiological malfunctions (including malfunction in reproduction) or physical deformations in either organisms or offspring of the organisms.

Pollutant limit (for sludge disposal requirements) is a numerical value that describes the amount of a pollutant allowed per unit amount of sewage sludge (e.g., milligrams per kilogram of total solids); the amount of pollutant that can be applied to a unit of land (e.g., kilograms per hectare); or the volume of the material that can be applied to the land (e.g., gallons per acre).

Public contact site is a land with a high potential for contact by the public. This includes, but is not limited to, public parks, ball fields, cemeteries, plant nurseries, turf farms, and golf courses.

Qualified ground water scientist is an individual with a baccalaureate or post-graduate degree in the natural sciences or engineering who has sufficient training and experience in ground water hydrology and related fields, as may be demonstrated by State registration, professional certification, or completion of accredited university programs, to make sound professional judgments regarding ground water monitoring, pollutant fate and transport, and corrective action.

Range land is open land with indigenous vegetation.

Reclamation site is drastically disturbed land that is reclaimed using sewage sludge. This includes, but is not limited to, strip mines and construction sites.

NPDES PART II STANDARD CONDITIONS (January, 2007)

Risk specific concentration is the allowable increase in the average daily ground level ambient air concentration for a pollutant from the incineration of sewage sludge at or beyond the property line of a site where the sewage sludge incinerator is located.

Runoff is rainwater, leachate, or other liquid that drains overland on any part of a land surface and runs off the land surface.

Seismic impact zone is an area that has 10 percent or greater probability that the horizontal ground level acceleration to the rock in the area exceeds 0.10 gravity once in 250 years.

Sewage sludge is a solid, semi-solid, or liquid residue generated during the treatment of domestic sewage in a treatment works. Sewage sludge includes, but is not limited to: domestic septage; scum or solids removed in primary, secondary, or advanced wastewater treatment processes; and a material derived from sewage sludge. Sewage sludge does not include ash generated during the firing of sewage sludge in a sewage sludge incinerator or grit and screening generated during preliminary treatment of domestic sewage in treatment works.

Sewage sludge feed rate is either the average daily amount of sewage sludge fired in all sewage sludge incinerators within the property line of the site where the sewage sludge incinerators are located for the number of days in a 365 day period that each sewage sludge incinerator operates, or the average daily design capacity for all sewage sludge incinerators within the property line of the site where the sewage sludge incinerators are located.

Sewage sludge incinerator is an enclosed device in which only sewage sludge and auxiliary fuel are fired.

Sewage sludge unit is land on which only sewage sludge is placed for final disposal. This does not include land on which sewage sludge is either stored or treated. Land does not include waters of the United States, as defined in 40 CFR §122.2.

Sewage sludge unit boundary is the outermost perimeter of an active sewage sludge unit.

Specific oxygen uptake rate (SOUR) is the mass of oxygen consumed per unit time per unit mass of total solids (dry weight basis) in sewage sludge.

Stack height is the difference between the elevation of the top of a sewage sludge incinerator stack and the elevation of the ground at the base of the stack when the difference is equal to or less than 65 meters. When the difference is greater than 65 meters, stack height is the creditable stack height determined in accordance with 40 CFR §51.100 (ii).

State is one of the United States of America, the District of Columbia, the Commonwealth of Puerto Rico, the Virgin Islands, Guam, American Samoa, the Trust Territory of the Pacific Islands, the Commonwealth of the Northern Mariana Islands, and an Indian tribe eligible for treatment as a State pursuant to regulations promulgated under the authority of section 518(e) of the CWA.

Store or storage of sewage sludge is the placement of sewage sludge on land on which the sewage sludge remains for two years or less. This does not include the placement of sewage sludge on land for treatment.

Surface disposal site is an area of land that contains one or more active sewage sludge units.

NPDES PART II STANDARD CONDITIONS (January, 2007)

Total hydrocarbons means the organic compounds in the exit gas from a sewage sludge incinerator stack measured using a flame ionization detection instrument referenced to propane.

Total solids are the materials in sewage sludge that remain as residue when the sewage sludge is dried at 103 to 105 degrees Celsius.

Treat or treatment of sewage sludge is the preparation of sewage sludge for final use or disposal. This includes, but is not limited to, thickening, stabilization, and dewatering of sewage sludge. This does not include storage of sewage sludge.

Treatment works is either a federally owned, publicly owned, or privately owned device or system used to treat (including recycle and reclaim) either domestic sewage or a combination of domestic sewage and industrial waste of a liquid nature.

Unstable area is land subject to natural or human-induced forces that may damage the structural components of an active sewage sludge unit. This includes, but is not limited to, land on which the soils are subject to mass movement.

Unstabilized solids are organic materials in sewage sludge that have not been treated in either an aerobic or anaerobic treatment process.

Vector attraction is the characteristic of sewage sludge that attracts rodents, flies, mosquitoes, or other organisms capable of transporting infectious agents.

Volatile solids is the amount of the total solids in sewage sludge lost when the sewage sludge is combusted at 550 degrees Celsius in the presence of excess air.

Wet electrostatic precipitator is an air pollution control device that uses both electrical forces and water to remove pollutants in the exit gas from a sewage sludge incinerator stack.

Wet scrubber is an air pollution control device that uses water to remove pollutants in the exit gas from a sewage sludge incinerator stack.

3. Commonly Used Abbreviations

BOD	Five-day biochemical oxygen demand unless otherwise specified
CBOD	Carbonaceous BOD
CFS	Cubic feet per second
COD	Chemical oxygen demand
Chlorine	
Cl ₂	Total residual chlorine
TRC	Total residual chlorine which is a combination of free available chlorine (FAC, see below) and combined chlorine (chloramines, etc.)

NPDES PART II STANDARD CONDITIONS
(January, 2007)

TRO	Total residual chlorine in marine waters where halogen compounds are present
FAC	Free available chlorine (aqueous molecular chlorine, hypochlorous acid, and hypochlorite ion)
Coliform	
Coliform, Fecal	Total fecal coliform bacteria
Coliform, Total	Total coliform bacteria
Cont. (Continuous)	Continuous recording of the parameter being monitored, i.e. flow, temperature, pH, etc.
Cu. M/day or M ³ /day	Cubic meters per day
DO	Dissolved oxygen
kg/day	Kilograms per day
lbs/day	Pounds per day
mg/l	Milligram(s) per liter
ml/l	Milliliters per liter
MGD	Million gallons per day
Nitrogen	
Total N	Total nitrogen
NH ₃ -N	Ammonia nitrogen as nitrogen
NO ₃ -N	Nitrate as nitrogen
NO ₂ -N	Nitrite as nitrogen
NO ₃ -NO ₂	Combined nitrate and nitrite nitrogen as nitrogen
TKN	Total Kjeldahl nitrogen as nitrogen
Oil & Grease	Freon extractable material
PCB	Polychlorinated biphenyl
pH	A measure of the hydrogen ion concentration. A measure of the acidity or alkalinity of a liquid or material
Surfactant	Surface-active agent

NPDES PART II STANDARD CONDITIONS
(January, 2007)

Temp. °C	Temperature in degrees Centigrade
Temp. °F	Temperature in degrees Fahrenheit
TOC	Total organic carbon
Total P	Total phosphorus
TSS or NFR	Total suspended solids or total nonfilterable residue
Turb. or Turbidity	Turbidity measured by the Nephelometric Method (NTU)
ug/l	Microgram(s) per liter
WET	“Whole effluent toxicity” is the total effect of an effluent measured directly with a toxicity test.
C-NOEC	“Chronic (Long-term Exposure Test) – No Observed Effect Concentration”. The highest tested concentration of an effluent or a toxicant at which no adverse effects are observed on the aquatic test organisms at a specified time of observation.
A-NOEC	“Acute (Short-term Exposure Test) – No Observed Effect Concentration” (see C-NOEC definition).
LC ₅₀	LC ₅₀ is the concentration of a sample that causes mortality of 50% of the test population at a specific time of observation. The LC ₅₀ = 100% is defined as a sample of undiluted effluent.
ZID	Zone of Initial Dilution means the region of initial mixing surrounding or adjacent to the end of the outfall pipe or diffuser ports.

**PERMIT ATTACHMENT A
MARINE ACUTE
TOXICITY TEST PROCEDURE AND PROTOCOL**

I. GENERAL REQUIREMENTS

The permittee shall conduct acceptable acute toxicity tests in accordance with the appropriate test protocols described below:

- Mysid Shrimp (Mysidopsis bahia or Americamysis bahia) **definitive 48 hour test.**
- Inland Silverside (Menidia beryllina) **definitive 48 hour test.**

Acute toxicity data shall be reported as outlined in Section VIII.

II. METHODS

Methods to follow are those recommended by EPA in:

Weber, C.I. et al. Methods for Measuring the Acute Toxicity of Effluents to Freshwater and Marine Organisms, Fourth Edition. Environmental Monitoring Systems Laboratory, U.S. Environmental Protection Agency, Cincinnati, OH. August 1993, EPA/600/4-90/027F.

Any exceptions are stated herein.

III. SAMPLE COLLECTION

A discharge sample shall be collected. Aliquots shall be split from the sample, containerized and preserved (as per 40 CFR Part 136) for the chemical and physical analyses. The remaining sample shall be dechlorinated (if detected) in the laboratory using sodium thiosulfate for subsequent toxicity testing. (Note that EPA approved test methods require that samples collected for metals analyses be preserved immediately after collection.) Grab samples must be used for pH, temperature, and total residual oxidants (as per 40 CFR Part 122.21).

Standard Methods for the Examination of Water and Wastewater describes dechlorination of samples (APHA, 1992). Dechlorination can be achieved using a ratio of 6.7 mg/L anhydrous sodium thiosulfate to reduce 1.0 mg/L chlorine. A thiosulfate control (maximum amount of thiosulfate in lab control or receiving water) should also be run.

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

IV. DILUTION WATER

A grab sample of dilution water used for acute toxicity testing shall be collected at a point away from the discharge which is free from toxicity or other sources of contamination. Avoid collecting near areas of obvious road or agricultural runoff, storm sewers or other point source discharges. An additional control (0% effluent) of a standard laboratory water of known quality shall also be tested.

If the receiving water diluent is found to be, or suspected to be toxic or unreliable, an alternate standard dilution water of known quality with a conductivity, salinity, total suspended solids, and pH similar to that of the receiving water may be substituted **AFTER RECEIVING WRITTEN APPROVAL FROM THE PERMIT ISSUING AGENCY(S)**. Written requests for use of an alternative dilution water should be mailed with supporting documentation to the following address:

Director
Office of Ecosystem Protection
U. S. Environmental Protection Agency-New England
One Congress Street
Suite 1100 - CAA
Boston, MA 02114-2023

It may prove beneficial to have the proposed dilution water source screened for suitability prior to toxicity testing. EPA strongly urges that screening be done prior to set up of a full definitive toxicity test any time there is question about the dilution water's ability to support acceptable performance as outlined in the 'test acceptability' section of the protocol.

V. TEST CONDITIONS AND TEST ACCEPTABILITY CRITERIA

EPA New England requires tests be performed using four replicates of each control and effluent concentration because the non-parametric statistical tests cannot be used with data from fewer replicates. The following tables summarize the accepted Mysid and Menidia toxicity test conditions and test acceptability criteria:

**EPA NEW ENGLAND RECOMMENDED EFFLUENT TOXICITY TEST CONDITIONS
FOR THE MYSID, MYSIDOPSIS BAHIA 48 HOUR TEST¹**

1. Test type	Static, non-renewal
2. Salinity	25ppt \pm 10 percent for all dilutions by adding dry ocean salts
3. Temperature (°C)	20°C \pm 1°C or 25°C \pm 1°C
4. Light quality	Ambient laboratory illumination
5. Photoperiod	16 hour light, 8 hour dark
6. Test chamber size	250 ml
7. Test solution volume	200 ml
8. Age of test organisms	1-5 days
9. No. Mysids per test chamber	10
10. No. of replicate test chambers per treatment	4
11. Total no. Mysids per test concentration	40
12. Feeding regime	Light feeding using concentrated <u>Artemia</u> nauplii while holding prior to initiating the test
13. Aeration ²	None
14. Dilution water	Natural seawater, or deionized water mixed with artificial sea salts
15. Dilution factor	≥ 0.5
16. Number of dilutions ³	5 plus a control. An additional dilution at the permitted effluent concentration (%effluent) is required if it is not included in the dilution series.
17. Effect measured	Mortality - no movement of body appendages on gentle prodding

18. Test acceptability	90% or greater survival of test organisms in control solution
19. Sampling requirements	For on-site tests, samples are used within 24 hours of the time that they are removed from the sampling device. For off-site tests, samples must be first used within 36 hours of collection.
20. Sample volume required	Minimum 1 liter for effluents and 2 liters for receiving waters

Footnotes:

1. Adapted from EPA/600/4-90/027F.
2. If dissolved oxygen falls below 4.0 mg/L, aerate at rate of less than 100 bubbles/min. Routine D.O. checks are recommended.
3. When receiving water is used for dilution, an additional control made up of standard laboratory dilution water (0% effluent) is required.

EPA NEW ENGLAND RECOMMENDED TOXICITY TEST CONDITIONS FOR THE INLAND SILVERSIDE, MENIDIA BERYLLINA 48 HOUR TEST¹

1. Test Type	Static, non-renewal
2. Salinity	25 ppt \pm 2 ppt by adding dry ocean salts
3. Temperature	20°C \pm 1°C or 25°C \pm 1°C
4. Light Quality	Ambient laboratory illumination
5. Photoperiod	16 hr light, 8 hr dark
6. Size of test vessel	250 mL (minimum)
7. Volume of test solution	200 mL/replicate (minimum)
8. Age of fish	9-14 days; 24 hr age range
9. No. fish per chamber	10 (not to exceed loading limits)
10. No. of replicate test vessels per treatment	4
11. total no. organisms per concentration	40
12. Feeding regime	Light feeding using concentrated <u>Artemia</u> nauplii while holding prior to initiating the test
13. Aeration ²	None
14. Dilution water	Natural seawater, or deionized water mixed with artificial sea salts.
15. Dilution factor	≥ 0.5
16. Number of dilutions ³	5 plus a control. An additional dilution at the permitted concentration (% effluent) is required if it is not included in the dilution series.
17. Effect measured	Mortality-no movement on gentle prodding.

18. Test acceptability	90% or greater survival of test organisms in control solution.
19. Sampling requirements	For on-site tests, samples must be used within 24 hours of the time they are removed from the sampling device. Off-site test samples must be used within 36 hours of collection.
20. Sample volume required	Minimum 1 liter for effluents and 2 liters for receiving waters.

Footnotes:

1. Adapted from EPA/600/4-90/027F.
2. If dissolved oxygen falls below 4.0 mg/L, aerate at rate of less than 100 bubbles/min. Routine D.O. checks recommended.
3. When receiving water is used for dilution, an additional control made up of standard laboratory dilution water (0% effluent) is required.

VI. CHEMICAL ANALYSIS

At the beginning of the static acute test, pH, salinity, and temperature must be measured at the beginning and end of each 24 hour period in each dilution and in the controls. The following chemical analyses shall be performed for each sampling event.

<u>Parameter</u>	<u>Effluent</u>	<u>Diluent</u>	<u>Minimum Quanti- fication Level (mg/L)</u>
pH	x	x	---
Salinity	x	x	PPT(o/oo)
Total Residual Oxidants ^{*1}	x	x	0.05
Total Solids and Suspended Solids	x	x	---
Ammonia	x	x	0.1
Total Organic Carbon	x	x	0.5
<u>Total Metals</u>			
Cd		x	0.001
Cr		x	0.005
Pb		x	0.005
Cu		x	0.0025
Zn		x	0.0025
Ni		x	0.004
Al		x	0.02

Superscript:

^{*1} Total Residual Oxidants

Either of the following methods from the 18th Edition of the APHA Standard Methods for the Examination of Water and Wastewater must be used for these analyses:

- Method 4500-Cl E Low Level Amperometric Titration (the preferred method);
- Method 4500-CL G DPD Photometric Method.

or use USEPA Manual of Methods Analysis of Water or Wastes, Method 330.5.

VII. TOXICITY TEST DATA ANALYSIS

LC50 Median Lethal Concentration

An estimate of the concentration of effluent or toxicant that is lethal to 50% of the test organisms during the time prescribed by the test method.

Methods of Estimation:

- Probit Method
- Spearman-Kärber
- Trimmed Spearman-Kärber
- Graphical

See flow chart in Figure 6 on page 77 of EPA 600/4-90/027F for appropriate method to use on a given data set.

No Observed Acute Effect Level (NOAEL)

See flow chart in Figure 13 on page 94 of EPA 600/4-90/027F.

VIII. TOXICITY TEST REPORTING

The following must be reported:

- Description of sample collection procedures, site description;
- Names of individuals collecting and transporting samples, times and dates of sample collection and analysis on chain-of-custody; and
- General description of tests: age of test organisms, origin, dates and results of standard toxicant tests; light and temperature regime; other information on test conditions if different than procedures recommended. Reference toxicity test data must be included.
- Raw data and bench sheets.
- All chemical/physical data generated. (Include minimum detection levels and minimum quantification levels.)
- Provide a description of dechlorination procedures (as applicable).
- Any other observations or test conditions affecting test outcome.
- Statistical tests used to calculate endpoints.

RESPONSE TO COMMENTS
ON DRAFT MODIFICATION OF NPDES PERMIT NO. MA0000833
EXXONMOBIL OIL CORPORATION-EVERETT TERMINAL

The U.S. Environmental Protection Agency (EPA or Region) and the Massachusetts Department of Environmental Protection (MassDEP) solicited public comments from December 10, 2009 through January 8, 2010 on the draft National Pollution Discharge Elimination System (NPDES) permit modification for ExxonMobil Oil Corporation's (ExxonMobil's) bulk petroleum storage facility in Everett, Massachusetts. The permit modification is being jointly issued by EPA and MassDEP under the federal Clean Water Act and Massachusetts Clean Waters Act, respectively. The Region received timely comments from one party: Michael Fager of Mystic River Watershed Association (MyRWA). This document presents EPA's and MassDEP's joint response to comments. No substantive changes were made between the draft and final permit modification. However, administrative updates were made to the permit, such as the name and title of the current MassDEP signator.

The Final Modified Permit and this response to public comments are available and can be downloaded from EPA's web site at http://www.epa.gov/NE/npdes/permits_listing_ma.html. Copies of the Final Modified Permit also may be obtained by writing or calling Ellen Weitzler, Office of Ecosystem Protection, 5 Post Office Square, Suite 100, Boston, MA 02109-3912; Telephone: (617) 918-1582.

Background

The Region re-issued NPDES Permit No. MA0000833 ("Final Permit") on September 29, 2008, to ExxonMobil to authorize point source discharges during dry weather and wet weather from a bulk petroleum storage facility in Everett, Massachusetts to a culvert that leads to the Island End River. The Final Permit authorized discharges consisting of storm water, groundwater, hydrostatic test water, boiler condensate, fire testing water and effluent pond water, subject to effluent limitations and monitoring conditions.

Following issuance of the Final Permit, ExxonMobil timely petitioned the U.S. Environmental Protection Agency Environmental Appeals Board ("Board") for review of the Final Permit under 40 C.F.R § 124.19(a). ExxonMobil's petition challenged various aspects of the Final Permit on substantive as well as procedural grounds. *See* Petition for Review of a NPDES Permit Issued by EPA Region 1, dated October 28, 2008 ("Petition").

Following receipt of ExxonMobil's Petition, the Board directed the Region to prepare a response that addressed ExxonMobil's contentions and whether ExxonMobil had satisfied the requirements for obtaining review. Subsequently, the parties jointly moved the Board to extend the deadline for the Region to file its response to ExxonMobil's Petition, to allow the parties to explore the viability of settlement. The parties successfully settled their dispute. Under the settlement, ExxonMobil *withdrew its Petition*, and the Region *withdrew the contested conditions* and agreed to propose modified conditions for public review and comment. The Board dismissed the appeal on August 11, 2009.

The proposed permit modification established separate effluent limitations and monitoring requirements to address wet weather discharges (dominated by storm water) and dry weather discharges (comprised of infiltrated groundwater, some of which exhibits contamination from historic refinery and bulk petroleum operations). To implement this tiered permitting structure, ExxonMobil agreed to extensively redesign its effluent treatment system in order to improve effluent quality under all flow conditions, including through the use of a continuously operated advanced treatment system, and a flow equalization tank to store storm

water volume during periods of peak storm water flow. The continuously operated treatment system will be capable of treating the dry weather flow from the site, as well as storm water flow.

ExxonMobil also agreed to move forward with the effluent treatment system upgrade in the absence of a final permit so that it will be in a position to comply with all aspects of the permit modification upon the date of final permit modification issuance. The Region, for its part, agreed to time the issuance of the final permit modification to allow ExxonMobil to complete its upgrade so long as certain interim milestones are achieved as outlined in the Memorandum of Understanding (MOU), dated August 5, 2009, between ExxonMobil and the Region.

ExxonMobil has completed the work on the effluent treatment system upgrade under the MOU. The issuance of the final permit modification is the final step in the implementation of the settlement. Upon the effective date of the final permit modification, the treatment system will come online and become fully operational.

Comments

Michael A. Fager submitted the following comments on behalf of MyRWA:

The Mystic River Watershed Association is an organization whose mission is to restore clean water in the Mystic River watershed, to protect that water quality and related natural resources within the watershed. To this end, we support the NPDES permit issued to ExxonMobil for their bulk petroleum storage facility in Everett, Massachusetts, on September 20, 2008. We do not support the petition for modification of that permit filed by ExxonMobil. Therefore, we are requesting that the requested modification of that permit be denied, and the original permit, as issued, be put in force.

We specifically object to the requested modification because, in our opinion, those modifications will lead to a decline in the water quality of the Mystic River, and will thus have an adverse impact on marine and estuarine organisms that inhabit the waters that will be impacted by these discharges. At this point, any permit issued should be structured with the goal of improving the quality of the receiving waters, which we feel the original NPDES permit as issued would do. Therefore we feel that ExxonMobil should be held to the standards of that permit, as issued, and the requested modifications of that permit should be denied.

Response:

It is difficult for the Region to respond with specificity to the comment because the commenter does not substantiate its claim that the permit modification will lead to a decline in Mystic River water quality, or otherwise set forth any factual basis for the assertion, or provide any other indication of how the permit modification might possibly lead to adverse water quality impacts. The commenter also does not explain why it prefers the permit as originally proposed—the contested portions of which have already been withdrawn, in 2009—over the alternative of the permit modification. The Region is therefore unclear what specific aspects of the permit modification the commenter finds objectionable, and why.

The Region respectfully disagrees with the opinion that the permit modification will lead to a decline in the water quality of the Mystic River. The Region is not aware of any aspect of the permit modification that would lead to a decline in receiving water quality. In the Region's judgment, the opposite is true: the modification enhances the permit's overall water quality benefit while ensuring compliance with applicable water quality- and technology-based requirements. The combination of new and modified treatment facilities, as well as ongoing maintenance and operations efforts, under the

permit modification will result in continued benefits and improvements to the Island End River and the Mystic River Watershed area, as described below.

The permit modification was primarily designed to address the problem of infiltration and discharge of contaminated groundwater through the stormwater collection and treatment system, but takes a more prescriptive approach than the withdrawn conditions. The Region believes the permit modification addresses the contaminated groundwater issue more effectively than the original conception, because it includes technological, operational, and implementation detail targeted to address the problem significantly beyond that of the original permit. These detailed permitting requirements provide the Region with additional assurance that the groundwater infiltration issue is being effectively addressed. Additionally, the requirements ensure that the stormwater collection and treatment system is operated in a manner that achieves better overall effluent quality than contemplated by the original permit.

Under the modification, the new and modified facilities are required to address stormwater flows, infiltrating groundwater and other permitted discharges, under a variety of flow scenarios, which vary widely at the 110 acre site. This final permit modification requires a comprehensive system that provides treatment of effluent before discharge in all but the most extreme storm events exceeding the 10-year, 24 hour design storm event calculated at 13,600 gpm. The combined system provides continuous treatment of flows up to 280 gpm (over 12 million gallons per month) through sand filters and activated carbon. In order to meet the permit modification requirements, ExxonMobil has also modified its existing facilities to provide 2.1 million gallons of storage capacity to contain significant flows generated by most storm events. This will result in very infrequent discharges through Outfall 01B, known as bypass events. Indeed, since the storage modifications were completed in September 2010, there has not been a single discharge through Outfall 01B.

In addition, during the period between 2009 and June 2011, ExxonMobil, under the terms of the MOU, was required to conduct significant maintenance of its storm sewer system which included cleaning and inspecting over 150 vertical drainage structures and mapping over 5 miles of on-site piping. Repairs were made to over 50 vertical structures to reduce the infiltration of contaminated groundwater in those structures. Annual inspections and modifications to the storm drain system continue, along with investigations of potential groundwater contamination source areas. ExxonMobil's NPDES permit requires on-going operation and maintenance programs, including enhanced sediment control, which also contribute to improved water quality in its discharge.

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

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

ExxonMobil Oil Corporation

is authorized to discharge from a facility located at

**ExxonMobil Everett Terminal
52 Beacham Street
Everett, MA 02149**

to receiving water named

Island End River/Mystic River Watershed (MA71)

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

This permit was signed on September 29, 2008 and became effective on January 1, 2009 (“2009 Permit”), to the extent described in the Notice of Uncontested and Severable Conditions, dated November 20, 2008, issued by the Regional Administrator of Region 1 of the United States Environmental Protection Agency (“Notice”). The 2009 Permit superseded the prior permit issued on March 6, 2000, to the extent described in the Notice.

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

This permit and the authorization to discharge shall expire at midnight on **January 1, 2014**.

This permit consists of 15 pages in Part I, including effluent limitations and monitoring requirements, 25 pages in Part II, including General Conditions and Definitions, and 10 pages in Attachment A, Marine Acute Toxicity Test Procedure and Protocol.

Signed this ___ day of _____, 2009.

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

Glenn Haas, Director
Division of Watershed Management
Department of Environmental Protection
Commonwealth of Massachusetts
Boston, MA

PART I

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

1. Definitions

- a. *Conventional oil water separator* refers to the secondary gravity-type separator in the ExxonMobil Everett Terminal treatment works.
- b. *Continuous treatment system* refers to the treatment system that is designed to remove pollutants from dry weather and stormwater flows up to its design capacity of 280 gpm in the ExxonMobil Everett Terminal treatment works.
- c. *Corrugated plate separator* refers to the main separator with a design capacity of 4,000 gpm in the ExxonMobil Everett Terminal treatment works.
- d. *Minimum Level (ML)* shall mean the level at which the entire analytical system gives recognizable mass spectra and/or acceptable calibration points. This level corresponds to the lowest point at which the calibration curve is determined based on analyses for the pollutant of concern in reagent water. The ML for a gas chromatographic-mass spectrometry method or inductively coupled plasma-mass spectrometry method is based on both mass spectra and acceptable calibration points. The ML for methods that do not use mass spectrometry for pollutant confirmation and/or have no published ML in the method documentation is based on the method detection limit (MDL) and minimum level (ML) determinations as described in Section 9.3.1.1 of "Protocol for EPA Approval of New Methods for Organic and Inorganic Analysis in Wastewater and Drinking Water" (EPA 821-B-98-003, March 1999).
- e. *"10-year 24-hour precipitation event"* shall mean a rainfall event with a probable recurrence interval of once in ten years. This information is available from National Oceanic & Atmospheric Administration, U.S. Department of Commerce. The 10-year 24-hour rainfall in Boston is estimated at 4.6 inches [Figure 2, Natural Resources Conservation Service Technical Release 55 (TR-55) - Urban Hydrology for Small Watersheds (1986)].

2. During the period beginning from the effective date and lasting through expiration, the permittee is authorized to discharge corrugated plate separator effluent from **Serial Number Outfall 01A** to the culvert at Island End River. The discharge is comprised of storm water, groundwater, hydrostatic test water, boiler condensate, fire testing water, truck wash water, effluent pond water and continuous treatment system filter backwash water. Such discharge shall: 1) be limited and monitored by the permittee as specified below; and 2) not cause a violation of the State Water Quality Standards of the receiving water.

Effluent Characteristic	Units	Discharge Limitation		Monitoring Requirements ⁽¹⁾	
		Average Monthly	Maximum Daily	Measurement Frequency ⁽²⁾	Sample Type
Flow Rate ⁽³⁾	MGD	Report	Report	Continuous	Meter
Total Suspended Solids (TSS)	mg/l	30	100	1/Month	Grab
Oil and Grease (O&G)	mg/l	----	15	1/Month	Grab
pH ⁽⁴⁾	S.U.	----	6.5 to 8.5	1/Month	Grab
Available Cyanide ⁽⁵⁾	µg/L	----	Report	Quarterly	Grab
Total Mercury ⁽⁶⁾	µg/L	----	Report	Quarterly	Grab
<u>Polycyclic Aromatic Hydrocarbons (PAHs)⁽⁷⁾⁽⁸⁾</u>					
Group I:					
Benzo(a)anthracene	µg/L	----	0.031	Quarterly	Grab
Benzo(a)pyrene	µg/L	----	0.031	Quarterly	Grab
Benzo(b)fluoranthene	µg/L	----	0.031	Quarterly	Grab
Benzo(k)fluoranthene	µg/L	----	0.031	Quarterly	Grab
Chrysene	µg/L	----	0.031	Quarterly	Grab
Dibenzo(a,h)anthracene	µg/L	----	0.031	Quarterly	Grab
Indeno(1,2,3-cd)pyrene	µg/L	----	0.031	Quarterly	Grab
Group II:					
Acenaphthene	µg/L	----	0.031	Quarterly	Grab
Acenaphthylene	µg/L	----	0.031	Quarterly	Grab
Anthracene	µg/L	----	0.031	Quarterly	Grab
Benzo(ghi)perylene	µg/L	----	0.031	Quarterly	Grab
Fluoranthene	µg/L	----	0.031	Quarterly	Grab
Fluorene	µg/L	----	0.031	Quarterly	Grab
Naphthalene	µg/L	----	0.031	Quarterly	Grab
Phenanthrene	µg/L	----	0.031	Quarterly	Grab
Pyrene	µg/L	----	0.031	Quarterly	Grab
Total PAHs	µg/L	----	50	Quarterly	Grab
<u>Volatile Organic Compounds (VOCs)</u>					
Benzene	µg/L	----	40	Quarterly	Grab
Toluene	µg/L	----	Report	Quarterly	Grab
Ethylbenzene	µg/L	----	Report	Quarterly	Grab
Total Xylenes	µg/L	----	Report	Quarterly	Grab
Ethanol	µg/L	----	Report	Quarterly	Grab
Methyl Tertiary-Butyl Ether (MTBE) ⁽⁹⁾	µg/L	----	Report	Quarterly	Grab

Footnotes:

1. All sampling shall be representative of the effluent that is discharged through outfall 01A to the culvert at Island End River. All samples shall be analyzed using the analytical methods found in 40 CFR Part 136, or alternative methods approved by EPA in accordance with the procedures in 40 CFR Part 136. Total Xylenes and MTBE can be analyzed using EPA Method 602. Ethanol can be analyzed using EPA Method 1671.
2. Sampling frequency of 1/month is defined as the sampling of one (1) significant rain event in each calendar month. Monthly sampling is only required if there is discharge from outfall 01A during a calendar month. Sampling frequency of quarterly is defined as the sampling of one (1) event in each quarter. Quarters are defined as the interval of time between the months of: January through March, inclusive; April through June, inclusive; July through September, inclusive; and October through December, inclusive. **Quarterly sampling shall be performed concurrently with the monthly monitoring event.** The permittee shall submit to EPA and MassDEP the results of any additional testing of the parameters established for outfall 01A if conducted in accordance with EPA approved methods consistent with the provisions of 40 CFR § 122.41(l)(4)(ii).
3. For Flow Rate, the permittee shall report the maximum daily flow rate of water discharged by the facility during the reporting period. The maximum daily flow rate, which is to be measured in the units of millions of gallons per day (MGD), shall be based upon the totalizer flow results or an approved equivalent flow measuring device.
4. See Part I.A.6., Page 9.
5. Available cyanide shall be analyzed using a detection limit less than or equal to 2.0 µg/l. After submitting ten (10) consecutive quarterly sampling results that are each below the available cyanide detection limit, the permittee may submit a written request to EPA for approval to eliminate required testing for available cyanide. The permittee is required to continue testing for this pollutant at the frequency specified in the permit until notice is received by certified mail from EPA that the permittee's request has been approved and the available cyanide testing requirement eliminated.
6. Total mercury shall be analyzed using a detection limit less than or equal to 2.0 µg/l. After submitting ten (10) consecutive quarterly sampling results that are each below the total mercury detection limit, the permittee may submit a written request to EPA for approval to eliminate required testing for total mercury. The permittee is required to continue testing for this pollutant at the frequency specified in the permit until notice is received by certified mail from EPA that the permittee's request has been approved and the total mercury testing requirement eliminated.
7. Compliance/non-compliance for Polycyclic Aromatic Hydrocarbons (PAHs) for discharges at outfall 01A shall be 10 µg/l for individual PAHs.
8. Analytical methods used to measure PAHs shall use minimum levels no greater than the minimum levels identified in Part I.A.20 on page 10.
9. MTBE shall be analyzed using a minimum level less than or equal to 5 µg/l. After submitting ten (10) consecutive quarterly sampling results that are each below the MTBE minimum level, the permittee may submit a written request to EPA for approval to eliminate required testing for MTBE. The permittee is required to continue testing for this pollutant at the frequency specified in the permit until notice is received by certified mail from EPA that the permittee's request has been approved and the MTBE testing requirement eliminated.

3. During the period beginning from the effective date and lasting through expiration, the permittee is authorized to discharge conventional oil water separator effluent from **Serial Number Outfall 01B** to the culvert at Island End River. The discharge is comprised of storm water, groundwater, hydrostatic test water, boiler condensate, fire testing water, truck wash water and effluent pond water. Such discharge shall: 1) be limited and monitored by the permittee as specified below; and 2) not cause a violation of the State Water Quality Standards of the receiving water.

Effluent Characteristic	Units	Discharge Limitation		Monitoring Requirements ⁽¹⁾	
		Average Monthly	Maximum Daily	Measurement Frequency ⁽²⁾	Sample Type
Flow Rate ⁽³⁾	MGD	Report	Report	Continuous	Meter
Total Suspended Solids (TSS)	mg/l	Report	Report	Each Discharge	Grab
Oil and Grease (O&G)	mg/l	----	Report	Each Discharge	Grab
pH ⁽⁴⁾	S.U.	----	Report	Each Discharge	Grab

Footnotes:

1. All sampling shall be representative of the effluent that is discharged through outfall 01B to the culvert at Island End River. All samples shall be analyzed using the analytical methods found in 40 CFR Part 136, or alternative methods approved by EPA in accordance with the procedures in 40 CFR Part 136.
2. A "Discharge Event" is defined as single or multiple discharges associated with a precipitation event. A discharge event will end after 72-hours have elapsed since the previous storm event. The permittee shall record the date and duration (in hours) of the discharge event(s) sampled, daily rainfall measurements or estimates (in inches) of the storm event that generated the sampled runoff, and the end of the previous measurable (greater than 0.1 inch rainfall) storm event. The permittee shall submit to EPA and MassDEP the results of any additional testing of the parameters established for outfall 01B if conducted in accordance with EPA approved methods consistent with the provisions of 40 CFR § 122.41(l)(4)(ii).
3. For Flow Rate, the permittee shall report the maximum daily flow rate of water discharged by the facility during the reporting period. The maximum daily flow rate, which is to be measured in the units of millions of gallons per day (MGD), shall be based upon the totalizer flow results or an approved equivalent flow measuring device.
4. See Part I.A.6., Page 9.

4. During the period beginning from the effective date and lasting through expiration, the permittee is authorized to discharge continuous treatment system effluent from **Serial Number Outfall 01C** to the culvert at Island End River. The discharge is comprised of storm water, groundwater, hydrostatic test water, boiler condensate, fire testing water, truck wash water, effluent pond water, and continuous treatment system filter backwash water. Such discharge shall: 1) be limited and monitored by the permittee as specified below; and 2) not cause a violation of the State Water Quality Standards of the receiving water.

Effluent Characteristic	Units	Discharge Limitation		Monitoring Requirements ⁽¹⁾	
		Average Monthly	Maximum Daily	Measurement Frequency ⁽²⁾	Sample Type
Flow Rate ⁽³⁾	MGD	Report	Report	Continuous	Meter
Total Suspended Solids (TSS)	mg/l	30	100	1/Month	Grab
Oil and Grease (O&G)	mg/l	----	5	1/Month	Grab
pH ⁽⁴⁾	S.U.	----	6.5 to 8.5	1/Month	Grab
Available Cyanide ⁽⁵⁾	µg/L	----	Report	Quarterly	Grab
<u>Metals</u>					
Total Aluminum	mg/L	----	Report	Quarterly	Grab
Total Cadmium	mg/L	----	Report	Quarterly	Grab
Total Chromium	mg/L	----	Report	Quarterly	Grab
Total Copper	mg/L	----	Report	Quarterly	Grab
Total Lead	mg/L	----	Report	Quarterly	Grab
Total Mercury ⁽⁶⁾	mg/L	----	Report	Quarterly	Grab
Total Nickel	mg/L	----	Report	Quarterly	Grab
Total Zinc	mg/L	----	Report	Quarterly	Grab
<u>Whole Effluent Toxicity (WET)^(7,8)</u>					
LC ₅₀	%	----	>50	2/year	Grab
Total Solids	mg/L	----	Report	2/year	Grab
Ammonia	mg/L	----	Report	2/year	Grab
Total Organic Carbon	mg/L	----	Report	2/year	Grab

Effluent Characteristic	Units	Discharge Limitation		Monitoring Requirements ⁽¹⁾	
		Average Monthly	Maximum Daily	Measurement Frequency ⁽²⁾	Sample Type
<u>Polycyclic Aromatic Hydrocarbons (PAHs)⁽⁹⁾</u>					
Group I:					
Benzo(a)anthracene	µg/L	----	0.018	1/Month	Grab
Benzo(a)pyrene	µg/L	----	0.018	1/Month	Grab
Benzo(b)flouranthene	µg/L	----	0.018	1/Month	Grab
Benzo(k)fluoranthene	µg/L	----	0.018	1/Month	Grab
Chrysene	µg/L	----	0.018	1/Month	Grab
Dibenzo(a,h)anthracene	µg/L	----	0.018	1/Month	Grab
Indeno(1,2,3-cd)pyrene	µg/L	----	0.018	1/Month	Grab
Group II:					
Acenaphthene	µg/L	----	0.031	1/Month	Grab
Acenaphthylene	µg/L	----	0.031	1/Month	Grab
Anthracene	µg/L	----	0.031	1/Month	Grab
Benzo(ghi)perylene	µg/L	----	0.031	1/Month	Grab
Fluoranthene	µg/L	----	0.031	1/Month	Grab
Fluorene	µg/L	----	0.031	1/Month	Grab
Naphthalene	µg/L	----	0.031	1/Month	Grab
Phenanthrene	µg/L	----	0.031	1/Month	Grab
Pyrene	µg/L	----	0.031	1/Month	Grab
<u>Volatile Organic Compounds (VOCs)</u>					
Benzene	µg/l	----	5	1/Month	Grab
Toluene	µg/l	----	Report	1/Month	Grab
Ethylbenzene	µg/l	----	Report	1/Month	Grab
Total Xylenes	µg/l	----	Report	1/Month	Grab
BTEX ⁽¹⁰⁾	µg/l	----	100	1/Month	Grab
Methyl Tertiary-Butyl Ether (MTBE) ⁽¹¹⁾	µg/l	----	70	1/Month	Grab

Footnotes:

1. All sampling shall be representative of the effluent that is discharged through outfall 01C to the culvert at Island End River. All samples shall be analyzed using the analytical methods found in 40 CFR Part 136, or alternative methods approved by EPA in accordance with the procedures in 40 CFR Part 136. Total Xylenes and MTBE can be analyzed using EPA Method 602.
2. Sampling frequency of 1/month is defined as the sampling of once each calendar month. Sampling frequency of quarterly is defined as the sampling of one (1) event in each quarter. Quarters are defined as the interval of time between the months of: January through March, inclusive; April through June, inclusive; July through September, inclusive; and October through December, inclusive. **Quarterly sampling shall be performed concurrently with the monthly monitoring event.** The permittee shall submit to EPA and MassDEP the results of any additional testing of the parameters established for outfall 01C if conducted in accordance with EPA approved methods consistent with the provisions of 40 CFR §122.41(1)(4)(ii).

3. For Flow Rate, the permittee shall report the maximum daily flow rate of water discharged by the facility during the reporting period. The maximum daily flow rate, which is to be measured in the units of millions of gallons per day (MGD), shall be based upon the totalizer flow results or an approved equivalent flow measuring device.
4. See Part I.A.6, Page 9.
5. Available cyanide shall be analyzed using a detection limit less than or equal to 2.0 µg/l. After submitting ten (10) consecutive quarterly sampling results that are each below the available cyanide detection limit, the permittee may submit a written request to EPA for approval to eliminate required testing for available cyanide. The permittee is required to continue testing for this pollutant at the frequency specified in the permit until notice is received by certified mail from EPA that the permittee's request has been approved and the available cyanide testing requirement eliminated.
6. Total mercury shall be analyzed using a detection limit less than or equal to 2.0 µg/l. After submitting ten (10) consecutive quarterly sampling results that are each below the total mercury detection limit, the permittee may submit a written request to EPA for approval to eliminate required testing for total mercury. The permittee is required to continue testing for this pollutant at the frequency specified in the permit until notice is received by certified mail from EPA that the permittee's request has been approved and the total mercury testing requirement eliminated.
7. LC50 (Lethal Concentration 50 Percent) is the concentration of wastewater (effluent) causing mortality to 50 percent (%) of the test organisms. Therefore, a 50% limit means that a sample of 50% effluent shall cause no more than a 50% mortality rate. The limit is considered to be a maximum daily limit.
8. The permittee shall conduct 48-Hour Static Acute Whole Effluent Toxicity (WET) test on effluent samples from Outfall 01C two times a year, in March and September, using one specie, Mysid Shrimp (*Americamysis Bahía*, formerly known as *Mysidopsis Bahía*) and following the protocol in Attachment A (Marine Acute Toxicity Test Procedure and Protocol dated September 1996), provided, however, that in lieu of the method referenced in Part II of Attachment A, the permittee shall use EPA Method 2007.0 as identified in 40 CFR Part 136. Toxicity test results are to be submitted within 30 days after the sampling date with the routine Discharge Monitoring Reports (DMRs). Results of wet chemistry analyses conducted on WET test samples may be submitted to meet quarterly metals monitoring requirements. In that case, metals data would be submitted in the discharge monitoring report and in the WET test written report.
9. Compliance/non-compliance for Polycyclic Aromatic Hydrocarbons (PAHs) for discharges at outfall 01C will be based on the minimum level (ML) of analysis, as defined in Part 1.A.1. See Part I.A.20, Page 10 for the required MLs.
10. BTEX shall be reported as the sum of the detectable concentrations of benzene, toluene, ethylbenzene and xylenes.
11. MTBE shall be analyzed using a minimum level less than or equal to 5 µg/l. After submitting ten (10) consecutive quarterly sampling results that are each below the MTBE minimum level, the permittee may submit a written request to EPA for approval to eliminate required testing for MTBE. The permittee is required to continue testing for this pollutant at the frequency specified in the permit until notice is received by certified mail from EPA that the permittee's request has been approved and the MTBE testing requirement eliminated.

Part 1.A. (Continued)

5. The discharges either individually or in combination shall not cause or contribute to a violation of State Water Quality Standards of the receiving waters.
6. The pH of the effluent shall not be less than 6.5 or greater than 8.5 at any time unless these values are exceeded as a result of natural causes.
7. The discharge shall not cause objectionable discoloration of the receiving waters.
8. The discharge shall not contain a visible oil sheen, foam, or floating solids at any time.
9. The discharge shall not contain materials in concentrations or combinations which are hazardous or toxic to human health, aquatic life of the receiving surface waters or which would impair the uses designated by its classification.
10. There shall be no discharge of tank bottom water and/or bilge water alone or in combination with storm water discharge or other wastewater.
11. There shall be no discharge of floor wash water from the interior of the facility maintenance garage.
12. The discharge shall not impart color, taste, turbidity, toxicity, radioactivity or other properties which cause those waters to be unsuitable for the designated uses and characteristics ascribed to their use.
13. Notwithstanding specific conditions of this permit, the effluent must not lower the quality of any classified body of water below such classification, or lower the existing quality of any body of water if the existing quality is higher than the classification.
14. The permittee shall inspect, operate, and maintain the continuous treatment system, conventional oil water separator and the corrugated plate separator at the facility to ensure that the Effluent Limitations and Monitoring Requirements and other conditions contained in this permit are met. The permittee shall ensure that all components of the facility's Storm Water Pollution Prevention Plan, including those that specifically address the operation and maintenance of the separator(s) and other components of the storm water conveyance system, are complied with.
15. Chemicals (e.g., disinfecting agents, detergents, emulsifiers, etc.) and bioremedial agents including microbes shall not be added to the collection and treatment systems without prior approval by the U. S. Environmental Protection Agency (EPA) and the Massachusetts Department of Environmental Protection (MassDEP).
16. There shall be no discharge of any sludge and/or bottom deposits that has been physically removed from any storage tank(s), basin(s), and/or diked area(s) to the receiving waters. Examples of storage tanks and/or basins include, but are not limited to: primary catch basins, stilling basins, oil water separators, petroleum product storage tanks, baffled storage tanks collecting spills, and tank truck loading rack sumps.
17. No truck washing or hydrostatic testing shall occur during a storm event or following an overflow event or following a discharge event through outfall 01B until the potential for discharge through outfall 01B has ceased.
18. EPA may modify this permit in accordance with EPA regulations in 40 Code of Federal Regulations (CFR) § 122.62 and § 122.63 to incorporate more stringent effluent limitations, increase the frequency of analyses, or impose additional sampling and analytical requirements.
19. The appearance of any size sheen attributable to the discharge from this facility shall be reported immediately by the permittee to the National Response Center in accordance with Section 311 of the

Clean Water Act (CWA). This requirement is in addition to any reporting requirements related to EPA or MassDEP contained in this National Pollutant Discharge Elimination System (NPDES) permit.

20. PAH analysis shall include the following compounds and their respective minimum levels (as defined in part I.A.1) as identified in parenthesis for each compound. benzo(a)anthracene (<0.05 µg/L), benzo(a)pyrene (<0.05 µg/L), benzo(b)fluoranthene (<0.05 µg/L), benzo(k)fluoranthene (<0.05 µg/L), chrysene (<0.5 µg/L), dibenzo(a,h)anthracene (<0.10 µg/L), indeno(1,2,3-cd)pyrene (<0.10 µg/L), and naphthalene (5.00 µg/L), acenaphthene (<5.00 µg/L), acenaphthylene (<5.00 µg/L), anthracene (<2.0 µg/L), benzo(ghi)perylene (<0.2 µg/L), fluoranthene (<0.50 µg/L), fluorene (<0.5 µg/L), naphthalene (<5.00 µg/L), phenanthrene (<2.00 µg/L), and pyrene (<1.00 µg/L).
21. The permittee shall attach a copy of the laboratory case narrative to the respective Discharge Monitoring Report Form submitted to EPA and MassDEP for each sampling event reported. The laboratory case narrative shall include a copy of the laboratory data sheets for each analysis (identifying the test method, the analytical results, and the detection limits for each analyte) and provide a brief discussion of whether all appropriate QA/QC procedures were met and were within acceptable limits.
22. 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”:
 - i One hundred micrograms per liter (100 µg/l);
 - ii Two hundred micrograms per liter (200 µg/l) for acrolein and acrylonitrile; five hundred micrograms per liter (500 µg/l) for 2,4-dinitrophenol; and one milligram per liter (1 mg/L) for antimony;
 - iii 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
 - iv Any other notification level established by the Director in accordance with 40C.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”:
 - i Five hundred micrograms per liter (500 µg/L);
 - ii One milligram per liter (1 mg/L) for antimony;
 - iii 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).
 - iv Any other notification level established by the Director in accordance with 40C.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.
23. Wastewater Treatment System Flow
 - a. The continuous treatment system shall be designed, constructed, maintained and operated to treat the volume of storm water, groundwater and other associated wastewaters up to and including 280 gpm through outfall 01C.
 - b. The collection, storage and treatment systems shall be designed, constructed, maintained and

operated to treat the total equivalent volume of storm water, groundwater, hydrostatic test water, boiler condensate, fire testing water, truck wash water, effluent pond water and continuous treatment system filter backwash water which would result from a 10-year 24-hour precipitation event, which volume shall be discharged through outfall 01C and outfall 01A. All wet weather and dry weather discharges less than or equal to the design capacity of the continuous treatment system [280 gpm] shall be treated through the continuous treatment system and discharged at outfall 01C. The flow through the corrugated plate separator shall not exceed 4,000 gpm.

- c. Discharge from outfall 01B shall be limited to situations when the combined capacity of the facility to collect, store, treat and discharge wastewater through outfalls 01A and 01C is exceeded. As a result, it is expected that discharges through outfall 01B will occur only in extreme weather events.
- d. The permittee shall certify that the facility's collection storage and treatment systems have been designed, constructed, maintained and operated to meet the requirements of this permit. The certification shall be signed in accordance with the requirements identified in 40 CFR § 122.22. A copy of this certification shall be sent to EPA and MassDEP within sixty (60) days of the effective date of the Permit.
- e. Written notification and approval by EPA and the MassDEP shall be required, should the permittee propose changes to the storm water conveyance, storage or treatment systems which have the potential to cause the maximum design flow rate through any portion of the collection, storage and treatment systems to be increased.

24. 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.

25. Hydrostatic Test Water Discharges

- a. The hydrostatic test water shall be monitored as described below and discharged through outfalls 01A and 01C to the culvert at Island End River.
- b. At a minimum, four (4) representative samples shall be taken of the hydrostatic test water: one (1) grab sample of the influent test water; and three (3) serial-grab samples of the hydrostatic test water effluent. The influent grab sample shall be taken approximately midway through the fill segment of the hydrostatic test procedure. The three (3) effluent serial-grab samples shall be taken over the duration of the entire discharge segment of the hydrostatic test procedure. The first effluent serial-grab sample shall be taken during the initial phase of discharge; the second around the midpoint; and the third near the end of the discharge. The effluent serial-grab samples shall be obtained before discharge into the treatment works and/or mixing with any storm water or other non-storm water flow.

These influent and effluent samples shall be analyzed for the following parameters:

Effluent Characteristic	Units	Sample Type
-------------------------	-------	-------------

Total Suspended Solids (TSS)	mg/l	Grab
Oil and Grease (O&G)	mg/l	Grab
pH	S.U.	Grab
Dissolved Oxygen (DO)	mg/l	Grab
Total Residual Chlorine	mg/l	Grab
Benzene	µg/l	Grab
Toluene	µg/l	Grab
Ethylbenzene	µg/l	Grab
Total Xylenes	µg/l	Grab
Methyl Tertiary-Butyl Ether	µg/l	Grab
<u>PAHs</u>		
Benzo(a)anthracene	µg/l	Grab
Benzo(a)pyrene	µg/l	Grab
Benzo(b)fluoranthene	µg/l	Grab
Benzo(k)fluoranthene	µg/l	Grab
Chrysene	µg/l	Grab
Dibenzo(a,h)anthracene	µg/l	Grab
Indeno(1,2,3-cd)pyrene	µg/l	Grab
Acenaphthene	µg/l	Grab
Acenaphthylene	µg/l	Grab
Anthracene	µg/l	Grab
Benzo(ghi)perylene	µg/l	Grab
Fluoranthene	µg/l	Grab
Fluorene	µg/l	Grab
Naphthalene	µg/l	Grab
Phenanthrene	µg/l	Grab
Pyrene	µg/l	Grab

- c. Testing for total residual chlorine is only required when potable water or a similar source of water which is likely to contain a residual chlorine concentration is used for hydrostatic testing. Testing for MTBE is only required if the tank undergoing testing was recently (i.e., within three years of the proposed testing date) used to store gasoline containing MTBE.
- d. During discharge (i.e., approximately at the same time the three effluent grab samples are taken), the flow exiting the treatment system should be observed in order to prevent the inadvertent release of hydrocarbons to the receiving water(s). In the event that there is evidence of such a release (e.g., visible oil sheen and/or noticeable increase in turbidity of discharge water), the permittee shall immediately halt the discharge of hydrostatic test water and take steps to correct the problem.
- e. Any changes to these procedures must be approved by EPA and the MassDEP prior to their implementation.
- f. The permittee shall submit a letter/report to EPA and MassDEP, summarizing the results of the hydrostatic test within forty-five (45) days of completion of the test. This report shall contain: the date(s) during which the hydrostatic testing occurred; the estimated volume of hydrostatic test water discharged; a copy of the laboratory data sheets for each analyses, providing the test method, the detection limits for each analyte, and a brief discussion of whether all appropriate

QA/QC procedures were met and were within acceptable limits; and a comparison of the overall test results with the effluent limitations for outfall 01C in this permit.

- g. The U.S. Environmental Protection Agency shall reserve the right to re-open the permit, in accordance with 40 CFR § 122.62(a)(2), to limit hydrostatic test water discharges in the event that sampling results indicate that such discharge has a reasonable potential to cause or contribute to a violation of Massachusetts Water Quality Standards in the Island End River.

B. STORM WATER POLLUTION PREVENTION PLAN

1. The permittee shall develop, implement, and maintain a Storm Water Pollution Prevention Plan (SWPPP) designed to reduce, or prevent, the discharge of pollutants in storm water to the receiving waters identified in this permit. The SWPPP shall be a written document and consistent with the terms of this permit. The permittee shall comply with the terms of its SWPPP.
2. The SWPPP shall be completed or updated and signed by the Permittee within 90 days after the effective date of this Permit. The Permittee shall certify that the SWPPP has been completed or updated and that it meets the requirements of the permit. The certification shall be signed in accordance with the requirements identified in 40 CFR § 122.22. A copy of this initial certification shall be sent to EPA and MassDEP within one hundred and twenty (120) days of the effective date of the Permit.
3. The SWPPP shall be consistent with the provisions for SWPPPs included in the most current version of the Multi-Sector General Permits for Storm Water Discharges Associated with Industrial Activities. (The current MSGP was issued September 29, 2008 – see 73 FR 56572). The SWPPP shall include best management practices (BMPs) for on-site activities that will minimize the discharge of pollutants in storm water to waters of the United States.
4. The SWPPP shall be prepared in accordance with good engineering practices, identify potential sources of pollution that may reasonably be expected to affect the quality of the storm water discharges, and describe and ensure implementation of practices which will be used to reduce the pollutants and assure compliance with this permit. Specifically, the SWPPP shall contain the elements listed below:
 - a. A pollution prevention team responsible for developing, implementing, maintaining, revising and ensuring compliance with the SWPPP.
 - b. A site description which includes a list of activities at the facility; a site map showing drainage areas and direction of storm water flows; receiving waters and outfall location; areas of the facility where industrial materials or activities are exposed to storm water including the location of industrial activities, storage, disposal, material handling; and all structural controls.
 - c. A summary of all pollutant sources which includes all areas where spills have occurred or could occur. For each source, identify the expected drainage and the corresponding pollutant.
 - d. A summary of any existing storm water discharge sampling data.
 - e. A description of all storm water controls, both structural and non-structural. BMPs must include good housekeeping measures, preventative maintenance programs, spill prevention and response procedures, runoff management practices, and proper handling of deicing materials. The SWPPP shall describe how the BMPs are appropriate for the facility. All BMPs shall be properly maintained and be in effective operating conditions.
5. All areas of the facility where industrial materials or activities are exposed to storm water shall be

inspected, at least on a quarterly basis. Inspections shall occur beginning the 1st quarter after the effective date of the permit. EPA considers quarters as follows: January to March; April to June; July to September; and October to December.

6. The permittee shall amend and update the SWPPP within 30 days for any changes at the facility affecting the SWPPP. Changes which may affect the SWPPP include, but are not limited to, the following activities: a change in design, construction, operation, or maintenance, which has a significant effect on the potential for the discharge of pollutants to the waters of the United States; a release of a reportable quantity of pollutants as described in 40 CFR Part 302; or a determination by the permittee or EPA that the SWPPP appears to be ineffective in achieving the general objectives of controlling pollutants in storm water discharges associated with industrial activity. Any amended or new versions of the SWPPP shall be re-certified by the Permittee. Such re-certifications also shall be signed in accordance with the requirements identified in 40 CFR § 122.22
7. The permittee shall certify at least annually that the previous year's inspections and maintenance activities were conducted, results were recorded, records were maintained, and that the facility is in compliance with the SWPPP. If the facility is not in compliance with any aspect of the SWPPP, the annual certification shall state the non-compliance and the remedies which are being undertaken. Such annual certifications also shall be signed in accordance with the requirements identified in 40 CFR § 122.22. A copy of this annual certification shall be sent to EPA and MassDEP on, or before, every anniversary of the effective date of the permit. The permittee shall keep a copy of the current SWPPP and all SWPPP certifications (the initial certification, re-certifications, and annual certifications) signed during the effective period of this permit at the facility and shall make them available for inspection by EPA and MassDEP.

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 reports and evaluations required herein, shall be submitted to EPA at the following address:

U.S. Environmental Protection Agency
Water Technical Unit (SMR-04)
5 Post Office Square – Suite 100
Boston, Massachusetts 02109-3912

Signed and dated Discharge Monitoring Report Form(s) and all other reports required by this permit shall also be submitted to the State at the following addresses:

Massachusetts Department of Environmental Protection
Northeast Regional Office
Bureau of Waste Prevention
205 B Lowell Street
Wilmington, MA 01887

and

Massachusetts Department of Environmental Protection
Division of Watershed Management
Surface Water Discharge Permit Program

D. STATE PERMIT CONDITIONS

1. This Discharge Permit is issued jointly by the EPA and the MassDEP under Federal and State law, respectively. As such, all the terms and conditions of this permit are hereby incorporated into and constitute a discharge permit issued by the Commissioner of the MassDEP pursuant to M.G.L. Chap.21, '43.
2. 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 a 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
REGION 1 - NEW ENGLAND
1 CONGRESS STREET, SUITE 1100
BOSTON, MASSACHUSETTS 02114-2023
STATEMENT OF BASIS**

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

NPDES PERMIT NO.: MA0000833

PUBLIC NOTICE DATES: December 10, 2009 to January 8, 2010

NAME AND ADDRESS OF APPLICANT:

**ExxonMobil Oil Corporation
3225 Gallows Road
Fairfax, VA 22037**

NAME AND ADDRESS OF FACILITY WHERE DISCHARGE OCCURS:

**ExxonMobil Everett Terminal
52 Beacham Street
Everett, MA 02149**

RECEIVING WATERS: Island End River/Mystic River Watershed (MA71)

CLASSIFICATION: SB

TABLE OF CONTENTS

1.0 PROPOSED ACTION, TYPE OF FACILITY AND DISCHARGE LOCATION	3
1.1 Background	3
1.1.1 Factual Setting.....	4
2.0 LIMITS AND CONDITIONS	4
3.0 PERMIT MODIFICATION BASIS	5
4.0 MODIFIED EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS	6
4.1 Facility Changes	6
4.2 Effluent Limit Modifications	8
4.2.2 Flow	8
4.2.3 Oil and Grease.....	9
4.2.4 Metals and Cyanide.....	9
4.2.5 Whole Effluent Toxicity (WET)	9
4.2.6 Volatile Organic Compounds (VOCs)	9
4.2.7 Polycyclic Aromatic Hydrocarbons (PAHs).....	10
5.0 STATE PERMIT CONDITIONS	11
6.0 STATE WATER QUALITY CERTIFICATION REQUIREMENT	11
7.0 PUBLIC COMMENT PERIOD AND PROCEDURES FOR FINAL DECISION	11
8.0 EPA & MASSDEP CONTACTS	13

Attachment A Notice of Withdrawal of Contested Conditions

Attachment B Memorandum of Understanding, dated August 5, 2009, between
ExxonMobil and the Region

Attachment C Everett Terminal Conceptual Simplified Process Flow Diagram

Attachment D Summary of Effluent Limit Modifications

Attachment E Plan of Everett Terminal Identifying Outfall Monitoring Locations

1.0 PROPOSED ACTION, TYPE OF FACILITY AND DISCHARGE LOCATION

1.1 Background

The Region re-issued National Pollutant Discharge Elimination System Permit (“NPDES”) No. MA0000833 (“Final Permit”) on September 29, 2008, to the ExxonMobil Oil Corporation (“ExxonMobil”) to authorize point source discharges during dry weather and wet weather from a bulk petroleum storage facility in Everett, Massachusetts (“Terminal”) to the culvert which leads to the Island End River. The Final Permit authorized discharges consisting of storm water, groundwater, hydrostatic test water, boiler condensate, fire testing water and effluent pond water, subject to effluent limitations and monitoring conditions. Following issuance of the Final Permit, ExxonMobil timely petitioned the U.S. Environmental Protection Agency Environmental Appeals Board (“Board”) for review of the Final Permit under 40 C.F.R. § 124.19(a). ExxonMobil’s petition challenged various aspects of the Final Permit on substantive as well as procedural grounds. *See* Petition for Review of a NPDES Permit Issued by EPA Region 1, dated October 28, 2008 (“Petition”).

Under NPDES permitting regulations, the filing of a petition for review stays the entire permit for the duration of proceedings before the Board except to the extent that the Regional Administrator identifies uncontested and severable conditions and issues notice thereof to the Board, the permittee and other interested parties. *See* 40 C.F.R. §§ 124.16(a) and 124.60(b). Uncontested and severable conditions become effective upon thirty (30) days notice. By letter dated November 20, 2008, the Region issued a notice identifying the Final Permit’s uncontested and severable conditions and placing them into effect as of January 1, 2009. *See* Attachment A (Notice of Uncontested and Severable Conditions, dated November 20, 2008). As to each of the otherwise stayed contested or inseverable conditions (“Contested Conditions”), the Region explained in the notice that the corresponding term, if any, in ExxonMobil’s individual prior permit issued by EPA on March 6, 2000 remained in effect. Thus, notwithstanding the appeal, a portion of the Final Permit is already in effect, along with applicable portions of the prior permit.

Following receipt of ExxonMobil’s Petition, the Board directed the Region to prepare a response that addresses ExxonMobil’s contentions and whether ExxonMobil has satisfied the requirements for obtaining review. Subsequently, the parties jointly moved the Board to extend the deadline for the Region to file its response to ExxonMobil’s Petition, to allow the parties to explore the viability of settlement. The parties successfully settled their dispute, as described in more detail below.

Under the settlement, ExxonMobil agreed to voluntarily withdraw its Petition, and the Region agreed to withdraw the contested conditions and to propose modified conditions for public review and comment.¹ The proposed permit modification establishes separate effluent limitations and monitoring requirements to address wet weather discharges (dominated by storm water) and dry weather discharges (comprised of infiltrated groundwater, some of which exhibits contamination from historic refinery and bulk

¹ The Board dismissed the Petition with prejudice on August 11, 2009.

petroleum operations). To implement this tiered permitting structure, Exxon Mobil has agreed to extensively redesign its effluent treatment system in order to improve effluent quality under all flow conditions, including through the use of a continuously operated advanced treatment system, and a flow equalization tank to store storm water volume during periods of peak storm water flow. The continuously operated treatment system will be capable of treating the dry weather flow from the site, as well as storm water flow.

ExxonMobil has agreed to move forward with the effluent treatment system upgrade in the absence of a final permit so that it will be in a position to comply with all aspects of the permit modification upon the date of final permit modification issuance. The Region, for its part, has agreed to time the issuance of the final permit modification to allow ExxonMobil to complete its upgrade so long as certain interim milestones are achieved. *See Attachment B (Memorandum of Understanding, dated August 5, 2009, between ExxonMobil and the Region).* The work on the effluent treatment system upgrade has been triggered by execution of the MOU, not the issuance of the draft and final permit modification, and is scheduled to be complete in less than two years, with significant components of the system becoming operational prior to that time.

1.1.1 Factual Setting

The Terminal is engaged in the receipt, storage and distribution of petroleum products. The spectrum of products handled by this facility consists of gasoline, ethanol, light distillate fuel oils, heavy distillate fuel oils, and fuel additives. Petroleum products are received in bulk quantities at the Terminal's marine vessel dock. Product is then transferred via piping to aboveground storage tanks located within the Terminal's tank farm areas. Final distribution of product is conducted at the Terminal's truck loading racks. The Terminal's operations also include the collection and discharge of storm water from Sprague Energy, an asphalt storage and distribution facility located on property formerly owned by ExxonMobil. The total storm water collection drainage area for ExxonMobil and Sprague Energy is 110 acres.

All of the water discharged is collected by the Terminal's storm water collection system, which drains to the treatment works near the eastern end of the North Tank Farm. The treatment works are used to remove floating oil and settleable solids from all discharge to the Island End River. The existing treatment system consists of an older, conventional oil water separator, a corrugated plate oil water separator (CPS), a two-chamber wet well with a total of 5 submersible pumps, and a 2.2 million gallon above-ground storage tank, known as Tank 140. Discharge to the Island End River is by means of a 6-foot diameter, 1500 foot long culvert that carries water from the Terminal to the river. More detailed descriptions of the physical configuration of the facility, including its point source discharges, have been set forth by the Region in the Fact Sheet accompanying the Draft Permit, issued May 31, 2007, the Response to Comments, dated September 29, 2008, and, to the extent applicable, herein.

2.0 LIMITS AND CONDITIONS

The Clean Water Act requires that discharges satisfy both technology-based and water quality-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 to meet best practicable control technology currently available (BPT), best conventional control technology (BCT) for conventional pollutants, and best available technology

economically achievable (BAT) for toxic and nonconventional pollutants. Subpart A of 40 C.F.R. 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. In general, technology-based effluent guidelines for 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 CFR § 125.3(a)(2). EPA has not promulgated technology-based National Effluent Guidelines for storm water or other non-sanitary discharges from petroleum bulk stations and terminals (Standard Industrial Code 5171). In the absence of 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).

Water quality-based effluent limits, on the other hand, are designed to ensure that state water quality standards are met regardless of the decision made in establishing technology-based limitations. In particular, section 301 requires achievement of “any more stringent limitation, including those necessary to meet water quality standards...established pursuant to any State law or regulation...” CWA § 301(b)(1)(C); *see also* 40 C.F.R. § 122.4(d)(prohibiting issuance of a permit “when the imposition of conditions cannot ensure compliance with the applicable water quality requirements of all affected states”); 40 C.F.R. § 122.44(d)(1)(providing that a permit must contain effluent limits as necessary to protect state water quality standards).

3.0 PERMIT MODIFICATION BASIS

Federal regulations governing the NPDES permitting program give EPA regional offices an absolute right to withdraw portions or all of a permit at any time prior to the Board's rendering of a decision on a permit appeal. *See* 40 C.F.R. § 124.19(d); *In re Wash. Aqueduct Water Treatment Plant*, NPDES Appeal No. 03-07, slip op. at 2 (EAB, Dec. 15, 2003). Section 124.19(d) specifies further that, once the permit or portions thereof are withdrawn, the Regional Administrator must “prepare a new draft permit under § 124.6 addressing the portions so withdrawn. The new draft permit shall proceed through the same process of public comment and opportunity for a public hearing as would apply to any other draft permit subject to this part.”

The Final Permit established effluent limitations and conditions on discharges from the facility, including, *inter alia*:

- A requirement that the treatment system be sized and operated in a manner to ensure that storm water and groundwater flow generated by a 10-year, 24-hour storm event be treated through the Terminal's oil water separator at or below its design flow in lieu of discharges through outfall 001B.
- Technology-based effluent limits for oil and grease and volatile organic compounds. These limits were based on available treatment technology for contaminated groundwater and were applicable to dry and wet weather discharges. Contaminated groundwater is the largest component of dry weather flows and the second largest component of wet weather flows. However, in the Fact Sheet and Response to

Comments, the Region indicated that if ExxonMobil were to develop and implement a plan to remove contaminated groundwater from the discharge (for instance, by inspecting and repairing storm drains with the goal of eliminating the discharges of contaminated groundwater to the treatment works), the Region would reassess its position on this issue.

The Region concluded that these requirements were sufficient to ensure compliance with the Clean Water Act, including section 301, which obligates NPDES permit issuers to include limitations necessary to meet both technology-based standards and water quality-based standards established pursuant to any State law or regulation.

In its Petition, ExxonMobil requested that the Permit be modified to reflect a tiered approach, in which separate effluent limitations and monitoring requirements would be established for dry weather flows and wet weather flows. The Region agreed to consider such an approach, pending the outcome of engineering studies initiated by ExxonMobil. ExxonMobil submitted a general outline of the treatment plans anticipated by ExxonMobil on December 18, 2008. ExxonMobil provided a more detailed conceptual plan on March 20, 2009 and a final design basis on September 10, 2009. *See* Attachment C (Treatment Works Conceptual Flow Schematic). Based on the meetings with and plans submitted by ExxonMobil, the Terminal plans include the following: (1) identify and mitigate contaminated groundwater infiltration into the Terminal's storm water collection system, (2) reconfigure flow through the treatment works to provide advanced treatment for dry weather flow, and (3) reconfigure and upgrade existing treatment system components to ensure that the groundwater and storm water volume equivalent to that generated by a 10-year, 24-hour storm event would be treated through the corrugated plate separator at or below that unit's design flow rate.

The Region has concluded that the plan proposed to be undertaken by ExxonMobil possesses significant environmental merit relative to the appealed permit. The proposed modification retains, but recasts, the essential protective elements of the appealed permit—*i.e.*, stringent technology based effluent limits for dry weather discharges (which consist primarily of groundwater infiltration), continuation of stringent water quality-based PAH limitations that are protective of aquatic life in the Island End River, and the requirement to treat wet weather flows at the treatment system design capacity for a volume equivalent to that generated by a 10-year, 24-hour storm event or less. The resulting modification, in the Region's judgment, enhances the permit's overall environmental benefit. Accordingly, the Region determined to proceed with a withdrawal of the contested portions of the permit and to move forward with this permit modification.

4.0 MODIFIED EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

4.1 Facility Changes

Storm Water Collection System Remediation

ExxonMobil has recently conducted remedial response activities at the Terminal to significantly reduce the loading of groundwater contaminants in its discharge by investigating and repairing potential areas of contaminated groundwater infiltration into the storm water system. This work was conducted under the oversight of a Licensed Site

Professional and the Massachusetts Bureau of Waste Site Cleanup in accordance with the requirements of the Massachusetts Contingency Plan, 310 C.M.R. 40.0000. Response actions were completed in October 2009. ExxonMobil has informed EPA that remediation activities included the removal of accumulated solids from 156 vertical structures and repairs to 55 structures throughout the storm water collection system. EPA expects that this remediation in combination with continuing maintenance of the storm water collection system will significantly improve the quality of water entering the treatment works.

Treatment Works Modification

The proposed modification is designed to reflect changes to the operation of the Terminal's storm water collection and treatment system that are being implemented in accordance with the MOU. Specifically:

- Tank 140 will be used as a flow equalization tank to store storm water volume during periods of peak storm water flow. Currently treatment works effluent passes through Tank 140 downstream of the corrugated plate separator (CPS). The new use of Tank 140 will help maintain flow through the treatment works at or below the system's design flow rate.
- The existing CPS coalescing media was replaced in January 2009 and will be used as the primary oil water separator. Already a primary component of the treatment works, the replacement of the corrugated plate coalescing media has and will continue to improve the operational efficiency of the CPS.
- Flow through the CPS will be controlled to no greater than 4,000 gallons per minute (gpm). Storm water flows in excess of 4,000 gpm will pass through the existing older, conventional oil water separator and be diverted to Tank 140 for storage and will be released at a controlled rate back to the CPS as capacity becomes available. Currently, there is no storage capacity in ExxonMobil's storm water collection and treatment system upstream of the CPS resulting in discharges through outfall 001B during heavy precipitation events.
- At least 280 gpm (403,200 gallons per day) of CPS effluent will be treated using continuous flow granular activated carbon (GAC) advanced treatment during dry and wet weather to remove volatile and semi-volatile hydrocarbons. These include PAHs, benzene, toluene, ethylbenzene, xylenes (BTEX), methyl tertiary butyl ether (MTBE), and oil and grease. Discharge of advanced treatment effluent will be through a new outfall 01C to Island End River via the 1,500 long culvert. Currently the treatment works does not include processes capable of removing dissolved pollutants. The continuous flow GAC system will greatly reduce the discharge of dissolved pollutants.
- Discharge of the CPS effluent greater than the 280 gpm capacity of the continuous flow GAC treatment system will flow through outfall 01A to Island End River via the 1,500 long culvert. Currently all CPS effluent flows through outfall 001A via Tank 140 to the Island End River. The new system will ensure that the first 280 gpm of collected dry and wet weather discharges will be treated to reduce dissolved pollutant discharges to the Island End River.
- During extremely wet weather, flows in excess of 4,000 gpm will pass through the conventional oil water separator and discharge through outfall 01B to Island End River

if the volume equivalent of a 10 year, 24 hour storm event occurs and there is insufficient capacity to divert flows to Tank 140. As storm water flows diminish and Tank 140 begins to empty, discharges to outfall 01B will cease. Currently there is no storage capacity within the treatment works. The new use of Tank 140 and control of flows through the CPS will reduce the frequency of discharges through outfall 001B.

4.2 Effluent Limit Modifications

Effluent limitations for the outfalls developed for the draft permit modification are generally based on considerations of available technologies for the treatment of storm water and groundwater and water quality concerns discussed in the Fact Sheet and Response to Comments which accompanied the Final Permit. The Region derived the effluent limits for volatile organic compounds in the Final Permit by considering available technology for groundwater, technology available for storm water, water quality considerations and antibacksliding requirements. The Region compared the respective limits and applied the most stringent of the four—those derived for contaminated groundwater treatment—to the combined storm water and groundwater discharge from the facility. However, in light of ExxonMobil's decision to investigate and make repairs to the storm water collection system to reduce groundwater infiltration, reconfigure the treatment works and install an advanced dry weather flow treatment system, the Region proposes (1) to revise the permit to introduce an internal dry weather flow outfall (01C), (2) apply different effluent limits at internal outfall 01A specifically applicable to wet weather flows, and (3) reauthorize outfall 01B (previously designated outfall 001B) for flows that would result from a 10-year, 24-hour precipitation event.

Briefly, the draft permit modification applies without change the previously derived effluent limitations to internal outfall 01C, which is comprised primarily of groundwater and discharges continuously, while subjecting internal outfall 01A, which will be comprised primarily of storm water, to a combination of numeric and BMP-based effluent limitations specifically tailored to wet weather discharges. The reconfigured treatments works will be designed, constructed, maintained and operated to treat the total volume equivalent of storm water and groundwater that would result from a 10-year 24-hour precipitation event. All discharges which exceed this capacity will flow through outfall 01B to the Island End River, which will be subject to monitoring and reporting for flow, total suspended solids, oil and grease, pH and available cyanide. This approach is consistent with the approach of the September 28, 2009, Final Permit, part I.A.14.

A table summarizing the effluent limitation changes from the Final Permit to the draft permit modification is presented in Attachment D. A figure identifying the sampling locations for outfalls 01A, 01B and 01C is presented in Attachment E. Effluent limitations and monitoring requirements which have either changed or been applied only to outfall 01A or 01C, are discussed in the following sections.

4.2.2 Flow

Based on conceptual design information provided by ExxonMobil, the permit requires that flow through the corrugated plate separator be controlled so as to be less than or equal to 4,000 gpm, the maximum capacity for that separator, as reflected in part I.A.26 of the permit modification. In addition, the permit has been revised to require that the storm

water collection, storage and treatment systems be designed so that the total volume of storm water and groundwater generated by a 10-year, 24-hour storm event is treated and discharged through outfalls 01A and 01C. In addition, flow through the continuous flow GAC advanced treatment system, which will discharge to outfall 01C is limited to its maximum design capacity of 280 gpm.

4.2.3 Oil and Grease

In the Final Permit, the derivation of the oil and grease limit for outfall 001 considered technology-based limits for groundwater treatment and storm water treatment. In the draft permit modification, the technology-based effluent limit for treated groundwater, 5 mg/L, has been applied at outfall 01C. The technology-based effluent limit for storm water of 15 mg/L, which had been used in the March 6, 2000 NPDES permit for the Terminal, has been applied to outfall 01A.

Consistent with the outfall 001 sampling requirements in the Final Permit, monthly oil and grease sampling is required for outfalls 01A and 01C.

4.2.4 Metals and Cyanide

The monitoring requirements for mercury and cyanide from the Final Permit are continued at both outfalls 01A and 01C. Because mercury and cyanide are not currently used or produced at the facility, it is likely that both were present in a 2007 dry weather sample result due to residual groundwater contamination. Due to a lack of previous sampling data, it is unclear as to whether these pollutants are consistently present in the discharge. The draft permit modification allows the mercury and/or cyanide monitoring to end following ten consecutive quarterly results below the method detection limit and review and approval by EPA.

Monitoring for other metals, indicated for outfall 001 in the Final Permit, has been applied to outfall 01C.

4.2.5 Whole Effluent Toxicity (WET)

During the last five years, WET testing of storm water discharges have been above the permitted LC50 threshold of 50%. Given the potential for dry weather flows to contain residual toxic pollutant groundwater contamination, EPA has applied the WET test requirement to the dry weather flow discharge outfall 01C.

In addition, to correct an error in the Final Permit, EPA has revised the reporting list of wet chemistry parameters to those required in the WET test protocol. This removes the requirement to report hardness, calcium and magnesium analysis conducted during the WET test. The WET test protocol (Marine Acute Toxicity Test Procedure and Protocol) itself is unchanged from the Final Permit to the draft permit modification. It is attached to the latter for the convenience of the reader.

4.2.6 Volatile Organic Compounds (VOCs)

Benzene, Toluene, Ethylbenzene, Xylenes (BTEX)

Technology-based BTEX effluent limits for treated groundwater, derived for the combined groundwater and storm water discharges at outfall 001 in the Final Permit have been

applied at outfall 01C. The basis for these effluent limits was discussed in the Fact Sheet and Response to Comments for the Final Permit.

In 1990, EPA derived a water quality-based effluent limit of 40 µg/L benzene for discharges from the Terminal consisting primarily of storm water and uncontaminated groundwater. The 1990 Permit also required monitoring of toluene, ethyl benzene, and xylenes. These BTEX effluent limits were reissued in the March 6, 2000 permit for the Everett Terminal.

Based on EPA's review of the data from this facility, as well as other petroleum bulk storage facilities, and ExxonMobil's commitment to install the continuous flow GAC treatment system to treat flows consisting primarily of groundwater, EPA has concluded that the 1990 benzene effluent limits are appropriate for wet weather flows consisting primarily of storm water. Therefore, the maximum daily effluent limit of 40 µg/L for benzene and monitoring requirements for other BTEX compounds has been applied to outfall 01A.

Ethanol Monitoring

The requirement for ethanol monitoring was applied at outfall 01A since large quantities of ethanol are currently being stored and managed on site. Since ethanol has not been detected in groundwater samples and there is no history of large scale ethanol use or storage on site, there is no ethanol sampling required at outfall 01C.

Methy Tertiary-Butyl Ether

Although MTBE is no longer used on site, MTBE is present in on-site groundwater samples and was indentified in a 2007 dry weather flow sample. The draft permit modification applies the 70 µg/L effluent limit to outfall 01C and maintains a monitoring requirement at outfall 01A.

4.2.7 Polycyclic Aromatic Hydrocarbons (PAHs)

In 1990, EPA derived a water quality-based PAH effluent limits of 0.031 µg/L for individual PAHs and 50 µg/L total PAHs for discharges from the Terminal consisting primarily of storm water and uncontaminated groundwater. A compliance/non-compliance level of 10 µg/L was established for individual PAHs since 0.031 µg/L was below the minimum analytical detection level available at the time. These PAH effluent limits and compliance levels were carried forward in the 2000 permit.

Based on EPA's review of the data from this facility as well as other petroleum bulk storage facilities, EPA has concluded that more stringent permit limits for PAH compounds at Outfall 01A are not required at this time. However, given the potential concerns related to PAH toxicity, the historic levels of PAHs which have been documented in the sediment of the Island End River, and the fact that priority organics were one of the "pollutants" identified by MassDEP contributing to the impairment of the Island End River, EPA has retained the numeric limits from the 2000 permit (with their associated compliance limits) for outfall 01A.

Effluent limits derived for the Final Permit have been applied to outfall 01C.

5.0 STATE PERMIT CONDITIONS

The NPDES Permit is issued jointly by the U. S. Environmental Protection Agency and the Massachusetts Department of Environmental Protection under federal and state law, respectively. As such, all the terms and conditions of the permit modification are, therefore, incorporated into and constitute a discharge permit issued by the Commissioner of the Massachusetts Department of Environmental Protection pursuant to M.G.L. Chap.21, § 43.

6.0 STATE WATER QUALITY CERTIFICATION REQUIREMENT

EPA may not issue a permit modification unless the State Water Pollution Control Agency with jurisdiction over the receiving waters certifies that the effluent limitations contained in the permit modification are stringent enough to assure that the discharge will not cause or contribute to a violation of state water quality standards in the receiving water or unless certification is waived. EPA has requested certification by the state pursuant to 40 C.F.R. § 124.53.

7.0 PUBLIC COMMENT PERIOD AND PROCEDURES FOR FINAL DECISION

As part of the modification procedure, EPA will accept comments from the public on the proposed modification. The beginning and end dates for the public comment period are shown on page 1 of this statement of basis. Only the conditions specifically revised from the Final Permit in the draft permit modification are within the scope of this permit modification proceeding and subject to public comment. Comments on any other condition(s) of the permit will not be considered. The revised conditions in the draft modification include those summarized below:

- The draft permit modification authorizes discharges from three internal outfalls (01A, 01B and 01C) instead of the single outfall (001) authorized in the Final Permit. Effluent limits, compliance levels and reporting requirements contained in part I.A.1 of the Final Permit are now in parts I.A.2, I.A.3, and I.A.4 in the draft permit modification, as follows:
 - Effluent limits, compliance levels and reporting requirements for outfall 001 in the Final Permit have been applied to outfall 01C in the draft permit modification, with the exception of the monitoring requirement for ethanol.
 - The requirement to analyze and report whole effluent toxicity (WET) test samples for hardness, calcium and magnesium was removed since it is not required in the Marine Acute Toxicity Test Procedure and Protocol.
 - Numeric effluent limits, compliance levels and reporting requirements derived for stormwater and uncontaminated groundwater in the 2000 permit have been carried forward and applied to outfall 01A in the draft permit modification. Numeric limits on these outfall 01A discharges have, in addition, been supplemented by expanded Best Management Practices.

- Monitoring requirements for mercury, cyanide, ethanol and MTBE have been applied to outfall 01A.
- Monitoring requirements for flow, TSS, oil and grease and pH have been applied to outfall 01B.
- The requirement for proper operation of treatment system components in part I.A.11 in the Final Permit has been revised to reflect the treatment system modifications. This part is part I.A.14 in the draft permit modification.
- The design flow requirements in part I.A.14 of the Final Permit have been revised and incorporated into part I.A.23 of the draft permit modification.
- Part I.A.15 in the Final Permit has been revised to reflect the treatment system modifications and is part I.A.17 in the draft permit modification.
- The reference in part I.A.17 to “the appropriate U.S. Coast Guard Officer” in the Final Permit has been changed to “the National Response Center” to reflect current emergency reporting protocol. This paragraph is part I.A.19 in the draft permit modification.
- The identification of compliance/non-compliance levels for PAHs in part I.A.18 of the Final Permit has been moved to footnotes 7 and 9 in parts I.A.2 and I.A.4, respectively, in the draft permit modification. The Minimum Levels of analysis (MLs) for PAHs remain in this paragraph, which is part I.A.20 in the draft permit modification.
- The “Wastewater Treatment System Control” requirements in part I.A.21 of the Final Permit has been revised and expanded to reflect the treatment system modifications. The modified requirements are under “Wastewater Treatment System Flow” in part I.A.23 of the draft permit modification.
- The reference to the Multi-Sector General Permit (MSGP) in part I.B.3 of the Final Permit has been updated to refer to the current MSGP which was issued September 29, 2008.

In addition:

- For the purposes of ensuring clarity in this relatively complex permit, a “definitions” section (paragraph I.A.1) was added to the draft permit modification.
- Unmodified paragraphs in part I.A of the Final Permit are renumbered in the draft permit modification due to the addition of the “definitions section” and two additional outfalls.
- The address for submittals to EPA has been updated.

All persons, including applicants, who believe any revised condition in the draft permit modification 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: Ms. Ellen Weitzler, NPDES Industrial Permit Branch, U.S. Environmental Protection Agency, 5 Post Office Square, Suite 100 (Mail Code: OEP06-2), 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 modification to EPA. Such requests shall state the nature of the issues proposed to be raised in the hearing. A public hearing may be held after at least thirty (30) days public notice whenever the Regional Administrator finds that response to this notice indicates significant public interest.

In reaching a final decision on the draft permit modification the Regional Administrator will respond to all significant comments addressing the conditions specifically proposed in the draft permit modification and make these responses available to the public at EPA's Boston office. Following the close of the comment period, and after a public hearing, if such hearing is held, the Regional Administrator will issue a final permit modification decision and forward a copy of the final decision to the applicant and each person who has submitted written comments or requested notice.

8.0 EPA & MASSDEP CONTACTS

Additional information concerning the draft permit modification 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:

Ellen Weitzler, EPA New England - Region 1
5 Post Office Square, Suite 100 (OEP06-2)
Boston, MA 02109-3912
Telephone: (617) 918-1582
FAX: (617) 918-0582
email: weitzler.ellen@epa.gov

or

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) 767-2796 FAX: (508) 791-4131
email: keohane.kathleen@state.ma.us

Date

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



ATTACHMENT A
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 1
1 CONGRESS STREET, SUITE 1100
BOSTON, MASSACHUSETTS 02114-2023

VIA FIRST CLASS MAIL AND ELECTRONIC SUBMISSION

Ms. Erika Durr
Clerk of the Board
U.S. EPA Environmental Appeals Board
(MC 1103B)
Ariel Rios Building
1200 Pennsylvania Avenue, N.W.
Washington, D.C. 20460-0001

Mr. Arthur Powers
Terminal Supervisor
ExxonMobil Pipeline Company
52 Beacham Street
Everett, Massachusetts 02149

Re: ExxonMobil Oil Corporation
Notice of Withdrawal of Contested Conditions
NPDES Appeal No. 08-23
NPDES Permit No. MA0000833

Dear Ms. Durr and Mr. Powers:

The ExxonMobil Oil Corporation ("ExxonMobil") timely petitioned the U.S. Environmental Protection Agency Environmental Appeals Board ("Board") for review of NPDES Permit No. MA0000833 ("Permit"), on October 29, 2008. The Permit had been issued by the New England Regional Office of the U.S. EPA ("Region") on September 29, 2008. The Region placed the uncontested and severable portions of the Permit into effect on January 1, 2009. *See* Attachment 1 (Notice of Uncontested and Severable Conditions, dated November 20, 2008) ("Notice"). In accordance with NPDES regulations, all other conditions of the Permit were stayed for the pendency of the appeal.


Federal regulations governing the NPDES permitting program give EPA regional offices an absolute right to withdraw portions or all of a permit at any time prior to the Board's rendering of a decision on a permit appeal. *See* 40 C.F.R. § 124.19(d); *In re Wash. Aqueduct Water Treatment Plant*, NPDES Appeal No. 03-07, slip op. at 2 (EAB, Dec. 15, 2003). This authority includes the discretion to withdraw portions of a permit without withdrawing the permit in its entirety. *See* 40 C.F.R. § 124.19(d) (Region may, after issuing a withdrawal notification, prepare a new draft permit "addressing the portions so withdrawn"); Amendments to Streamline the National Pollutant Discharge Elimination System Program Regulations: Round Two, 61 Fed. Reg. 65,268, 65,281 (Dec. 11, 1996) ("EPA therefore proposes to clarify that the Regional Administrator may withdraw and

reissue any NPDES...permit (or a contested condition thereof) prior to a decision of the EAB to grant or deny review under § 124.19(c).”). Section 124.19(d) specifies further that, once the permit or portions thereof are withdrawn, the Regional Administrator must “prepare a new draft permit under § 124.6 addressing the portions so withdrawn. The new draft permit shall proceed through the same process of public comment and opportunity for a public hearing as would apply to any other draft permit subject to this part.”

Following receipt of ExxonMobil’s petition, the parties jointly moved the Board to stay the proceedings in order to allow the parties to explore the viability of settlement. The parties have successfully settled their dispute. As the Board has not rendered a decision to grant or deny review of the Permit, the Region is authorized to act under 40 C.F.R. § 124.19(d) and is hereby withdrawing the “Contested Conditions,” as such term is defined in the Notice. In addition, ExxonMobil has agreed to promptly withdraw its petition for review. To implement the settlement, the Region will propose modified conditions for public review and comment in accordance with applicable NPDES procedural regulations. With respect to each of the Contested Conditions, the corresponding term, if any, in ExxonMobil’s prior permit issued by EPA on March 6, 2000, shall remain in effect until superseded by final and effective modified permit conditions.

If you have any questions regarding this notice, please feel free to contact Samir Bukhari, the Region’s legal counsel in this matter, at 617-918-1095, or Ellen Weitzler, in our Office of Ecosystem Protection, at 617-918-1582.

Sincerely,

A handwritten signature in black ink, appearing to read "Ira W. Leighton", followed by a long horizontal flourish.

Ira W. Leighton
Acting Regional Administrator

cc:

Dianne R. Phillips, Esq., Holland and Knight LLP
David Webster, EPA
Ellen Weitzler, EPA
Denny Dart, EPA
Paul Hogan, MassDEP

Attachment 1



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 1

1 CONGRESS STREET, SUITE 1100
BOSTON, MASSACHUSETTS 02114-2023

VIA FEDERAL EXPRESS AND ELECTRONIC SUBMISSION

November 20, 2008

Ms. Eureka Durr
U.S. Environmental Protection Agency
Clerk of the Board
Environmental Appeals Board
1341 G Street, N.W. Suite 600
Washington, D.C. 20005

Mr. Arthur Powers
Terminal Supervisor
ExxonMobil Pipeline Company
52 Beacham Street
Everett, Massachusetts 02149

**Re: ExxonMobil Oil Corporation
Notice of Uncontested and Severable Conditions
NPDES Appeal No. 08-23
NPDES Permit No. MA0000833**

Dear Ms. Durr and Mr. Powers:

The ExxonMobil Oil Corporation ("ExxonMobil") timely petitioned the U.S. Environmental Protection Agency Environmental Appeals Board ("Board") for review of NPDES Permit No. MA0000833 ("Permit"), on October 29, 2008. The Permit was issued by the New England Regional Office of the U.S. EPA ("Region") on September 29, 2008.

Pursuant to 40 C.F.R. § 124.19, ExxonMobil seeks review of the following permit requirements:

Part	Permit Term
Part I.A.1	Outfall 001B elimination
Part I.A.14	Peak flow
Part I.A.21	Certification and flow control
Part I.A.14 and 21	Flow and operational restrictions
Part I.A.14 and 21	10 year, 24-hour storm
Part I.A.1, Oil and Grease	5 mg/l
Part I.A.1, Benzene	5 µg/l

Toll Free • 1-888-372-7341

Internet Address (URL) • <http://www.epa.gov/region1>

Recycled/Recyclable • Printed with Vegetable Oil Based Inks on Recycled Paper (Minimum 30% Postconsumer)

Part I.A.1, BTEX	100 µg/l
Part I.A.1, Methyl Tertiary-Butyl Ether	70 µg/l
Part I.A.18	Compliance/noncompliance for Polycyclic Aromatic Hydrocarbons (PAHs)
Part I.A.1, footnote 9	Monthly metals and hardness monitoring
Part I.A.1	Hardness, total solids, calcium, and magnesium sampling
Part I.A.1, footnote 1	Heated purge requirement
Part I.A.1, footnote 1	Ethanol analytical method
Part I.A.1, footnote 8	WET testing
Part I.A.17	Notification
Part I.A.23.f	Notification
Part I.B.4.e	Manage salt

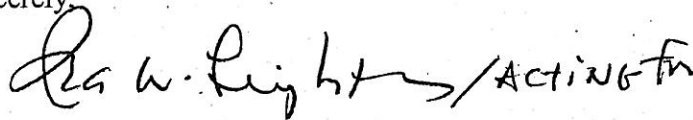
The foregoing requirements are referred to as the "Contested Conditions," and all other conditions of the Permit are referred to as "Uncontested Conditions."

Pursuant to 40 C.F.R. §§ 124.16(a) and 124.60(b), I hereby notify you of my determination that the Contested Conditions are stayed during the pendency of this appeal and until final agency action under 40 C.F.R. § 124.19(f). With respect to each of the Contested Conditions, the corresponding term in ExxonMobil's prior permit issued March 6, 2000, including paragraph I.A.2 of that permit, shall remain in effect.

I further notify you of my determination that the Uncontested Conditions of the Permit are severable from the Contested Conditions, with the exception of the ethanol reporting requirement set forth in Part I.A.1 of the Permit and the inspection, operation and maintenance requirements set forth in Part I.A.11 of the Permit. The uncontested and severable conditions of the Permit shall become fully effective enforceable obligations on January 1, 2009.

If you have any questions regarding this notice, please feel free to contact Samir Bukhari, the Region's legal counsel in this matter, at 617-918-1095, or Ellen Weitzler, in our Office of Ecosystem Protection, at 617-918-1582.

Sincerely,



Robert W. Varney
Regional Administrator

cc: Dianne R. Philips, Esq. (Holland & Knight)
Cynthia Liebman, Esq. (Conservation Law Foundation)
Minka Van Beuzekom (Mystic River Watershed Association)

ATTACHMENT B

**BEFORE THE ENVIRONMENTAL APPEALS BOARD
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C.**

)	
In the Matter of:)	
)	
ExxonMobil Oil Corporation)	NPDES Appeal No. 08-23
)	
NPDES Permit No. MA0000833)	
)	

MEMORANDUM OF UNDERSTANDING

Now comes Region 1 of the United States Environmental Protection Agency ("Region") and the ExxonMobil Oil Corporation ("ExxonMobil"), by and through the undersigned counsel, and hereby agree as follows:

WHEREAS, the Region reissued NPDES Permit No. MA0000833 to ExxonMobil on September 29, 2008;

WHEREAS, ExxonMobil timely filed a petition for review by the Environmental Appeals Board contesting certain conditions of the permit on October 28, 2008;

WHEREAS, the parties have engaged in settlement negotiations since that time to resolve the disputed permit conditions, which proposal contemplates a new and different permitting scheme to separately address dry weather and wet weather flows involving the redesign of the effluent treatment system and construction of a continuous flow treatment system, as well as other substantial infrastructure changes;

WHEREAS, the parties have reached agreement in connection with a proposed Permit Modification which will resolve the pending permit dispute and achieve improved overall surface water discharge quality;

WHEREAS, the parties agree that these effluent treatment system improvements require a reasonable time to design, procure, construct, and commission;

NOW, THEREFORE, the parties hereby agree as follows:

1. The Region will promptly withdraw the Contested Permit Conditions identified in the Notice of Uncontested and Severable Conditions dated November 20, 2008, and ExxonMobil will concurrently withdraw its petition for review, thereby rendering ExxonMobil's appeal moot, which appeal shall subsequently be dismissed.

2. The Region will provide a draft Statement of Basis or Fact Sheet to support the anticipated Draft Permit Modification pursuant to its authority under 40 CFR § 124.19(d) for review and comment by ExxonMobil prior to issuance of the Draft Permit Modification. The parties agree to work in good faith to address ExxonMobil's comments on the Statement of Basis or Fact Sheet.

3. The Region will issue the Draft Permit Modification attached hereto as Exhibit A, which is the result of this negotiated settlement of the disputed permit proceeding.

4. On or before September 15, 2009, ExxonMobil shall provide the Region with a copy of its conceptual design basis for the proposed facility modifications for Outfalls 01A, 01B and 01C certified in accordance with 40 CFR § 122.22.

5. On or before October 31, 2009, ExxonMobil shall provide the Region with a written summary status report regarding ExxonMobil's efforts to eliminate, control or mitigate the source(s) of LNAPL (Light Non-aqueous Phase Liquid) entering the storm sewer system from site contamination in accordance with its February 19, 2009 Release Abatement Measure Plan filed with the Massachusetts Department of Environmental Protection.

6. On or before November 1, 2009, ExxonMobil shall provide the Region with a copy of its detailed design documentation in connection with modifications associated with Outfalls 01A and 01B certified in accordance with 40 CFR § 122.22.

7. On or before March 15, 2010, ExxonMobil shall provide the Region with a copy of its detailed design documentation in connection with modifications associated with Outfall 01C certified in accordance with 40 CFR § 122.22.

8. On or before June 15, 2010, ExxonMobil shall design, procure, construct, and place in service modifications associated with Outfalls 01A and 01B as described in the detailed design information previously submitted to the Region pursuant to paragraph 6 above.

9. On or before January 15, 2010 and June 15, 2010, respectively, ExxonMobil shall provide the Region with a concise written status report regarding achievement of the requirements set forth in paragraph 8 above.

10. On or before June 15, 2011, ExxonMobil shall design, procure, construct and place in service modifications associated with the new continuous flow treatment system associated with Outfall 01C as described in the detailed design information previously submitted to the Region pursuant to paragraph 7 above.

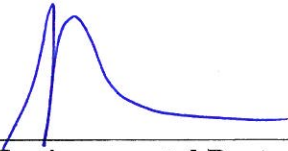
11. On or before January 15, 2011 and June 15, 2011, respectively, ExxonMobil shall provide the Region with a concise written status report regarding achievement of the requirements set forth in paragraph 10 above.

12. Upon consideration of the actions and implementation milestones set forth in paragraphs 4 through 11 above, and the circumstances of this case, the Region has concluded that issuance of the final Permit Modification after June 15, 2011, is reasonable and intends to issue such modification after such date.

13. The parties agree that the (A) (1) continuous treatment system, (2) corrugated plate separator, and (3) conventional oil water separator, when operated in accordance with Part I.A.23 of the Draft Permit Modification (Wastewater Treatment System Flow), and the (B) remedial actions to eliminate infiltration of light non-aqueous phase liquid (LNAPL) into the storm sewer system completed under the Massachusetts Contingency Plan, 310 C.M.R. 40.000 *et seq*, as specifically set forth in the ExxonMobil's February 19, 2009 Release Abatement Measure Plan, 310 C.M.R. 40.0444 *et seq*, will, in combination, constitute "material and substantial alterations or additions to the permitted facility" within the meaning of 33 U.S.C. § 1342(o)(2)(A). Polycyclic Aromatic Hydrocarbons (PAHs) sampling results collected in accordance with Part I.A.2 of the Permit Modification after implementation of such material and substantial alterations or additions to the permitted facility and that are below the Minimum Level (as defined in Part I.A.1 of the Draft Permit Modification) for PAHs will constitute "information...not available at the time of permit issuance" within the meaning of 33 U.S.C. § 1342(o)(2)(B)(ii). When the Permit is re-issued on or after January 1, 2014, ExxonMobil may use (a) quarterly sampling results, and (b) a contemporaneous Storm Water Pollution Prevention Plan (SWPPP) that assures such discharge will continue to meet applicable water quality requirements consistent 33 U.S.C. § 1342(o)(3) through the application of Best Management Practices, as a basis under applicable anti-backsliding requirements for eliminating the numeric PAH effluent limits on discharges from outfall 01A to the culvert to Island End River.

14. This Memorandum of Understanding will be come effective on the date fully-executed as noted below. This Memorandum of Understanding may be modified at any time by

the mutual written consent of the parties, which consent shall not be unreasonably withheld.



**U.S. Environmental Protection Agency,
Region 1**

By its counsel,

Samir Bukhari
Office of Regional Counsel
U.S. EPA-Region 1 (RAA)
One Congress Street, Suite 1100
Boston, MA 02114
Phone: (617) 918-1095
Fax: (617) 918-0095

August 5, 2009



ExxonMobil Oil Corporation

By its counsel,

Dianne R. Phillips
Holland & Knight LLP
10 St. James Avenue
Boston, MA 02116
Phone: (617) 573-5818
Fax: (617) 523-6850

August 5, 2009

8737024_v2

Exhibit A

DRAFT PERMIT MODIFICATION

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,

ExxonMobil Oil Corporation

is authorized to discharge from a facility located at

**ExxonMobil Everett Terminal
52 Beacham Street
Everett, MA 02149**

to receiving water named

Island End River/Mystic River Watershed (MA71)

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

This permit was signed on September 29, 2008 and became effective on January 1, 2009 (“2009 Permit”), to the extent described in the Notice of Uncontested and Severable Conditions, dated November 20, 2008, issued by the Regional Administrator of Region 1 of the United States Environmental Protection Agency (“Notice”). The 2009 Permit superseded the prior permit issued on March 6, 2000, to the extent described in the Notice.

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

This permit and the authorization to discharge shall expire at midnight on **January 1, 2014**.

This permit consists of 15 pages in Part I, including effluent limitations and monitoring requirements, 25 pages in Part II, including General Conditions and Definitions, and 10 pages in Attachment A, Marine Acute Toxicity Test Procedure and Protocol.

Signed this __ day of _____, 2009.

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

Glenn Haas, Director
Division of Watershed Management
Department of Environmental Protection
Commonwealth of Massachusetts
Boston, MA

DRAFT PERMIT MODIFICATION

PART I

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

1. Definitions

- a. *Conventional oil water separator* refers to the secondary gravity-type separator in the ExxonMobil Everett Terminal treatment works, at the approximate location identified on Attachment ____.
- b. *Continuous treatment system* refers to the treatment system that is designed to remove pollutants from dry weather and stormwater flows up to its design capacity of 280 gpm in the ExxonMobil Everett Terminal treatment works, at the approximate location identified on Attachment ____.
- c. *Corrugated plate separator* refers to the main separator with a design capacity of 4,000 gpm in the ExxonMobil Everett Terminal treatment works, at the approximate location identified on Attachment ____.
- d. *Minimum Level (ML)* shall mean the level at which the entire analytical system gives recognizable mass spectra and/or acceptable calibration points. This level corresponds to the lowest point at which the calibration curve is determined based on analyses for the pollutant of concern in reagent water. The ML for a gas chromatographic-mass spectrometry method or inductively coupled plasma-mass spectrometry method is based on both mass spectra and acceptable calibration points. The ML for methods that do not use mass spectrometry for pollutant confirmation and/or have no published ML in the method documentation is based on the method detection limit (MDL) and minimum level (ML) determinations as described in Section 9.3.1.1 of "Protocol for EPA Approval of New Methods for Organic and Inorganic Analysis in Wastewater and Drinking Water" (EPA 821-B-98-003, March 1999).
- e. *"10-year 24-hour precipitation event"* shall mean a rainfall event with a probable recurrence interval of once in ten years. This information is available from National Oceanic & Atmospheric Administration, U.S. Department of Commerce. The 10-year 24-hour rainfall in Boston is estimated at 4.6 inches [Figure 2, Natural Resources Conservation Service Technical Release 55 (TR-55) - Urban Hydrology for Small Watersheds (1986)].

DRAFT PERMIT MODIFICATION

2. During the period beginning from the effective date and lasting through expiration, the permittee is authorized to discharge corrugated plate separator effluent from **Serial Number Outfall 01A** to the culvert at Island End River. The discharge is comprised of storm water, groundwater, hydrostatic test water, boiler condensate, fire testing water, truck wash water, effluent pond water and continuous treatment system filter backwash water. Such discharge shall: 1) be limited and monitored by the permittee as specified below; and 2) not cause a violation of the State Water Quality Standards of the receiving water.

Effluent Characteristic	Units	Discharge Limitation		Monitoring Requirements ⁽¹⁾	
		Average Monthly	Maximum Daily	Measurement Frequency ⁽²⁾	Sample Type
Flow Rate ⁽³⁾	MGD	Report	Report	Continuous	Meter
Total Suspended Solids (TSS)	mg/l	30	100	1/Month	Grab
Oil and Grease (O&G)	mg/l	----	15	1/Month	Grab
pH ⁽⁴⁾	S.U.	----	6.5 to 8.5	1/Month	Grab
Available Cyanide ⁽⁵⁾	µg/L	----	Report	Quarterly	Grab
Total Mercury ⁽⁶⁾	µg/L	----	Report	Quarterly	Grab
<u>Polycyclic Aromatic Hydrocarbons (PAHs) ⁽⁷⁾⁽⁸⁾</u>					
Group I:					
Benzo(a)anthracene	µg/L	----	0.031	Quarterly	Grab
Benzo(a)pyrene	µg/L	----	0.031	Quarterly	Grab
Benzo(b)fluoranthene	µg/L	----	0.031	Quarterly	Grab
Benzo(k)fluoranthene	µg/L	----	0.031	Quarterly	Grab
Chrysene	µg/L	----	0.031	Quarterly	Grab
Dibenzo(a,h)anthracene	µg/L	----	0.031	Quarterly	Grab
Indeno(1,2,3-cd)pyrene	µg/L	----	0.031	Quarterly	Grab
Group II:					
Acenaphthene	µg/L	----	0.031	Quarterly	Grab
Acenaphthylene	µg/L	----	0.031	Quarterly	Grab
Anthracene	µg/L	----	0.031	Quarterly	Grab
Benzo(ghi)perylene	µg/L	----	0.031	Quarterly	Grab
Fluoranthene	µg/L	----	0.031	Quarterly	Grab
Fluorene	µg/L	----	0.031	Quarterly	Grab
Naphthalene	µg/L	----	0.031	Quarterly	Grab
Phenanthrene	µg/L	----	0.031	Quarterly	Grab
Pyrene	µg/L	----	0.031	Quarterly	Grab
Total PAHs	µg/L	----	50	Quarterly	Grab
<u>Volatile Organic Compounds (VOCs)</u>					
Benzene	µg/L	----	40	Quarterly	Grab
Toluene	µg/L	----	Report	Quarterly	Grab
Ethylbenzene	µg/L	----	Report	Quarterly	Grab
Total Xylenes	µg/L	----	Report	Quarterly	Grab
Ethanol	µg/L	----	Report	Quarterly	Grab
Methyl Tertiary-Butyl Ether (MTBE) ⁽⁹⁾	µg/L	----	Report	Quarterly	Grab

DRAFT PERMIT MODIFICATION

Footnotes:

1. All sampling shall be representative of the effluent that is discharged through outfall 01A to the culvert at Island End River. All samples shall be analyzed using the analytical methods found in 40 CFR Part 136, or alternative methods approved by EPA in accordance with the procedures in 40 CFR Part 136. Total Xylenes and MTBE can be analyzed using EPA Method 602. Ethanol can be analyzed using EPA Method 1671.
2. Sampling frequency of 1/month is defined as the sampling of one (1) significant rain event in each calendar month. Monthly sampling is only required if there is discharge from outfall 01A during a calendar month. Sampling frequency of quarterly is defined as the sampling of one (1) event in each quarter. Quarters are defined as the interval of time between the months of: January through March, inclusive; April through June, inclusive; July through September, inclusive; and October through December, inclusive. **Quarterly sampling shall be performed concurrently with the monthly monitoring event.** The permittee shall submit to EPA and MassDEP the results of any additional testing of the parameters established for outfall 01A if conducted in accordance with EPA approved methods consistent with the provisions of 40 CFR § 122.41(l)(4)(ii).
3. For Flow Rate, the permittee shall report the maximum daily flow rate of water discharged by the facility during the reporting period. The maximum daily flow rate, which is to be measured in the units of millions of gallons per day (MGD), shall be based upon the totalizer flow results or an approved equivalent flow measuring device.
4. See Part I.A.6., Page 9.
5. Available cyanide shall be analyzed using a detection limit less than or equal to 2.0 µg/l. After submitting ten (10) consecutive quarterly sampling results that are each below the available cyanide detection limit, the permittee may submit a written request to EPA for approval to eliminate required testing for available cyanide. The permittee is required to continue testing for this pollutant at the frequency specified in the permit until notice is received by certified mail from EPA that the permittee's request has been approved and the available cyanide testing requirement eliminated.
6. Total mercury shall be analyzed using a detection limit less than or equal to 2.0 µg/l. After submitting ten (10) consecutive quarterly sampling results that are each below the total mercury detection limit, the permittee may submit a written request to EPA for approval to eliminate required testing for total mercury. The permittee is required to continue testing for this pollutant at the frequency specified in the permit until notice is received by certified mail from EPA that the permittee's request has been approved and the total mercury testing requirement eliminated.
7. Compliance/non-compliance for Polycyclic Aromatic Hydrocarbons (PAHs) for discharges at outfall 01A shall be 10 µg/l for individual PAHs.
8. Analytical methods used to measure PAHs shall use minimum levels no greater than the minimum levels identified in Part I.A.20 on page 10.
9. MTBE shall be analyzed using a minimum level less than or equal to 5 µg/l. After submitting ten (10) consecutive quarterly sampling results that are each below the MTBE minimum level, the permittee may submit a written request to EPA for approval to eliminate required testing for MTBE. The permittee is required to continue testing for this pollutant at the frequency specified in the permit until notice is received by certified mail from EPA that the permittee's request has been approved and the MTBE testing requirement eliminated.

DRAFT PERMIT MODIFICATION

3. During the period beginning from the effective date and lasting through expiration, the permittee is authorized to discharge conventional oil water separator effluent from **Serial Number Outfall 01B** to the culvert at Island End River. The discharge is comprised of storm water, groundwater, hydrostatic test water, boiler condensate, fire testing water, truck wash water and effluent pond water. Such discharge shall: 1) be limited and monitored by the permittee as specified below; and 2) not cause a violation of the State Water Quality Standards of the receiving water.

Effluent Characteristic	Units	Discharge Limitation		Monitoring Requirements ⁽¹⁾	
		Average Monthly	Maximum Daily	Measurement Frequency ⁽²⁾	Sample Type
Flow Rate ⁽³⁾	MGD	Report	Report	Continuous	Meter
Total Suspended Solids (TSS)	mg/l	Report	Report	Each Discharge	Grab
Oil and Grease (O&G)	mg/l	----	Report	Each Discharge	Grab
pH ⁽⁴⁾	S.U.	----	Report	Each Discharge	Grab

Footnotes:

1. All sampling shall be representative of the effluent that is discharged through outfall 01B to the culvert at Island End River. All samples shall be analyzed using the analytical methods found in 40 CFR Part 136, or alternative methods approved by EPA in accordance with the procedures in 40 CFR Part 136.
2. A "Discharge Event" is defined as single or multiple discharges associated with a precipitation event. A discharge event will end after 72-hours have elapsed since the previous storm event. The permittee shall record the date and duration (in hours) of the discharge event(s) sampled, daily rainfall measurements or estimates (in inches) of the storm event that generated the sampled runoff, and the end of the previous measurable (greater than 0.1 inch rainfall) storm event. The permittee shall submit to EPA and MassDEP the results of any additional testing of the parameters established for outfall 01B if conducted in accordance with EPA approved methods consistent with the provisions of 40 CFR § 122.41(l)(4)(ii).
3. For Flow Rate, the permittee shall report the maximum daily flow rate of water discharged by the facility during the reporting period. The maximum daily flow rate, which is to be measured in the units of millions of gallons per day (MGD), shall be based upon the totalizer flow results or an approved equivalent flow measuring device.
4. See Part I.A.6., Page 9.

DRAFT PERMIT MODIFICATION

4. During the period beginning from the effective date and lasting through expiration, the permittee is authorized to discharge continuous treatment system effluent from **Serial Number Outfall 01C** to the culvert at Island End River. The discharge is comprised of storm water, groundwater, hydrostatic test water, boiler condensate, fire testing water, truck wash water, effluent pond water, and continuous treatment system filter backwash water. Such discharge shall: 1) be limited and monitored by the permittee as specified below; and 2) not cause a violation of the State Water Quality Standards of the receiving water.

Effluent Characteristic	Units	Discharge Limitation		Monitoring Requirements ⁽¹⁾	
		Average Monthly	Maximum Daily	Measurement Frequency ⁽²⁾	Sample Type
Flow Rate ⁽³⁾	MGD	Report	Report	Continuous	Meter
Total Suspended Solids (TSS)	mg/l	30	100	1/Month	Grab
Oil and Grease (O&G)	mg/l	----	5	1/Month	Grab
pH ⁽⁴⁾	S.U.	----	6.5 to 8.5	1/Month	Grab
Available Cyanide ⁽⁵⁾	µg/L	----	Report	Quarterly	Grab
<u>Metals</u>					
Total Aluminum	mg/L	----	Report	Quarterly	Grab
Total Cadmium	mg/L	----	Report	Quarterly	Grab
Total Chromium	mg/L	----	Report	Quarterly	Grab
Total Copper	mg/L	----	Report	Quarterly	Grab
Total Lead	mg/L	----	Report	Quarterly	Grab
Total Mercury ⁽⁶⁾	mg/L	----	Report	Quarterly	Grab
Total Nickel	mg/L	----	Report	Quarterly	Grab
Total Zinc	mg/L	----	Report	Quarterly	Grab
<u>Whole Effluent Toxicity (WET)^(7,8)</u>					
LC ₅₀	%	----	>50	2/year	Grab
Total Solids	mg/L	----	Report	2/year	Grab
Ammonia	mg/L	----	Report	2/year	Grab
Total Organic Carbon	mg/L	----	Report	2/year	Grab

DRAFT PERMIT MODIFICATION

Effluent Characteristic	Units	Discharge Limitation		Monitoring Requirements ⁽¹⁾	
		Average Monthly	Maximum Daily	Measurement Frequency ⁽²⁾	Sample Type
<u>Polycyclic Aromatic Hydrocarbons (PAHs) ⁽⁹⁾</u>					
Group I:					
Benzo(a)anthracene	µg/L	----	0.018	1/Month	Grab
Benzo(a)pyrene	µg/L	----	0.018	1/Month	Grab
Benzo(b)flouranthene	µg/L	----	0.018	1/Month	Grab
Benzo(k)fluoranthene	µg/L	----	0.018	1/Month	Grab
Chrysene	µg/L	----	0.018	1/Month	Grab
Dibenzo(a,h)anthracene	µg/L	----	0.018	1/Month	Grab
Indeno(1,2,3-cd)pyrene	µg/L	----	0.018	1/Month	Grab
Group II:					
Acenaphthene	µg/L	----	0.031	1/Month	Grab
Acenaphthylene	µg/L	----	0.031	1/Month	Grab
Anthracene	µg/L	----	0.031	1/Month	Grab
Benzo(ghi)perylene	µg/L	----	0.031	1/Month	Grab
Fluoranthene	µg/L	----	0.031	1/Month	Grab
Fluorene	µg/L	----	0.031	1/Month	Grab
Naphthalene	µg/L	----	0.031	1/Month	Grab
Phenanthrene	µg/L	----	0.031	1/Month	Grab
Pyrene	µg/L	----	0.031	1/Month	Grab
<u>Volatile Organic Compounds (VOCs)</u>					
Benzene	µg/l	----	5	1/Month	Grab
Toluene	µg/l	----	Report	1/Month	Grab
Ethylbenzene	µg/l	----	Report	1/Month	Grab
Total Xylenes	µg/l	----	Report	1/Month	Grab
BTEX ⁽¹⁰⁾	µg/l	----	100	1/Month	Grab
Methyl Tertiary-Butyl Ether (MTBE) ⁽¹¹⁾	µg/l	----	70	1/Month	Grab

Footnotes:

1. All sampling shall be representative of the effluent that is discharged through outfall 01C to the culvert at Island End River. All samples shall be analyzed using the analytical methods found in 40 CFR Part 136, or alternative methods approved by EPA in accordance with the procedures in 40 CFR Part 136. Total Xylenes and MTBE can be analyzed using EPA Method 602.
2. Sampling frequency of 1/month is defined as the sampling of once each calendar month. Sampling frequency of quarterly is defined as the sampling of one (1) event in each quarter. Quarters are defined as the interval of time between the months of: January through March, inclusive; April through June, inclusive; July through September, inclusive; and October through December, inclusive. **Quarterly sampling shall be performed concurrently with the monthly monitoring event.** The permittee shall submit to EPA and MassDEP the results of any additional testing of the parameters established for outfall 01C if conducted in accordance with EPA approved methods

DRAFT PERMIT MODIFICATION

consistent with the provisions of 40 CFR §122.41(l)(4)(ii).

3. For Flow Rate, the permittee shall report the maximum daily flow rate of water discharged by the facility during the reporting period. The maximum daily flow rate, which is to be measured in the units of millions of gallons per day (MGD), shall be based upon the totalizer flow results or an approved equivalent flow measuring device.
4. See Part I.A.6, Page 9.
5. Available cyanide shall be analyzed using a detection limit less than or equal to 2.0 µg/l. After submitting ten (10) consecutive quarterly sampling results that are each below the available cyanide detection limit, the permittee may submit a written request to EPA for approval to eliminate required testing for available cyanide. The permittee is required to continue testing for this pollutant at the frequency specified in the permit until notice is received by certified mail from EPA that the permittee's request has been approved and the available cyanide testing requirement eliminated.
6. Total mercury shall be analyzed using a detection limit less than or equal to 2.0 µg/l. After submitting ten (10) consecutive quarterly sampling results that are each below the total mercury detection limit, the permittee may submit a written request to EPA for approval to eliminate required testing for total mercury. The permittee is required to continue testing for this pollutant at the frequency specified in the permit until notice is received by certified mail from EPA that the permittee's request has been approved and the total mercury testing requirement eliminated.
7. LC50 (Lethal Concentration 50 Percent) is the concentration of wastewater (effluent) causing mortality to 50 percent (%) of the test organisms. Therefore, a 50% limit means that a sample of 50% effluent shall cause no more than a 50% mortality rate. The limit is considered to be a maximum daily limit.
8. The permittee shall conduct 48-Hour Static Acute Whole Effluent Toxicity (WET) test on effluent samples from Outfall 01C two times a year, in March and September, using one specie, Mysid Shrimp (*Americamysis Bahia*, formerly known as *Mysidopsis Bahia*) and following the protocol in Attachment A (Marine Acute Toxicity Test Procedure and Protocol dated September 1996), provided, however, that in lieu of the method referenced in Part II of Attachment A, the permittee shall use EPA Method 2007.0 as identified in 40 CFR Part 136. Toxicity test results are to be submitted within 30 days after the sampling date with the routine Discharge Monitoring Reports (DMRs). Results of wet chemistry analyses conducted on WET test samples may be submitted to meet quarterly metals monitoring requirements. In that case, metals data would be submitted in the discharge monitoring report and in the WET test written report.
9. Compliance/non-compliance for Polycyclic Aromatic Hydrocarbons (PAHs) for discharges at outfall 01C will be based on the minimum level (ML) of analysis, as defined in Part 1.A.1. See Part I.A.20, Page 10 for the required MLs.
10. BTEX shall be reported as the sum of the detectable concentrations of benzene, toluene, ethylbenzene and xylenes.
11. MTBE shall be analyzed using a minimum level less than or equal to 5 µg/l. After submitting ten (10) consecutive quarterly sampling results that are each below the MTBE minimum level, the permittee may submit a written request to EPA for approval to eliminate required testing for MTBE. The permittee is required to continue testing for this pollutant at the frequency specified in the permit until notice is received by certified mail from EPA that the permittee's request has been

DRAFT PERMIT MODIFICATION

approved and the MTBE testing requirement eliminated.

DRAFT PERMIT MODIFICATION

Part 1.A. (Continued)

5. The discharges either individually or in combination shall not cause or contribute to a violation of State Water Quality Standards of the receiving waters.
6. The pH of the effluent shall not be less than 6.5 nor greater than 8.5 at any time unless these values are exceeded as a result of natural causes.
7. The discharge shall not cause objectionable discoloration of the receiving waters.
8. The discharge shall not contain a visible oil sheen, foam, or floating solids at any time.
9. The discharge shall not contain materials in concentrations or combinations which are hazardous or toxic to human health, aquatic life of the receiving surface waters or which would impair the uses designated by its classification.
10. There shall be no discharge of tank bottom water and/or bilge water alone or in combination with storm water discharge or other wastewater.
11. There shall be no discharge of floor wash water from the interior of the facility maintenance garage.
12. The discharge shall not impart color, taste, turbidity, toxicity, radioactivity or other properties which cause those waters to be unsuitable for the designated uses and characteristics ascribed to their use.
13. Notwithstanding specific conditions of this permit, the effluent must not lower the quality of any classified body of water below such classification, or lower the existing quality of any body of water if the existing quality is higher than the classification.
14. The permittee shall inspect, operate, and maintain the continuous treatment system, conventional oil water separator and the corrugated plate separator at the facility to ensure that the Effluent Limitations and Monitoring Requirements and other conditions contained in this permit are met. The permittee shall ensure that all components of the facility's Storm Water Pollution Prevention Plan, including those that specifically address the operation and maintenance of the separator(s) and other components of the storm water conveyance system, are complied with.
15. Chemicals (e.g., disinfecting agents, detergents, emulsifiers, etc.) and bioremedial agents including microbes shall not be added to the collection and treatment systems without prior approval by the U. S. Environmental Protection Agency (EPA) and the Massachusetts Department of Environmental Protection (MassDEP).
16. There shall be no discharge of any sludge and/or bottom deposits that has been physically removed from any storage tank(s), basin(s), and/or diked area(s) to the receiving waters. Examples of storage tanks and/or basins include, but are not limited to: primary catch basins, stilling basins, oil water separators, petroleum product storage tanks, baffled storage tanks collecting spills, and tank truck loading rack sumps.
17. No truck washing or hydrostatic testing shall occur during a storm event or following an overflow event or following a discharge event through outfall 01B until the potential for discharge through outfall 01B has ceased.
18. EPA may modify this permit in accordance with EPA regulations in 40 Code of Federal Regulations (CFR) § 122.62 and § 122.63 to incorporate more stringent effluent limitations, increase the frequency of analyses, or impose additional sampling and analytical requirements.
19. The appearance of any size sheen attributable to the discharge from this facility shall be reported

DRAFT PERMIT MODIFICATION

immediately by the permittee to the National Response Center in accordance with Section 311 of the Clean Water Act (CWA). This requirement is in addition to any reporting requirements related to EPA or MassDEP contained in this National Pollutant Discharge Elimination System (NPDES) permit.

20. PAH analysis shall include the following compounds and their respective minimum levels (as defined in part I.A.1) as identified in parenthesis for each compound. benzo(a)anthracene (<0.05 µg/L), benzo(a)pyrene (<0.05 µg/L), benzo(b)fluoranthene (<0.05 µg/L), benzo(k)fluoranthene (<0.05 µg/L), chrysene (<0.5 µg/L), dibenzo(a,h)anthracene (<0.10 µg/L), indeno(1,2,3-cd)pyrene (<0.10 µg/L), and naphthalene (5.00 µg/L), acenaphthene (<5.00 µg/L), acenaphthylene (<5.00 µg/L), anthracene (<2.0 µg/L), benzo(ghi)perylene (<0.2 µg/L), fluoranthene (<0.50 µg/L), fluorene (<0.5 µg/L), naphthalene (<5.00 µg/L), phenanthrene (<2.00 µg/L), and pyrene (<1.00 µg/L).
21. The permittee shall attach a copy of the laboratory case narrative to the respective Discharge Monitoring Report Form submitted to EPA and MassDEP for each sampling event reported. The laboratory case narrative shall include a copy of the laboratory data sheets for each analysis (identifying the test method, the analytical results, and the detection limits for each analyte) and provide a brief discussion of whether all appropriate QA/QC procedures were met and were within acceptable limits.
22. 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”:
 - i One hundred micrograms per liter (100 µg/l);
 - ii Two hundred micrograms per liter (200 µg/l) for acrolein and acrylonitrile; five hundred micrograms per liter (500 µg/l) for 2,4-dinitrophenol; and one milligram per liter (1 mg/L) for antimony;
 - iii 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
 - iv 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”:
 - i Five hundred micrograms per liter (500 µg/L);
 - ii One milligram per liter (1 mg/L) for antimony;
 - iii 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).
 - iv 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.
23. Wastewater Treatment System Flow
 - a. The continuous treatment system shall be designed, constructed, maintained and operated to treat the volume of storm water, groundwater and other associated wastewaters up to and including 280

DRAFT PERMIT MODIFICATION

gpm through outfall 01C.

- b. The collection, storage and treatment systems shall be designed, constructed, maintained and operated to treat the total equivalent volume of storm water, groundwater, hydrostatic test water, boiler condensate, fire testing water, truck wash water, effluent pond water and continuous treatment system filter backwash water which would result from a 10-year 24-hour precipitation event, which volume shall be discharged through outfall 01C and outfall 01A. All wet weather and dry weather discharges less than or equal to the design capacity of the continuous treatment system [280 gpm] shall be treated through the continuous treatment system and discharged at outfall 01C. The flow through the corrugated plate separator shall not exceed 4,000 gpm.
- c. Discharge from outfall 01B shall be limited to situations when the combined capacity of the facility to collect, store, treat and discharge wastewater through outfalls 01A and 01C is exceeded. As a result, it is expected that discharges through outfall 01B will occur only in extreme weather events.
- d. The permittee shall certify that the facility's collection storage and treatment systems have been designed, constructed, maintained and operated to meet the requirements of this permit. The certification shall be signed in accordance with the requirements identified in 40 CFR § 122.22. A copy of this certification shall be sent to EPA and MassDEP within sixty (60) days of the effective date of the Permit.
- e. Written notification and approval by EPA and the MassDEP shall be required, should the permittee propose changes to the storm water conveyance, storage or treatment systems which have the potential to cause the maximum design flow rate through any portion of the collection, storage and treatment systems to be increased.

24. 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.

25. Hydrostatic Test Water Discharges

- a. The hydrostatic test water shall be monitored as described below and discharged through outfalls 01A and 01C to the culvert at Island End River.
- b. At a minimum, four (4) representative samples shall be taken of the hydrostatic test water: one (1) grab sample of the influent test water; and three (3) serial-grab samples of the hydrostatic test water effluent. The influent grab sample shall be taken approximately midway through the fill segment of the hydrostatic test procedure. The three (3) effluent serial-grab samples shall be taken over the duration of the entire discharge segment of the hydrostatic test procedure. The first effluent serial-grab sample shall be taken during the initial phase of discharge; the second around the midpoint; and the third near the end of the discharge. The effluent serial-grab samples shall be obtained before discharge into the treatment works and/or mixing with any storm water or other non-storm water flow.

These influent and effluent samples shall be analyzed for the following parameters:

DRAFT PERMIT MODIFICATION

Effluent Characteristic	Units	Sample Type
Total Suspended Solids (TSS)	mg/l	Grab
Oil and Grease (O&G)	mg/l	Grab
pH	S.U.	Grab
Dissolved Oxygen (DO)	mg/l	Grab
Total Residual Chlorine	mg/l	Grab
Benzene	µg/l	Grab
Toluene	µg/l	Grab
Ethylbenzene	µg/l	Grab
Total Xylenes	µg/l	Grab
Methyl Tertiary-Butyl Ether	µg/l	Grab
<u>PAHs</u>		
Benzo(a)anthracene	µg/l	Grab
Benzo(a)pyrene	µg/l	Grab
Benzo(b)fluoranthene	µg/l	Grab
Benzo(k)fluoranthene	µg/l	Grab
Chrysene	µg/l	Grab
Dibenzo(a,h)anthracene	µg/l	Grab
Indeno(1,2,3-cd)pyrene	µg/l	Grab
Acenaphthene	µg/l	Grab
Acenaphthylene	µg/l	Grab
Anthracene	µg/l	Grab
Benzo(ghi)perylene	µg/l	Grab
Fluoranthene	µg/l	Grab
Fluorene	µg/l	Grab
Naphthalene	µg/l	Grab
Phenanthrene	µg/l	Grab
Pyrene	µg/l	Grab

- c. Testing for total residual chlorine is only required when potable water or a similar source of water which is likely to contain a residual chlorine concentration is used for hydrostatic testing. Testing for MTBE is only required if the tank undergoing testing was recently (i.e., within three years of the proposed testing date) used to store gasoline containing MTBE.
- d. During discharge (i.e., approximately at the same time the three effluent grab samples are taken), the flow exiting the treatment system should be observed in order to prevent the inadvertent release of hydrocarbons to the receiving water(s). In the event that there is evidence of such a release (e.g., visible oil sheen and/or noticeable increase in turbidity of discharge water), the permittee shall immediately halt the discharge of hydrostatic test water and take steps to correct the problem.
- e. Any changes to these procedures must be approved by EPA and the MassDEP prior to their implementation.
- f. The permittee shall submit a letter/report to EPA and MassDEP, summarizing the results of the hydrostatic test within forty-five (45) days of completion of the test. This report shall contain: the

DRAFT PERMIT MODIFICATION

date(s) during which the hydrostatic testing occurred; the estimated volume of hydrostatic test water discharged; a copy of the laboratory data sheets for each analyses, providing the test method, the detection limits for each analyte, and a brief discussion of whether all appropriate QA/QC procedures were met and were within acceptable limits; and a comparison of the overall test results with the effluent limitations for outfall 01C in this permit.

- g. The U.S. Environmental Protection Agency shall reserve the right to re-open the permit, in accordance with 40 CFR § 122.62(a)(2), to limit hydrostatic test water discharges in the event that sampling results indicate that such discharge has a reasonable potential to cause or contribute to a violation of Massachusetts Water Quality Standards in the Island End River.

B. STORM WATER POLLUTION PREVENTION PLAN

1. The permittee shall develop, implement, and maintain a Storm Water Pollution Prevention Plan (SWPPP) designed to reduce, or prevent, the discharge of pollutants in storm water to the receiving waters identified in this permit. The SWPPP shall be a written document and consistent with the terms of this permit. The permittee shall comply with the terms of its SWPPP.
2. The SWPPP shall be completed or updated and signed by the Permittee within 90 days after the effective date of this Permit. The Permittee shall certify that the SWPPP has been completed or updated and that it meets the requirements of the permit. The certification shall be signed in accordance with the requirements identified in 40 CFR § 122.22. A copy of this initial certification shall be sent to EPA and MassDEP within one hundred and twenty (120) days of the effective date of the Permit.
3. The SWPPP shall be consistent with the provisions for SWPPPs included in the most current version of the Multi-Sector General Permits for Storm Water Discharges Associated with Industrial Activities. (The current MSGP was issued September 29, 2008 – see 73 FR 56572). The SWPPP shall include best management practices (BMPs) for on-site activities that will minimize the discharge of pollutants in storm water to waters of the United States.
4. The SWPPP shall be prepared in accordance with good engineering practices, identify potential sources of pollution that may reasonably be expected to affect the quality of the storm water discharges, and describe and ensure implementation of practices which will be used to reduce the pollutants and assure compliance with this permit. Specifically, the SWPPP shall contain the elements listed below:
 - a. A pollution prevention team responsible for developing, implementing, maintaining, revising and ensuring compliance with the SWPPP.
 - b. A site description which includes a list of activities at the facility; a site map showing drainage areas and direction of storm water flows; receiving waters and outfall location; areas of the facility where industrial materials or activities are exposed to storm water including the location of industrial activities, storage, disposal, material handling; and all structural controls.
 - c. A summary of all pollutant sources which includes all areas where spills have occurred or could occur. For each source, identify the expected drainage and the corresponding pollutant.
 - d. A summary of any existing storm water discharge sampling data.
 - e. A description of all storm water controls, both structural and non-structural. BMPs must include good housekeeping measures, preventative maintenance programs, spill prevention and response

DRAFT PERMIT MODIFICATION

procedures, runoff management practices, and proper handling of deicing materials. The SWPPP shall describe how the BMPs are appropriate for the facility. All BMPs shall be properly maintained and be in effective operating conditions.

5. All areas of the facility where industrial materials or activities are exposed to storm water shall be inspected, at least on a quarterly basis. Inspections shall occur beginning the 1st quarter after the effective date of the permit. EPA considers quarters as follows: January to March; April to June; July to September; and October to December.
6. The permittee shall amend and update the SWPPP within 30 days for any changes at the facility affecting the SWPPP. Changes which may affect the SWPPP include, but are not limited to, the following activities: a change in design, construction, operation, or maintenance, which has a significant effect on the potential for the discharge of pollutants to the waters of the United States; a release of a reportable quantity of pollutants as described in 40 CFR Part 302; or a determination by the permittee or EPA that the SWPPP appears to be ineffective in achieving the general objectives of controlling pollutants in storm water discharges associated with industrial activity. Any amended or new versions of the SWPPP shall be re-certified by the Permittee. Such re-certifications also shall be signed in accordance with the requirements identified in 40 CFR § 122.22
7. The permittee shall certify at least annually that the previous year's inspections and maintenance activities were conducted, results were recorded, records were maintained, and that the facility is in compliance with the SWPPP. If the facility is not in compliance with any aspect of the SWPPP, the annual certification shall state the non-compliance and the remedies which are being undertaken. Such annual certifications also shall be signed in accordance with the requirements identified in 40 CFR § 122.22. A copy of this annual certification shall be sent to EPA and MassDEP on, or before, every anniversary of the effective date of the permit. The permittee shall keep a copy of the current SWPPP and all SWPPP certifications (the initial certification, re-certifications, and annual certifications) signed during the effective period of this permit at the facility and shall make them available for inspection by EPA and MassDEP.

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 reports and evaluations required herein, shall be submitted to EPA at the following address:

EPA New England - Region 1
Water Technical Unit (SEW)
P.O. Box 8127
Boston, Massachusetts 02114

Signed and dated Discharge Monitoring Report Form(s) and all other reports required by this permit shall also be submitted to the State at the following addresses:

Massachusetts Department of Environmental Protection
Northeast Regional Office
Bureau of Waste Prevention
205 B Lowell Street

DRAFT PERMIT MODIFICATION

Wilmington, MA 01887

and

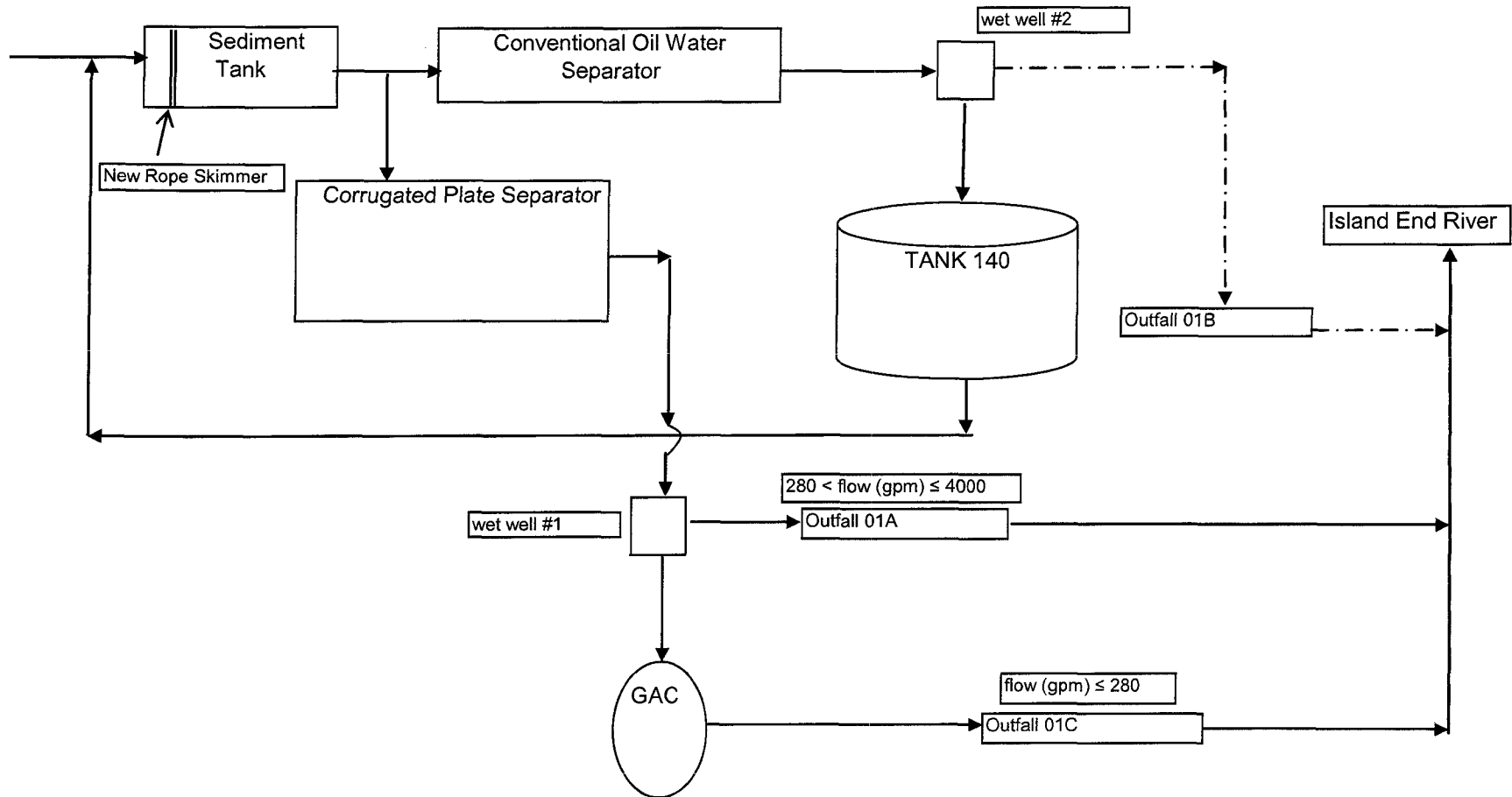
Massachusetts Department of Environmental Protection
Division of Watershed Management
Surface Water Discharge Permit Program
627 Main Street, 2nd Floor
Worcester, Massachusetts 01608

D. STATE PERMIT CONDITIONS

1. This Discharge Permit is issued jointly by the EPA and the MassDEP under Federal and State law, respectively. As such, all the terms and conditions of this permit are hereby incorporated into and constitute a discharge permit issued by the Commissioner of the MassDEP pursuant to M.G.L. Chap.21, §43.
2. 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 a NPDES Permit issued by the U.S. Environmental Protection Agency. In the event this Permit is declared invalid, illegal or otherwise issued in violation of Federal law, this Permit shall remain in full force and effect under State law as a Permit issued by the Commonwealth of Massachusetts.

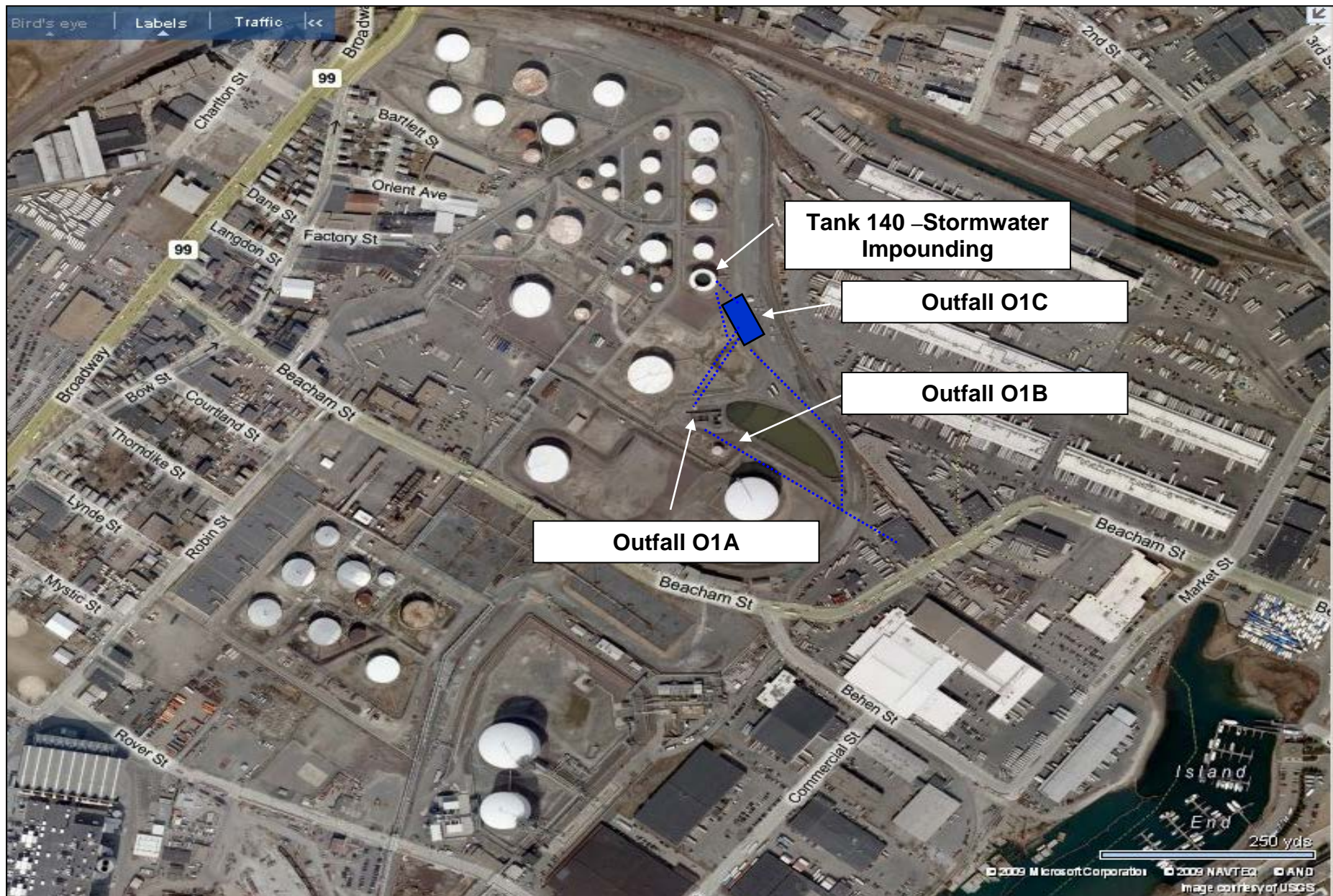
ATTACHMENT C

Everett Terminal Conceptual Simplified Process Flow Diagram



ATTACHMENT D Effluent Limit Changes from the Final Permit to the Draft Permit Modification

Effluent Characteristic	Units	Final Permit 9/29/2008	Draft Permit Modification November 2009		
		Ave Monthly /Max Daily	Outfall 01A Ave Monthly /Max Daily	Outfall 01B Ave Monthly /Max Daily	Outfall 01C Ave Monthly /Max Daily
Flow Rate	MGD	Rept/Rept	Rept/Rept	Rept/Rept	Rept/Rept
Total Suspended Solids (TSS)	30/100	30/100	30/100	Rept/Rept	30/100
Oil and Grease (O&G)	mg/L	--/5	--/15	--/Rept	--/5
pH	S.U.	--/6.5 to 8.5	--/6.5 to 8.5	--/Rept	6.5 to 8.5
Available Cyanide	µg/L	--/Rept	--/Rept	--/Rept	--/Rept
<u>Metals</u>					
Total Aluminum	mg/L	--/Rept	----	----	--/Rept
Total Cadmium	mg/L	--/Rept	----	----	--/Rept
Total Chromium	mg/L	--/Rept	----	----	--/Rept
Total Copper	mg/L	--/Rept	----	----	--/Rept
Total Lead	mg/L	--/Rept	----	----	--/Rept
Total Mercury	mg/L	--/Rept	--/Rept	----	--/Rept
Total Nickel	mg/L	--/Rept	----	----	--/Rept
Total Zinc	mg/L	--/Rept	----	----	--/Rept
<u>Whole Effluent Toxicity (WET)</u>					
LC ₅₀	%	--/>50	----	----	--/>50
Hardness	mg/L	--/Rept	----	----	--/Rept
Total Solids	mg/L	--/Rept	----	----	--/Rept
Ammonia	mg/L	--/Rept	----	----	--/Rept
Calcium	mg/L	--/Rept	----	----	--/Rept
Magnesium	mg/L	--/Rept	----	----	--/Rept
Total Organic Carbon	mg/L	--/Rept	----	----	--/Rept
<u>Polycyclic Aromatic Hydrocarbons (PAHs)</u>					
Group I:					
Benzo(a)anthracene	µg/L	--/0.018	--/0.031	----	--/0.018
Benzo(a)pyrene	µg/L	--/0.018	--/0.031	----	--/0.018
Benzo(b)fluoranthene	µg/L	--/0.018	--/0.031	----	--/0.018
Benzo(k)fluoranthene	µg/L	--/0.018	--/0.031	----	--/0.018
Chrysene	µg/L	--/0.018	--/0.031	----	--/0.018
Dibenzo(a,h)anthracene	µg/L	--/0.018	--/0.031	----	--/0.018
Indeno(1,2,3-cd)pyrene	µg/L	--/0.018	--/0.031	----	--/0.018
Group II:					
Acenaphthene	µg/L	--/0.031	--/0.031	----	--/0.031
Acenaphthylene	µg/L	--/0.031	--/0.031	----	--/0.031
Anthracene	µg/L	--/0.031	--/0.031	----	--/0.031
Benzo(ghi)perylene	µg/L	--/0.031	--/0.031	----	--/0.031
Fluoranthene	µg/L	--/0.031	--/0.031	----	--/0.031
Fluorene	µg/L	--/0.031	--/0.031	----	--/0.031
Naphthalene	µg/L	--/0.031	--/0.031	----	--/0.031
Phenanthrene	µg/L	--/0.031	--/0.031	----	--/0.031
Pyrene	µg/L	--/0.031	--/0.031	----	--/0.031
Total PAHs		----	--/50	----	
<u>Volatile Organic Compounds</u>					
Benzene	µg/L	--/5	40	----	--/5
Toluene	µg/L	--/Rept	--/Rept	----	--/Rept
Ethylbenzene	µg/L	--/Rept	--/Rept	----	--/Rept
Xylenes	µg/L	--/Rept	--/Rept	----	--/Rept
Total BTEX	µg/L	--/100	----	----	--/100
Ethanol	µg/L	--/Rept	--/Rept	----	----
Methyl Tertiary-Butyl Ether (MTBE)	µg/L	--/70	--/Rept	----	--/70



ATTACHMENT E - Plan of Everett Terminal Identifying Outfall Monitoring Locations

MASSACHUSETTS DEPARTMENT OF
ENVIRONMENTAL PROTECTION
COMMONWEALTH OF MASSACHUSETTS
1 WINTER STREET
BOSTON, MASSACHUSETTS 02108

UNITED STATES ENVIRONMENTAL
PROTECTION AGENCY
OFFICE OF ECOSYSTEM PROTECTION
REGION I
BOSTON, MASSACHUSETTS 02109

PUBLIC NOTICE OF A DRAFT NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT MODIFICATION TO DISCHARGE INTO THE WATERS OF THE UNITED STATES UNDER SECTION 301 AND 402 OF THE CLEAN WATER ACT (THE "ACT"), AS AMENDED, AND REQUEST FOR STATE CERTIFICATION UNDER SECTION 401 OF THE ACT.

DATE OF NOTICE: December 10, 2009

PERMIT NUMBER: MA0000833

PUBLIC NOTICE NUMBER: MA-002-2010

NAME AND MAILING ADDRESS OF APPLICANT:

Mr. Arthur Powers
Terminal Supervisor
ExxonMobil Pipeline Company
52 Beacham Street
Everett, MA 02149

NAME AND ADDRESS OF THE FACILITY WHERE DISCHARGE OCCURS:

ExxonMobil Everett Terminal
52 Beacham Street
Everett, MA 02149

RECEIVING WATER: Island End River/Mystic River

RECEIVING WATER CLASSIFICATION: Class SB

PREPARATION OF THE DRAFT PERMIT MODIFICATION:

The U.S. Environmental Protection Agency, (EPA) and the Massachusetts Department of Environmental Protection (MassDEP) have cooperated in the development of a permit modification for the above identified facility. The effluent limits and permit conditions imposed have been drafted to assure that State Water Quality Standards and provisions of the Clean Water Act will be met. EPA has formally requested that the State certify this draft permit modification pursuant to Section 401 of the Clean Water Act and expects that the draft permit modification will be certified.

INFORMATION ABOUT THE DRAFT PERMIT MODIFICATION:

A statement of basis (describing the type of facility; type and quantities of wastes; a brief summary of the basis for the draft permit modification conditions; and significant factual, legal and policy questions considered in preparing this draft permit modification) and the draft permit modification may be obtained at no cost at

http://www.epa.gov/region1/npdes/draft_permits_listing_ma.html or by writing or calling EPA's contact person named below:

Ellen Weitzler
US EPA
5 Post Office Square, Suite 100 (OEP06-2)
Boston, MA 02109-3912
Telephone: (617) 918-1582

The administrative record containing all documents relating to this draft permit modification is on file and may be inspected at the EPA Boston office mentioned above between 9:00 a.m. and 5:00 p.m., Monday through Friday, except holidays.

PUBLIC COMMENT AND REQUEST FOR PUBLIC HEARING:

All persons, including applicants, who believe any condition of this draft permit modification is inappropriate, must raise all issues and submit all available arguments and all supporting material for their arguments in full by **January 8, 2010**, to the US EPA, 5 Post Office Square, Suite 100, Boston, Massachusetts 02109-3912. Any person, prior to such date, may submit a request in writing to EPA and the State Agency for a public hearing to consider this draft permit modification. Such requests shall state the nature of the issues proposed to be raised in the hearing. A public hearing may be held after at least thirty days public notice whenever the Regional Administrator finds that response to this notice indicates significant public interest. In reaching a final decision on this draft permit modification the Regional Administrator will respond to all significant comments and make the responses available to the public at EPA's Boston office.

FINAL PERMIT MODIFICATION DECISION:

Following the close of the comment period, and after a public hearing, if such hearing is held, the Regional Administrator will issue a final permit modification decision and forward a copy of the final decision to the applicant and each person who has submitted written comments or requested notice.

Glenn Haas, Director
DIVISION OF WATERSHED
MANAGEMENT
MASSACHUSETTS DEPARTMENT OF
ENVIRONMENTAL PROTECTION

Stephen S. Perkins, Director
OFFICE OF ECOSYSTEM PROTECTION
ENVIRONMENTAL PROTECTION
AGENCY

**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),

ExxonMobil Oil Corporation

is authorized to discharge from a facility located at

**ExxonMobil Everett Terminal
52 Beacham Street
Everett, MA 02149**

to receiving water named

Island End River/Mystic River Watershed (MA71)

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 immediately following 60 days after signature.

This permit and the authorization to discharge shall 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 6, 2000

This permit consists of 11 pages in Part I, including effluent limitations and monitoring requirements, 25 pages in Part II, including General Conditions and Definitions, and 10 pages in Attachment A, Marine Acute Toxicity Test Procedure and Protocol.

Signed this 29th day of September, 2008

/s/ SIGNATURE ON FILE

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

Glenn Haas, Director
Division of Watershed Management
Department of Environmental Protection
Commonwealth of Massachusetts
Boston, MA

PART I

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

- During the period beginning from the effective date and lasting through expiration, the permittee is authorized to discharge treated effluent from **Serial Number Outfall 001** to the Island End River. The discharge is comprised of storm water, groundwater, hydrostatic test water, boiler condensate, fire testing water, truck wash water and effluent pond water. Such discharge shall: 1) be limited and monitored by the permittee as specified below; and 2) not cause a violation of the State Water Quality Standards of the receiving water.

Effluent Characteristic	Units	Discharge Limitation		Monitoring Requirements ⁽¹⁾	
		Average Monthly	Maximum Daily	Measurement Frequency ⁽²⁾	Sample Type
Flow Rate ⁽³⁾	MGD	Report	Report	Continuous	Meter
Total Suspended Solids (TSS)	mg/l	30	100	1/Month	Grab
Oil and Grease (O&G)	mg/l	----	5	1/Month	Grab
pH ⁽⁵⁾	S.U.	----	6.5 to 8.5	1/Month	Grab
Available Cyanide ⁽⁴⁾	µg/L	----	Report	Quarterly	Grab
<u>Metals</u>					
Total Aluminum	mg/L	----	Report	Quarterly	Grab
Total Cadmium	mg/L	----	Report	Quarterly	Grab
Total Chromium	mg/L	----	Report	Quarterly	Grab
Total Copper	mg/L	----	Report	Quarterly	Grab
Total Lead	mg/L	----	Report	Quarterly	Grab
Total Mercury	mg/L	----	Report	Quarterly	Grab
Total Nickel	mg/L	----	Report	Quarterly	Grab
Total Zinc	mg/L	----	Report	Quarterly	Grab
<u>Whole Effluent Toxicity (WET)^(8,9)</u>					
LC ₅₀	%	----	>50	2/year	Grab
Hardness	mg/L	----	Report	2/year	Grab
Total Solids	mg/L	----	Report	2/year	Grab
Ammonia	mg/L	----	Report	2/year	Grab
Calcium	mg/L	----	Report	2/year	Grab
Magnesium	mg/L	----	Report	2/year	Grab
Total Organic Carbon	mg/L	----	Report	2/year	Grab

Effluent Characteristic	Units	Discharge Limitation		Monitoring Requirements ⁽¹⁾	
		Average Monthly	Maximum Daily	Measurement Frequency ⁽²⁾	Sample Type
<u>Polycyclic Aromatic Hydrocarbons (PAHs)⁽⁶⁾</u>					
Group I:					
Benzo(a)anthracene	µg/L	----	0.018	1/Month	Grab
Benzo(a)pyrene	µg/L	----	0.018	1/Month	Grab
Benzo(b)fluoranthene	µg/L	----	0.018	1/Month	Grab
Benzo(k)fluoranthene	µg/L	----	0.018	1/Month	Grab
Chrysene	µg/L	----	0.018	1/Month	Grab
Dibenzo(a,h)anthracene	µg/L	----	0.018	1/Month	Grab
Indeno(1,2,3-cd)pyrene	µg/L	----	0.018	1/Month	Grab
Group II:					
Acenaphthene	µg/L	----	0.031	1/Month	Grab
Acenaphthylene	µg/L	----	0.031	1/Month	Grab
Anthracene	µg/L	----	0.031	1/Month	Grab
Benzo(ghi)perylene	µg/L	----	0.031	1/Month	Grab
Fluoranthene	µg/L	----	0.031	1/Month	Grab
Fluorene	µg/L	----	0.031	1/Month	Grab
Naphthalene	µg/L	----	0.031	1/Month	Grab
Phenanthrene	µg/L	----	0.031	1/Month	Grab
Pyrene	µg/L	----	0.031	1/Month	Grab
<u>Volatile Organic Compounds (VOCs)</u>					
Benzene	µg/l	----	5	1/Month	Grab
Toluene	µg/l	----	Report	1/Month	Grab
Ethylbenzene	µg/l	----	Report	1/Month	Grab
Total Xylenes	µg/l	----	Report	1/Month	Grab
BTEX ⁽⁷⁾	µg/l	----	100	1/Month	Grab
Ethanol	µg/l	----	Report	Quarterly	Grab
Methyl Tertiary-Butyl Ether (MTBE)	µg/l	----	70	1/Month	Grab

Footnotes:

1. All sampling shall be representative of the effluent that is discharged through outfall 001 to the Island End River. All samples shall be analyzed using the analytical methods found in 40 CFR Part 136, or alternative methods approved by EPA in accordance with the procedures in 40 CFR Part 136. Xylenes can be analyzed using EPA Method 602. MTBE can be analyzed using method EPA Method 602, modified to include a heated purge, or SW846 8260B. Ethanol can be analyzed using method SW846 8015B (with distillation using method 5031).
2. Sampling frequency of 1/month is defined as the sampling of one (1) significant rain event in

each calendar month. Sampling frequency of quarterly is defined as the sampling of one (1) event in each quarter. Quarters are defined as the interval of time between the months of: January through March, inclusive; April through June, inclusive; July through September, inclusive; and October through December, inclusive. **Quarterly sampling shall be performed concurrently with the monthly monitoring event.** The permittee shall submit the results to EPA and MassDEP of any additional testing done to 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).

3. For Flow Rate, the permittee shall report the maximum daily flow rate of water discharged by the facility during the reporting period. The maximum daily flow rate, which is to be measured in the units of millions of gallons per day (MGD), shall be based upon the totalizer flow results or an approved equivalent flow measuring device.
4. Available cyanide shall be analyzed using a detection limit less than or equal to 2.0 µg/l.
5. See Part I.A.3., Page 5
6. See Part I.A.18, Page 6
7. BTEX shall be reported as the sum of the detectable concentrations of benzene, toluene, ethylbenzene and xylenes.
8. LC50 (Lethal Concentration 50 Percent) is the concentration of wastewater (effluent) causing mortality to 50 percent (%) of the test organisms. The "50 % or greater limit" is defined as a sample which is composed of 50 % or greater effluent, the remainder being dilution water. The limit is considered to be a maximum daily limit.
9. The permittee shall conduct 48-Hour Static Acute Whole Effluent Toxicity (WET) test on effluent samples from Outfall 001 two times a year, in March and September, using one specie, Mysid Shrimp (Mysidopsis Bahia) and following the protocol in Attachment A (Marine Acute Toxicity Test Procedure and Protocol dated September 1996). Toxicity test results are to be submitted within 30 days after the sampling date with the routine Discharge Monitoring Reports (DMRs). Results of wet chemistry analyses conducted on WET test samples may be submitted to meet monthly metals and hardness monitoring requirements. In that case, metals and hardness data would be submitted in the monthly discharge monitoring report and in the WET test written report.

Part 1.A. (Continued)

2. The discharges either individually or in combination shall not cause or contribute to a violation of State Water Quality Standards of the receiving waters.
3. The pH of the effluent shall not be less than 6.5 nor greater than 8.5 at any time unless these values are exceeded as a result of natural causes.
4. The discharge shall not cause objectionable discoloration of the receiving waters.
5. The discharge shall not contain a visible oil sheen, foam, or floating solids at any time.
6. The discharge shall not contain materials in concentrations or combinations which are hazardous or toxic to human health, aquatic life of the receiving surface waters or which would impair the uses designated by its classification.
7. There shall be no discharge of tank bottom water and/or bilge water alone or in combination with storm water discharge or other wastewater.
8. There shall be no discharge of floor wash water from the interior of the facility maintenance garage.
9. The discharge shall not impart color, taste, turbidity, toxicity, radioactivity or other properties which cause those waters to be unsuitable for the designated uses and characteristics ascribed to their use.
10. Notwithstanding specific conditions of this permit, the effluent must not lower the quality of any classified body of water below such classification, or lower the existing quality of any body of water if the existing quality is higher than the classification.
11. The permittee shall inspect, operate, and maintain the O/W Separator(s) at the facility to ensure that the Effluent Limitations and Conditions contained in this permit are met. The permittee shall ensure that all components of the facility's Storm Water Pollution Prevention Plan including those which specifically address the operation and maintenance of the O/W Separator(s) and other components of the storm water conveyance system are complied with.
12. Chemicals (e.g., disinfecting agents, detergents, emulsifiers, etc.) and bioremedial agents including microbes shall not be added to the collection and treatment systems without prior approval by the U. S. Environmental Protection Agency (EPA) and the Massachusetts Department of Environmental Protection (MassDEP).
13. There shall be no discharge of any sludge and/or bottom deposits that has been physically removed from any storage tank(s), basin(s), and/or diked area(s) to the receiving waters. Examples of storage tanks and/or basins include, but are not limited to: primary catch basins, stilling basins, oil water separators, petroleum product storage tanks, baffled storage tanks collecting spills, and tank truck loading rack sumps.
14. Overflow of storm water and infiltrated groundwater shall not be subject to the limitations of outfall 001 if the collection and treatment facilities are designed, constructed, maintained and operated to treat the peak flow and total volume of storm water and groundwater which would result from a 10-year 24-hour precipitation event. The term "10-year 24 hour precipitation event" shall mean the maximum 24 hour precipitation event with a probable recurrence interval of once in 10 years. This information is available from National Oceanic & Atmospheric Administration, U.S. Department of Commerce.

15. No truck washing or hydrostatic testing shall occur during a storm event or following an overflow event until the potential for overflowing the treatment system has ceased.
16. EPA may modify this permit in accordance with EPA regulations in 40 Code of Federal Regulations (CFR) §122.62 and §122.63 to incorporate more stringent effluent limitations, increase the frequency of analyses, or impose additional sampling and analytical requirements.
17. The appearance of any size sheen attributable to the discharge from this facility shall be reported immediately by the permittee to the appropriate U.S. Coast Guard Officer in accordance with Section 311 of the Clean Water Act (CWA). This requirement is in addition to any reporting requirements related to EPA or MassDEP contained in this National Pollutant Discharge Elimination System (NPDES) permit.
18. Compliance/non-compliance for Polycyclic Aromatic Hydrocarbons (PAHs) will be based on the Minimum Level (ML) of analysis. The ML is defined as the level at which the entire analytical system gives recognizable mass spectra and acceptable calibration points. This level corresponds to the lower points at which the calibration curve is determined based on the analysis of the pollutant(s) of concern in reagent water. PAH analysis shall include the following compounds and their respective MLs as identified in parenthesis for each compound. benzo(a)anthracene (<0.05 µg/L), benzo(a)pyrene (<0.05 µg/L), benzo(b)fluoranthene (<0.05 µg/L), benzo(k)fluoranthene (<0.05 µg/L), chrysene (<0.5 µg/L), dibenzo(a,h)anthracene (<0.10 µg/L), indeno(1,2,3-cd)pyrene (<0.10 µg/L), and naphthalene (5.00 µg/L), acenaphthene (<5.00 µg/L), acenaphthylene (<5.00 µg/L), anthracene (<2.0 µg/L), benzo(ghi)perylene (<0.2 µg/L), fluoranthene (<0.50 µg/L), fluorene (<0.5 µg/L), naphthalene (<5.00 µg/L), phenanthrene (<2.00 µg/L), and pyrene (<1.00 µg/L).
19. The permittee shall attach a copy of the laboratory case narrative to the respective Discharge Monitoring Report Form submitted to EPA and MassDEP for each sampling event reported. The laboratory case narrative shall include a copy of the laboratory data sheets for each analysis (identifying the test method, the analytical results, and the detection limits for each analyte) and provide a brief discussion of whether all appropriate QA/QC procedures were met and were within acceptable limits.
20. 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:"
 - i One hundred micrograms per liter (100 µg/l);
 - ii Two hundred micrograms per liter (200 µg/l) for acrolein and acrylonitrile; five hundred micrograms per liter (500 µg/l) for 2,4-dinitrophenol; and one milligram per liter (1 mg/L) for antimony;
 - iii 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
 - iv 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:”

- i Five hundred micrograms per liter (500 µg/L);
- ii One milligram per liter (1 mg/L) for antimony;
- iii 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).
- iv 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.

21. Wastewater Treatment System Flow Control

- a. The flow through the wastewater treatment system (also known as the treatment works), including the oil water separator or any other component shall not exceed its maximum design flow. The Permittee shall certify the maximum design flow for the wastewater treatment system and each component within it. The certification shall be signed in accordance with the requirements identified in 40 CFR §122.22. A copy of this initial certification shall be sent to EPA and MassDEP within one hundred and twenty (120) days of the effective date of the Permit.
- b. Written notification and approval by EPA and the MassDEP shall be required, should the permittee propose changes to either the storm water conveyance or treatment systems which have the potential to cause the maximum design flow rate through the O/W Separator to be exceeded.

22. 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.

23. Hydrostatic Test Water Discharges

- a. The hydrostatic test water shall be monitored as described below and treated through the oil/water separator prior to being discharged through Outfall 001 to the Island End River. In addition, the flow of hydrostatic test water into the treatment system shall be controlled to prevent it from exceeding the maximum design flow rate of the treatment system.
- b. At a minimum, four (4) representative samples shall be taken of the hydrostatic test water: one (1) grab sample of the influent test water; and three (3) serial-grab samples of the hydrostatic test water effluent. The influent grab sample shall be taken approximately midway through the fill segment of the hydrostatic test procedure. The three (3) effluent serial-grab samples shall be taken over the duration of the entire discharge segment of the hydrostatic test procedure. The first effluent serial-grab sample shall be taken during the initial phase of discharge; the second around the midpoint; and the third near the end of the discharge. The effluent serial-grab samples shall be obtained before discharge into the treatment works and/or mixing with any storm water or other non-storm water flow.

These influent and effluent samples shall be analyzed for the following parameters:

Effluent Characteristic	Units	Sample Type
Total Suspended Solids (TSS)	mg/l	Grab
Oil and Grease (O&G)	mg/l	Grab
pH ⁽⁷⁾	S.U.	Grab
Dissolved Oxygen (DO)	mg/l	Grab
Total Residual Chlorine	mg/l	Grab
Benzene	mg/l	Grab
Toluene	mg/l	Grab
Ethylbenzene	mg/l	Grab
Total Xylenes	mg/l	Grab
Methyl tertiary-butyl ether	mg/l	Grab
<u>PAHs</u>		
Benzo(a)anthracene	µg/l	Grab
Benzo(a)pyrene	µg/l	Grab
Benzo(b)fluoranthene	µg/l	Grab
Benzo(k)fluoranthene	µg/l	Grab
Chrysene	µg/l	Grab
Dibenzo(a,h)anthracene	µg/l	Grab
Indeno(1,2,3-cd)pyrene	µg/l	Grab
Acenaphthene	µg/l	Grab
Acenaphthylene	µg/l	Grab
Anthracene	µg/l	Grab
Benzo(ghi)perylene	µg/l	Grab
Fluoranthene	µg/l	Grab
Fluorene	µg/l	Grab
Naphthalene	µg/l	Grab
Phenanthrene	µg/l	Grab
pyrene	µg/l	Grab

- c. Testing for total residual chlorine is only required when potable water or a similar source of water which is likely to contain a residual chlorine concentration is used for hydrostatic testing. Testing for MTBE is only required if the tank undergoing testing was recently (i.e., within three years of the proposed testing date) used to store gasoline containing MTBE.
- d. During discharge (i.e., approximately at the same time the three effluent grab samples are taken), the flow exiting the treatment system should be observed in order to prevent the inadvertent release of hydrocarbons to the receiving water(s). In the event that there is evidence of such a release (e.g., visible oil sheen and/or noticeable increase in turbidity of discharge water), the permittee shall immediately halt the discharge of hydrostatic test water and take

steps to correct the problem.

- e. Any changes to these procedures must be approved by EPA and the MassDEP prior to their implementation.
- f. The permittee shall submit a letter/report to EPA, the MassDEP, and the Director of Public Works of the municipality in which the facility is located, summarizing the results of the hydrostatic test within forty-five (45) days of completion of the test. This report shall contain: the date(s) during which the hydrostatic testing occurred; the volume of hydrostatic test water discharged; a copy of the laboratory data sheets for each analyses, providing the test method, the detection limits for each analyte, and a brief discussion of whether all appropriate QA/QC procedures were met and were within acceptable limits; and a comparison of the overall test results with the effluent limitations in this permit.
- g. The U.S. Environmental Protection Agency shall reserve the right to re-open the permit, in accordance with 40 CFR §122.62(a)(2), to limit hydrostatic test water discharges in the event that sampling results indicate that such discharge has a reasonable potential to cause or contribute to a violation of Massachusetts Water Quality Standards in the Island End River.

B. STORM WATER POLLUTION PREVENTION PLAN

- 1. The permittee shall develop, implement, and maintain a Storm Water Pollution Prevention Plan (SWPPP) designed to reduce, or prevent, the discharge of pollutants in storm water to the receiving waters identified in this permit. The SWPPP shall be a written document and consistent with the terms of this permit. The permittee shall comply with the terms of its SWPPP.
- 2. The SWPPP shall be completed or updated and signed by the Permittee within 90 days after the effective date of this Permit. The Permittee shall certify that the SWPPP has been completed or updated and that it meets the requirements of the permit. The certification shall be signed in accordance with the requirements identified in 40 CFR §122.22. A copy of this initial certification shall be sent to EPA and MassDEP within one hundred and twenty (120) days of the effective date of the Permit.
- 3. The SWPPP shall be consistent with the provisions for SWPPPs included in the most current version of the Multi-Sector General Permits for Storm Water Discharges Associated with Industrial Activities. (The current MSGP was issued October 30, 2000 – see 65 FR 64812-64815 section 4.) The SWPPP shall include best management practices (BMPs) for on-site activities that will minimize the discharge of pollutants in storm water to waters of the United States.
- 4. The SWPPP shall be prepared in accordance with good engineering practices, identify potential sources of pollution that may reasonably be expected to affect the quality of the storm water discharges, and describe and ensure implementation of practices which will be used to reduce the pollutants and assure compliance with this permit. Specifically, the SWPPP shall contain the elements listed below:
 - a. A pollution prevention team responsible for developing, implementing, maintaining, revising and ensuring compliance with the SWPPP.
 - b. A site description which includes a list of activities at the facility; a site map showing drainage areas and direction of storm water flows; receiving waters and outfall location; areas of the facility where industrial materials or activities are exposed to storm water including the

- location of industrial activities, storage, disposal, material handling; and all structural controls.
- c. A summary of all pollutant sources which includes all areas where spills have occurred or could occur. For each source, identify the expected drainage and the corresponding pollutant.
 - d. A summary of any existing storm water discharge sampling data.
 - e. A description of all storm water controls, both structural and non-structural. BMPs must include good housekeeping measures, preventative maintenance programs, spill prevention and response procedures, runoff management practices, and proper handling of salt or materials containing salt that are used for deicing activities. The SWPPP shall describe how the BMPs are appropriate for the facility. All BMPs shall be properly maintained and be in effective operating conditions.
5. All areas of the facility where industrial materials or activities are exposed to storm water shall be inspected, at least on a quarterly basis. Inspections shall occur beginning the 1st quarter after the effective date of the permit. EPA considers quarters as follows: January to March; April to June; July to September; and October to December.
 6. The permittee shall amend and update the SWPPP within 30 days for any changes at the facility affecting the SWPPP. Changes which may affect the SWPPP include, but are not limited to, the following activities: a change in design, construction, operation, or maintenance, which has a significant effect on the potential for the discharge of pollutants to the waters of the United States; a release of a reportable quantity of pollutants as described in 40 CFR Part 302; or a determination by the permittee or EPA that the SWPPP appears to be ineffective in achieving the general objectives of controlling pollutants in storm water discharges associated with industrial activity. Any amended or new versions of the SWPPP shall be re-certified by the Permittee. Such re-certifications also shall be signed in accordance with the requirements identified in 40 CFR §122.22
 7. The permittee shall certify at least annually that the previous year's inspections and maintenance activities were conducted, results were recorded, records were maintained, and that the facility is in compliance with the SWPPP. If the facility is not in compliance with any aspect of the SWPPP, the annual certification shall state the non-compliance and the remedies which are being undertaken. Such annual certifications also shall be signed in accordance with the requirements identified in 40 CFR §122.22. A copy of this annual certification shall be sent to EPA and MassDEP on, or before, every anniversary of the effective date of the permit. The permittee shall keep a copy of the current SWPPP and all SWPPP certifications (the initial certification, re-certifications, and annual certifications) signed during the effective period of this permit at the facility and shall make them available for inspection by EPA and MassDEP.

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 reports and evaluations required herein, shall be submitted to EPA at the following address:

EPA New England - Region 1

Water Technical Unit (SEW)
P.O. Box 8127
Boston, Massachusetts 02114

In addition, a second copy of each hydrostatic testing letter/report submitted in accordance with this permit shall be sent to EPA at the following address:

EPA New England - Region 1
OEP/Industrial Permits Branch
1 Congress Street, Suite 1100 (CIP)
Boston, Massachusetts 02114

Signed and dated Discharge Monitoring Report Form(s) and all other reports required by this permit shall also be submitted to the State at the following addresses:

Massachusetts Department of Environmental Protection
Northeast Regional Office
Bureau of Waste Prevention
205 B Lowell Street
Wilmington, MA 01887

and

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

D. STATE PERMIT CONDITIONS

1. This Discharge Permit is issued jointly by the EPA and the MassDEP under Federal and State law, respectively. As such, all the terms and conditions of this permit are hereby incorporated into and constitute a discharge permit issued by the Commissioner of the MassDEP pursuant to M.G.L. Chap.21, §43.
2. 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 a 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.

**PERMIT ATTACHMENT A
MARINE ACUTE
TOXICITY TEST PROCEDURE AND PROTOCOL**

I. GENERAL REQUIREMENTS

The permittee shall conduct acceptable acute toxicity tests in accordance with the appropriate test protocols described below:

- Mysid Shrimp (Mysidopsis bahia or Americamysis bahia) **definitive 48 hour test.**
- Inland Silverside (Menidia beryllina) **definitive 48 hour test.**

Acute toxicity data shall be reported as outlined in Section VIII.

II. METHODS

Methods to follow are those recommended by EPA in:

Weber, C.I. et al. Methods for Measuring the Acute Toxicity of Effluents to Freshwater and Marine Organisms, Fourth Edition. Environmental Monitoring Systems Laboratory, U.S. Environmental Protection Agency, Cincinnati, OH. August 1993, EPA/600/4-90/027F.

Any exceptions are stated herein.

III. SAMPLE COLLECTION

A discharge sample shall be collected. Aliquots shall be split from the sample, containerized and preserved (as per 40 CFR Part 136) for the chemical and physical analyses. The remaining sample shall be dechlorinated (if detected) in the laboratory using sodium thiosulfate for subsequent toxicity testing. (Note that EPA approved test methods require that samples collected for metals analyses be preserved immediately after collection.) Grab samples must be used for pH, temperature, and total residual oxidants (as per 40 CFR Part 122.21).

Standard Methods for the Examination of Water and Wastewater describes dechlorination of samples (APHA, 1992). Dechlorination can be achieved using a ratio of 6.7 mg/L anhydrous sodium thiosulfate to reduce 1.0 mg/L chlorine. A thiosulfate control (maximum amount of thiosulfate in lab control or receiving water) should also be run.

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

IV. DILUTION WATER

A grab sample of dilution water used for acute toxicity testing shall be collected at a point away from the discharge which is free from toxicity or other sources of contamination. Avoid collecting near areas of obvious road or agricultural runoff, storm sewers or other point source discharges. An additional control (0% effluent) of a standard laboratory water of known quality shall also be tested.

If the receiving water diluent is found to be, or suspected to be toxic or unreliable, an alternate standard dilution water of known quality with a conductivity, salinity, total suspended solids, and pH similar to that of the receiving water may be substituted **AFTER RECEIVING WRITTEN APPROVAL FROM THE PERMIT ISSUING AGENCY(S)**. Written requests for use of an alternative dilution water should be mailed with supporting documentation to the following address:

Director
Office of Ecosystem Protection
U. S. Environmental Protection Agency-New England
One Congress Street
Suite 1100 - CAA
Boston, MA 02114-2023

It may prove beneficial to have the proposed dilution water source screened for suitability prior to toxicity testing. EPA strongly urges that screening be done prior to set up of a full definitive toxicity test any time there is question about the dilution water's ability to support acceptable performance as outlined in the 'test acceptability' section of the protocol.

V. TEST CONDITIONS AND TEST ACCEPTABILITY CRITERIA

EPA New England requires tests be performed using four replicates of each control and effluent concentration because the non-parametric statistical tests cannot be used with data from fewer replicates. The following tables summarize the accepted Mysid and Menidia toxicity test conditions and test acceptability criteria:

**EPA NEW ENGLAND RECOMMENDED EFFLUENT TOXICITY TEST CONDITIONS
FOR THE MYSID, MYSIDOPSIS BAHIA 48 HOUR TEST¹**

1. Test type	Static, non-renewal
2. Salinity	25ppt \pm 10 percent for all dilutions by adding dry ocean salts
3. Temperature (°C)	20°C \pm 1°C or 25°C \pm 1°C
4. Light quality	Ambient laboratory illumination
5. Photoperiod	16 hour light, 8 hour dark
6. Test chamber size	250 ml
7. Test solution volume	200 ml
8. Age of test organisms	1-5 days
9. No. Mysids per test chamber	10
10. No. of replicate test chambers per treatment	4
11. Total no. Mysids per test concentration	40
12. Feeding regime	Light feeding using concentrated <u>Artemia</u> nauplii while holding prior to initiating the test
13. Aeration ²	None
14. Dilution water	Natural seawater, or deionized water mixed with artificial sea salts
15. Dilution factor	≥ 0.5
16. Number of dilutions ³	5 plus a control. An additional dilution at the permitted effluent concentration (%effluent) is required if it is not included in the dilution series.
17. Effect measured	Mortality - no movement of body appendages on gentle prodding

18. Test acceptability	90% or greater survival of test organisms in control solution
19. Sampling requirements	For on-site tests, samples are used within 24 hours of the time that they are removed from the sampling device. For off-site tests, samples must be first used within 36 hours of collection.
20. Sample volume required	Minimum 1 liter for effluents and 2 liters for receiving waters

Footnotes:

1. Adapted from EPA/600/4-90/027F.
2. If dissolved oxygen falls below 4.0 mg/L, aerate at rate of less than 100 bubbles/min. Routine D.O. checks are recommended.
3. When receiving water is used for dilution, an additional control made up of standard laboratory dilution water (0% effluent) is required.

EPA NEW ENGLAND RECOMMENDED TOXICITY TEST CONDITIONS FOR THE INLAND SILVERSIDE, MENIDIA BERYLLINA 48 HOUR TEST¹

1. Test Type	Static, non-renewal
2. Salinity	25 ppt \pm 2 ppt by adding dry ocean salts
3. Temperature	20°C \pm 1°C or 25°C \pm 1°C
4. Light Quality	Ambient laboratory illumination
5. Photoperiod	16 hr light, 8 hr dark
6. Size of test vessel	250 mL (minimum)
7. Volume of test solution	200 mL/replicate (minimum)
8. Age of fish	9-14 days; 24 hr age range
9. No. fish per chamber	10 (not to exceed loading limits)
10. No. of replicate test vessels per treatment	4
11. total no. organisms per concentration	40
12. Feeding regime	Light feeding using concentrated <u>Artemia</u> nauplii while holding prior to initiating the test
13. Aeration ²	None
14. Dilution water	Natural seawater, or deionized water mixed with artificial sea salts.
15. Dilution factor	≥ 0.5
16. Number of dilutions ³	5 plus a control. An additional dilution at the permitted concentration (% effluent) is required if it is not included in the dilution series.
17. Effect measured	Mortality-no movement on gentle prodding.

18. Test acceptability	90% or greater survival of test organisms in control solution.
19. Sampling requirements	For on-site tests, samples must be used within 24 hours of the time they are removed from the sampling device. Off-site test samples must be used within 36 hours of collection.
20. Sample volume required	Minimum 1 liter for effluents and 2 liters for receiving waters.

Footnotes:

1. Adapted from EPA/600/4-90/027F.
2. If dissolved oxygen falls below 4.0 mg/L, aerate at rate of less than 100 bubbles/min. Routine D.O. checks recommended.
3. When receiving water is used for dilution, an additional control made up of standard laboratory dilution water (0% effluent) is required.

VI. CHEMICAL ANALYSIS

At the beginning of the static acute test, pH, salinity, and temperature must be measured at the beginning and end of each 24 hour period in each dilution and in the controls. The following chemical analyses shall be performed for each sampling event.

<u>Parameter</u>	<u>Effluent</u>	<u>Diluent</u>	<u>Minimum Quanti- fication Level (mg/L)</u>
pH	x	x	---
Salinity	x	x	PPT(o/oo)
Total Residual Oxidants ^{*1}	x	x	0.05
Total Solids and Suspended Solids	x	x	---
Ammonia	x	x	0.1
Total Organic Carbon	x	x	0.5
<u>Total Metals</u>			
Cd		x	0.001
Cr		x	0.005
Pb		x	0.005
Cu		x	0.0025
Zn		x	0.0025
Ni		x	0.004
Al		x	0.02

Superscript:

^{*1} Total Residual Oxidants

Either of the following methods from the 18th Edition of the APHA Standard Methods for the Examination of Water and Wastewater must be used for these analyses:

- Method 4500-Cl E Low Level Amperometric Titration (the preferred method);
- Method 4500-CL G DPD Photometric Method.

or use USEPA Manual of Methods Analysis of Water or Wastes, Method 330.5.

VII. TOXICITY TEST DATA ANALYSIS

LC50 Median Lethal Concentration

An estimate of the concentration of effluent or toxicant that is lethal to 50% of the test organisms during the time prescribed by the test method.

Methods of Estimation:

- Probit Method
- Spearman-Kärber
- Trimmed Spearman-Kärber
- Graphical

See flow chart in Figure 6 on page 77 of EPA 600/4-90/027F for appropriate method to use on a given data set.

No Observed Acute Effect Level (NOAEL)

See flow chart in Figure 13 on page 94 of EPA 600/4-90/027F.

VIII. TOXICITY TEST REPORTING

The following must be reported:

- Description of sample collection procedures, site description;
- Names of individuals collecting and transporting samples, times and dates of sample collection and analysis on chain-of-custody; and
- General description of tests: age of test organisms, origin, dates and results of standard toxicant tests; light and temperature regime; other information on test conditions if different than procedures recommended. Reference toxicity test data must be included.
- Raw data and bench sheets.
- All chemical/physical data generated. (Include minimum detection levels and minimum quantification levels.)
- Provide a description of dechlorination procedures (as applicable).
- Any other observations or test conditions affecting test outcome.
- Statistical tests used to calculate endpoints.

NPDES PART II STANDARD CONDITIONS

(January, 2007)

TABLE OF CONTENTS

A. GENERAL CONDITIONS	Page
1. <u>Duty to Comply</u>	2
2. <u>Permit Actions</u>	2
3. <u>Duty to Provide Information</u>	2
4. <u>Reopener Clause</u>	3
5. <u>Oil and Hazardous Substance Liability</u>	3
6. <u>Property Rights</u>	3
7. <u>Confidentiality of Information</u>	3
8. <u>Duty to Reapply</u>	4
9. <u>State Authorities</u>	4
10. <u>Other laws</u>	4
B. OPERATION AND MAINTENANCE OF POLLUTION CONTROLS	
1. <u>Proper Operation and Maintenance</u>	4
2. <u>Need to Halt or Reduce Not a Defense</u>	4
3. <u>Duty to Mitigate</u>	4
4. <u>Bypass</u>	4
5. <u>Upset</u>	5
C. MONITORING AND RECORDS	
1. <u>Monitoring and Records</u>	6
2. <u>Inspection and Entry</u>	7
D. REPORTING REQUIREMENTS	
1. <u>Reporting Requirements</u>	7
a. Planned changes	7
b. Anticipated noncompliance	7
c. Transfers	7
d. Monitoring reports	8
e. Twenty-four hour reporting	8
f. Compliance schedules	9
g. Other noncompliance	9
h. Other information	9
2. <u>Signatory Requirement</u>	9
3. <u>Availability of Reports</u>	9
E. DEFINITIONS AND ABBREVIATIONS	
1. <u>Definitions for Individual NPDES Permits including Storm Water Requirements</u>	9
2. <u>Definitions for NPDES Permit Sludge Use and Disposal Requirements</u>	17
3. <u>Commonly Used Abbreviations</u>	23

NPDES PART II STANDARD CONDITIONS
(January, 2007)

PART II. A. GENERAL REQUIREMENTS

1. Duty to Comply

The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the Clean Water Act (CWA) and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application.

- a. The permittee shall comply with effluent standards or prohibitions established under Section 307(a) of the sludge use or disposal established under Section 405(d) of the CWA within the time provided in the regulations that establish these standards or prohibitions, even if the permit has not yet been modified to incorporate the requirements.
- b. The CWA provides that any person who violates Section 301, 302, 306, 307, 308, 318, or 405 of the CWA or any permit condition or limitation implementing any of such sections in a permit issued under Section 402, or any requirement imposed in a pretreatment program approved under Section 402 (a)(3) or 402 (b)(8) of the CWA is subject to a civil penalty not to exceed \$25,000 per day for each violation. Any person who negligently violates such requirements is subject to a fine of not less than \$2,500 nor more than \$25,000 per day of violation, or by imprisonment for not more than 1 year, or both. Any person who knowingly violates such requirements is subject to a fine of not less than \$5,000 nor more than \$50,000 per day of violation, or by imprisonment for not more than 3 years, or both.
- c. Any person may be assessed an administrative penalty by the Administrator for violating Section 301, 302, 306, 307, 308, 318, or 405 of the CWA, or any permit condition or limitation implementing any of such sections in a permit issued under Section 402 of the CWA. Administrative penalties for Class I violations are not to exceed \$10,000 per violation, with the maximum amount of any Class I penalty assessed not to exceed \$25,000. Penalties for Class II violations are not to exceed \$10,000 per day for each day during which the violation continues, with the maximum amount of any Class II penalty not to exceed \$125,000.

Note: See 40 CFR §122.41(a)(2) for complete “Duty to Comply” regulations.

2. Permit Actions

This permit may be modified, revoked and reissued, or terminated for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or notifications of planned changes or anticipated noncompliance does not stay any permit condition.

3. Duty to Provide Information

The permittee shall furnish to the Regional Administrator, within a reasonable time, any information which the Regional Administrator may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. The permittee shall also furnish to the Regional Administrator, upon request, copies of records required to be kept by this permit.

NPDES PART II STANDARD CONDITIONS

(January, 2007)

4. Reopener Clause

The Regional Administrator reserves the right to make appropriate revisions to this permit in order to establish any appropriate effluent limitations, schedules of compliance, or other provisions which may be authorized under the CWA in order to bring all discharges into compliance with the CWA.

For any permit issued to a treatment works treating domestic sewage (including “sludge-only facilities”), the Regional Administrator or Director shall include a reopener clause to incorporate any applicable standard for sewage sludge use or disposal promulgated under Section 405 (d) of the CWA. The Regional Administrator or Director may promptly modify or revoke and reissue any permit containing the reopener clause required by this paragraph if the standard for sewage sludge use or disposal is more stringent than any requirements for sludge use or disposal in the permit, or contains a pollutant or practice not limited in the permit.

Federal regulations pertaining to permit modification, revocation and reissuance, and termination are found at 40 CFR §122.62, 122.63, 122.64, and 124.5.

5. Oil and Hazardous Substance Liability

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from responsibilities, liabilities or penalties to which the permittee is or may be subject under Section 311 of the CWA, or Section 106 of the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA).

6. Property Rights

The issuance of this permit does not convey any property rights of any sort, nor any exclusive privileges.

7. Confidentiality of Information

- a. In accordance with 40 CFR Part 2, any information submitted to EPA pursuant to these regulations may be claimed as confidential by the submitter. Any such claim must be asserted at the time of submission in the manner prescribed on the application form or instructions or, in the case of other submissions, by stamping the words “confidential business information” on each page containing such information. If no claim is made at the time of submission, EPA may make the information available to the public without further notice. If a claim is asserted, the information will be treated in accordance with the procedures in 40 CFR Part 2 (Public Information).
- b. Claims of confidentiality for the following information will be denied:
 - (1) The name and address of any permit applicant or permittee;
 - (2) Permit applications, permits, and effluent data as defined in 40 CFR §2.302(a)(2).
- c. Information required by NPDES application forms provided by the Regional Administrator under 40 CFR §122.21 may not be claimed confidential. This includes information submitted on the forms themselves and any attachments used to supply information required by the forms.

NPDES PART II STANDARD CONDITIONS
(January, 2007)

8. Duty to Reapply

If the permittee wishes to continue an activity regulated by this permit after its expiration date, the permittee must apply for and obtain a new permit. The permittee shall submit a new application at least 180 days before the expiration date of the existing permit, unless permission for a later date has been granted by the Regional Administrator. (The Regional Administrator shall not grant permission for applications to be submitted later than the expiration date of the existing permit.)

9. State Authorities

Nothing in Part 122, 123, or 124 precludes more stringent State regulation of any activity covered by these regulations, whether or not under an approved State program.

10. Other Laws

The issuance of a permit does not authorize any injury to persons or property or invasion of other private rights, nor does it relieve the permittee of its obligation to comply with any other applicable Federal, State, or local laws and regulations.

PART II. B. OPERATION AND MAINTENANCE OF POLLUTION CONTROLS

1. Proper Operation and Maintenance

The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of this permit and with the requirements of storm water pollution prevention plans. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems only when the operation is necessary to achieve compliance with the conditions of the permit.

2. Need to Halt or Reduce Not a Defense

It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

3. Duty to Mitigate

The permittee shall take all reasonable steps to minimize or prevent any discharge or sludge use or disposal in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment.

4. Bypass

a. Definitions

- (1) *Bypass* means the intentional diversion of waste streams from any portion of a treatment facility.

NPDES PART II STANDARD CONDITIONS

(January, 2007)

- (2) *Severe property damage* means substantial physical damage to property, damage to the treatment facilities which causes them to become inoperable, or substantial and permanent loss of natural resources which can be reasonably expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.

b. Bypass not exceeding limitations

The permittee may allow any bypass to occur which does not cause effluent limitations to be exceeded, but only if it also is for essential maintenance to assure efficient operation. These bypasses are not subject to the provision of Paragraphs B.4.c. and 4.d. of this section.

c. Notice

- (1) Anticipated bypass. If the permittee knows in advance of the need for a bypass, it shall submit prior notice, if possible at least ten days before the date of the bypass.
- (2) Unanticipated bypass. The permittee shall submit notice of an unanticipated bypass as required in paragraph D.1.e. of this part (Twenty-four hour reporting).

d. Prohibition of bypass

Bypass is prohibited, and the Regional Administrator may take enforcement action against a permittee for bypass, unless:

- (1) Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage;
- (2) There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventative maintenance; and
- (3) i) The permittee submitted notices as required under Paragraph 4.c. of this section.
ii) The Regional Administrator may approve an anticipated bypass, after considering its adverse effects, if the Regional Administrator determines that it will meet the three conditions listed above in paragraph 4.d. of this section.

5. Upset

- a. Definition. *Upset* means an exceptional incident in which there is an unintentional and temporary noncompliance with technology-based permit effluent limitations because of factors beyond the reasonable control of the permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.
- b. Effect of an upset. An upset constitutes an affirmative defense to an action brought for noncompliance with such technology-based permit effluent limitations if the requirements of paragraph B.5.c. of this section are met. No determination made during

NPDES PART II STANDARD CONDITIONS

(January, 2007)

administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review.

- c. Conditions necessary for a demonstration of upset. A permittee who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs, or other relevant evidence that:
 - (1) An upset occurred and that the permittee can identify the cause(s) of the upset;
 - (2) The permitted facility was at the time being properly operated;
 - (3) The permittee submitted notice of the upset as required in paragraphs D.1.a. and 1.e. (Twenty-four hour notice); and
 - (4) The permittee complied with any remedial measures required under B.3. above.
- d. Burden of proof. In any enforcement proceeding the permittee seeking to establish the occurrence of an upset has the burden of proof.

PART II. C. MONITORING REQUIREMENTS

1. Monitoring and Records

- a. Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity.
- b. Except for records for monitoring information required by this permit related to the permittee's sewage sludge use and disposal activities, which shall be retained for a period of at least five years (or longer as required by 40 CFR Part 503), the permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this permit, and records of all data used to complete the application for this permit, for a period of at least 3 years from the date of the sample, measurement, report or application except for the information concerning storm water discharges which must be retained for a total of 6 years. This retention period may be extended by request of the Regional Administrator at any time.
- c. Records of monitoring information shall include:
 - (1) The date, exact place, and time of sampling or measurements;
 - (2) The individual(s) who performed the sampling or measurements;
 - (3) The date(s) analyses were performed;
 - (4) The individual(s) who performed the analyses;
 - (5) The analytical techniques or methods used; and
 - (6) The results of such analyses.
- d. Monitoring results must be conducted according to test procedures approved under 40 CFR Part 136 or, in the case of sludge use or disposal, approved under 40 CFR Part 136 unless otherwise specified in 40 CFR Part 503, unless other test procedures have been specified in the permit.
- e. The CWA provides that any person who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained under this permit shall, upon conviction, be punished by a fine of not more than \$10,000, or by

NPDES PART II STANDARD CONDITIONS

(January, 2007)

imprisonment for not more than 2 years, or both. If a conviction of a person is for a violation committed after a first conviction of such person under this paragraph, punishment is a fine of not more than \$20,000 per day of violation, or by imprisonment of not more than 4 years, or both.

2. Inspection and Entry

The permittee shall allow the Regional Administrator or an authorized representative (including an authorized contractor acting as a representative of the Administrator), upon presentation of credentials and other documents as may be required by law, to:

- a. Enter upon the permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this permit;
- b. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
- c. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and
- d. Sample or monitor at reasonable times, for the purposes of assuring permit compliance or as otherwise authorized by the CWA, any substances or parameters at any location.

PART II. D. REPORTING REQUIREMENTS

1. Reporting Requirements

- a. **Planned Changes.** The permittee shall give notice to the Regional Administrator as soon as possible of any planned physical alterations or additions to the permitted facility. Notice is only required when:
 - (1) The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source in 40 CFR§122.29(b); or
 - (2) The alteration or addition could significantly change the nature or increase the quantities of the pollutants discharged. This notification applies to pollutants which are subject neither to the effluent limitations in the permit, nor to the notification requirements at 40 CFR§122.42(a)(1).
 - (3) The alteration or addition results in a significant change in the permittee's sludge use or disposal practices, and such alteration, addition or change may justify the application of permit conditions different from or absent in the existing permit, including notification of additional use or disposal sites not reported during the permit application process or not reported pursuant to an approved land application plan.
- b. **Anticipated noncompliance.** The permittee shall give advance notice to the Regional Administrator of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements.
- c. **Transfers.** This permit is not transferable to any person except after notice to the Regional Administrator. The Regional Administrator may require modification or revocation and reissuance of the permit to change the name of the permittee and

NPDES PART II STANDARD CONDITIONS

(January, 2007)

incorporate such other requirements as may be necessary under the CWA. (See 40 CFR Part 122.61; in some cases, modification or revocation and reissuance is mandatory.)

- d. Monitoring reports. Monitoring results shall be reported at the intervals specified elsewhere in this permit.
 - (1) Monitoring results must be reported on a Discharge Monitoring Report (DMR) or forms provided or specified by the Director for reporting results of monitoring of sludge use or disposal practices.
 - (2) If the permittee monitors any pollutant more frequently than required by the permit using test procedures approved under 40 CFR Part 136 or, in the case of sludge use or disposal, approved under 40 CFR Part 136 unless otherwise specified in 40 CFR Part 503, or as specified in the permit, the results of the monitoring shall be included in the calculation and reporting of the data submitted in the DMR or sludge reporting form specified by the Director.
 - (3) Calculations for all limitations which require averaging or measurements shall utilize an arithmetic mean unless otherwise specified by the Director in the permit.
- e. Twenty-four hour reporting.
 - (1) The permittee shall report any noncompliance which may endanger health or the environment. Any information shall be provided orally within 24 hours from the time the permittee becomes aware of the circumstances.

A written submission shall also be provided within 5 days of the time the permittee becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.
 - (2) The following shall be included as information which must be reported within 24 hours under this paragraph.
 - (a) Any unanticipated bypass which exceeds any effluent limitation in the permit. (See 40 CFR §122.41(g).)
 - (b) Any upset which exceeds any effluent limitation in the permit.
 - (c) Violation of a maximum daily discharge limitation for any of the pollutants listed by the Regional Administrator in the permit to be reported within 24 hours. (See 40 CFR §122.44(g).)
 - (3) The Regional Administrator may waive the written report on a case-by-case basis for reports under Paragraph D.1.e. if the oral report has been received within 24 hours.

NPDES PART II STANDARD CONDITIONS
(January, 2007)

- f. Compliance Schedules. Reports of compliance or noncompliance with, any progress reports on, interim and final requirements contained in any compliance schedule of this permit shall be submitted no later than 14 days following each schedule date.
- g. Other noncompliance. The permittee shall report all instances of noncompliance not reported under Paragraphs D.1.d., D.1.e., and D.1.f. of this section, at the time monitoring reports are submitted. The reports shall contain the information listed in Paragraph D.1.e. of this section.
- h. Other information. Where the permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to the Regional Administrator, it shall promptly submit such facts or information.

2. Signatory Requirement

- a. All applications, reports, or information submitted to the Regional Administrator shall be signed and certified. (See 40 CFR §122.22)
- b. The CWA provides that any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this permit, including monitoring reports or reports of compliance or noncompliance shall, upon conviction, be punished by a fine of not more than \$10,000 per violation, or by imprisonment for not more than 2 years per violation, or by both.

3. Availability of Reports.

Except for data determined to be confidential under Paragraph A.8. above, all reports prepared in accordance with the terms of this permit shall be available for public inspection at the offices of the State water pollution control agency and the Regional Administrator. As required by the CWA, effluent data shall not be considered confidential. Knowingly making any false statements on any such report may result in the imposition of criminal penalties as provided for in Section 309 of the CWA.

PART II. E. DEFINITIONS AND ABBREVIATIONS

1. Definitions for Individual NPDES Permits including Storm Water Requirements

Administrator means the Administrator of the United States Environmental Protection Agency, or an authorized representative.

Applicable standards and limitations means all, State, interstate, and Federal standards and limitations to which a “discharge”, a “sewage sludge use or disposal practice”, or a related activity is subject to, including “effluent limitations”, water quality standards, standards of performance, toxic effluent standards or prohibitions, “best management practices”, pretreatment standards, and “standards for sewage sludge use and disposal” under Sections 301, 302, 303, 304, 306, 307, 308, 403, and 405 of the CWA.

NPDES PART II STANDARD CONDITIONS

(January, 2007)

Application means the EPA standard national forms for applying for a permit, including any additions, revisions, or modifications to the forms; or forms approved by EPA for use in “approved States”, including any approved modifications or revisions.

Average means the arithmetic mean of values taken at the frequency required for each parameter over the specified period. For total and/or fecal coliforms and Escherichia coli, the average shall be the geometric mean.

Average monthly discharge limitation means the highest allowable average of “daily discharges” over a calendar month calculated as the sum of all “daily discharges” measured during a calendar month divided by the number of “daily discharges” measured during that month.

Average weekly discharge limitation means the highest allowable average of “daily discharges” measured during the calendar week divided by the number of “daily discharges” measured during the week.

Best Management Practices (BMPs) means schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the pollution of “waters of the United States.” BMPs also include treatment requirements, operating procedures, and practices to control plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage.

Best Professional Judgment (BPJ) means a case-by-case determination of Best Practicable Treatment (BPT), Best Available Treatment (BAT), or other appropriate technology-based standard based on an evaluation of the available technology to achieve a particular pollutant reduction and other factors set forth in 40 CFR §125.3 (d).

Coal Pile Runoff means the rainfall runoff from or through any coal storage pile.

Composite Sample means a sample consisting of a minimum of eight grab samples of equal volume collected at equal intervals during a 24-hour period (or lesser period as specified in the section on Monitoring and Reporting) and combined proportional to flow, or a sample consisting of the same number of grab samples, or greater, collected proportionally to flow over that same time period.

Construction Activities - The following definitions apply to construction activities:

- (a) Commencement of Construction is the initial disturbance of soils associated with clearing, grading, or excavating activities or other construction activities.
- (b) Dedicated portable asphalt plant is a portable asphalt plant located on or contiguous to a construction site and that provides asphalt only to the construction site that the plant is located on or adjacent to. The term dedicated portable asphalt plant does not include facilities that are subject to the asphalt emulsion effluent limitation guideline at 40 CFR Part 443.
- (c) Dedicated portable concrete plant is a portable concrete plant located on or contiguous to a construction site and that provides concrete only to the construction site that the plant is located on or adjacent to.

NPDES PART II STANDARD CONDITIONS

(January, 2007)

- (d) Final Stabilization means that all soil disturbing activities at the site have been complete, and that a uniform perennial vegetative cover with a density of 70% of the cover for unpaved areas and areas not covered by permanent structures has been established or equivalent permanent stabilization measures (such as the use of riprap, gabions, or geotextiles) have been employed.
- (e) Runoff coefficient means the fraction of total rainfall that will appear at the conveyance as runoff.

Contiguous zone means the entire zone established by the United States under Article 24 of the Convention on the Territorial Sea and the Contiguous Zone.

Continuous discharge means a “discharge” which occurs without interruption throughout the operating hours of the facility except for infrequent shutdowns for maintenance, process changes, or similar activities.

CWA means the Clean Water Act (formerly referred to as the Federal Water Pollution Control Act or Federal Water Pollution Control Act Amendments of 1972) Pub. L. 92-500, as amended by Pub. L. 95-217, Pub. L. 95-576, Pub. L. 96-483, and Pub. L. 97-117; 33 USC §§1251 et seq.

Daily Discharge means the discharge of a pollutant measured during the calendar day or any other 24-hour period that reasonably represents the calendar day for purposes of sampling. For pollutants with limitations expressed in units of mass, the “daily discharge” is calculated as the total mass of the pollutant discharged over the day. For pollutants with limitations expressed in other units of measurements, the “daily discharge” is calculated as the average measurement of the pollutant over the day.

Director normally means the person authorized to sign NPDES permits by EPA or the State or an authorized representative. Conversely, it also could mean the Regional Administrator or the State Director as the context requires.

Discharge Monitoring Report Form (DMR) means the EPA standard national form, including any subsequent additions, revisions, or modifications for the reporting of self-monitoring results by permittees. DMRs must be used by “approved States” as well as by EPA. EPA will supply DMRs to any approved State upon request. The EPA national forms may be modified to substitute the State Agency name, address, logo, and other similar information, as appropriate, in place of EPA’s.

Discharge of a pollutant means:

- (a) Any addition of any “pollutant” or combination of pollutants to “waters of the United States” from any “point source”, or
- (b) Any addition of any pollutant or combination of pollutants to the waters of the “contiguous zone” or the ocean from any point source other than a vessel or other floating craft which is being used as a means of transportation (See “Point Source” definition).

This definition includes additions of pollutants into waters of the United States from: surface runoff which is collected or channeled by man; discharges through pipes, sewers, or other conveyances owned by a State, municipality, or other person which do not lead

NPDES PART II STANDARD CONDITIONS

(January, 2007)

to a treatment works; and discharges through pipes, sewers, or other conveyances leading into privately owned treatment works.

This term does not include an addition of pollutants by any “indirect discharger.”

Effluent limitation means any restriction imposed by the Regional Administrator on quantities, discharge rates, and concentrations of “pollutants” which are “discharged” from “point sources” into “waters of the United States”, the waters of the “contiguous zone”, or the ocean.

Effluent limitation guidelines means a regulation published by the Administrator under Section 304(b) of CWA to adopt or revise “effluent limitations”.

EPA means the United States “Environmental Protection Agency”.

Flow-weighted composite sample means a composite sample consisting of a mixture of aliquots where the volume of each aliquot is proportional to the flow rate of the discharge.

Grab Sample – An individual sample collected in a period of less than 15 minutes.

Hazardous Substance means any substance designated under 40 CFR Part 116 pursuant to Section 311 of the CWA.

Indirect Discharger means a non-domestic discharger introducing pollutants to a publicly owned treatment works.

Interference means a discharge which, alone or in conjunction with a discharge or discharges from other sources, both:

- (a) Inhibits or disrupts the POTW, its treatment processes or operations, or its sludge processes, use or disposal; and
- (b) Therefore is a cause of a violation of any requirement of the POTW’s NPDES permit (including an increase in the magnitude or duration of a violation) or of the prevention of sewage sludge use or disposal in compliance with the following statutory provisions and regulations or permits issued thereunder (or more stringent State or local regulations): Section 405 of the Clean Water Act (CWA), the Solid Waste Disposal Act (SWDA) (including Title II, more commonly referred to as the Resources Conservation and Recovery Act (RCRA), and including State regulations contained in any State sludge management plan prepared pursuant to Subtitle D of the SDWA), the Clean Air Act, the Toxic Substances Control Act, and the Marine Protection Research and Sanctuaries Act.

Landfill means an area of land or an excavation in which wastes are placed for permanent disposal, and which is not a land application unit, surface impoundment, injection well, or waste pile.

Land application unit means an area where wastes are applied onto or incorporated into the soil surface (excluding manure spreading operations) for treatment or disposal.

Large and Medium municipal separate storm sewer system means all municipal separate storm sewers that are either: (i) located in an incorporated place (city) with a population of 100,000 or more as determined by the latest Decennial Census by the Bureau of Census (these cities are listed in Appendices F and 40 CFR Part 122); or (ii) located in the counties with unincorporated urbanized

NPDES PART II STANDARD CONDITIONS

(January, 2007)

populations of 100,000 or more, except municipal separate storm sewers that are located in the incorporated places, townships, or towns within such counties (these counties are listed in Appendices H and I of 40 CFR 122); or (iii) owned or operated by a municipality other than those described in Paragraph (i) or (ii) and that are designated by the Regional Administrator as part of the large or medium municipal separate storm sewer system.

Maximum daily discharge limitation means the highest allowable “daily discharge” concentration that occurs only during a normal day (24-hour duration).

Maximum daily discharge limitation (as defined for the Steam Electric Power Plants only) when applied to Total Residual Chlorine (TRC) or Total Residual Oxidant (TRO) is defined as “maximum concentration” or “Instantaneous Maximum Concentration” during the two hours of a chlorination cycle (or fraction thereof) prescribed in the Steam Electric Guidelines, 40 CFR Part 423. These three synonymous terms all mean “a value that shall not be exceeded” during the two-hour chlorination cycle. This interpretation differs from the specified NPDES Permit requirement, 40 CFR § 122.2, where the two terms of “Maximum Daily Discharge” and “Average Daily Discharge” concentrations are specifically limited to the daily (24-hour duration) values.

Municipality means a city, town, borough, county, parish, district, association, or other public body created by or under State law and having jurisdiction over disposal of sewage, industrial wastes, or other wastes, or an Indian tribe or an authorized Indian tribe organization, or a designated and approved management agency under Section 208 of the CWA.

National Pollutant Discharge Elimination System means the national program for issuing, modifying, revoking and reissuing, terminating, monitoring and enforcing permits, and imposing and enforcing pretreatment requirements, under Sections 307, 402, 318, and 405 of the CWA. The term includes an “approved program”.

New Discharger means any building, structure, facility, or installation:

- (a) From which there is or may be a “discharge of pollutants”;
- (b) That did not commence the “discharge of pollutants” at a particular “site” prior to August 13, 1979;
- (c) Which is not a “new source”; and
- (d) Which has never received a finally effective NPDES permit for discharges at that “site”.

This definition includes an “indirect discharger” which commences discharging into “waters of the United States” after August 13, 1979. It also includes any existing mobile point source (other than an offshore or coastal oil and gas exploratory drilling rig or a coastal oil and gas exploratory drilling rig or a coastal oil and gas developmental drilling rig) such as a seafood processing rig, seafood processing vessel, or aggregate plant, that begins discharging at a “site” for which it does not have a permit; and any offshore rig or coastal mobile oil and gas exploratory drilling rig or coastal mobile oil and gas developmental drilling rig that commences the discharge of pollutants after August 13, 1979, at a “site” under EPA’s permitting jurisdiction for which it is not covered by an individual or general permit and which is located in an area determined by the Regional Administrator in the issuance of a final permit to be in an area of biological concern. In determining whether an area is an area of biological concern, the Regional Administrator shall consider the factors specified in 40 CFR §§125.122 (a) (1) through (10).

NPDES PART II STANDARD CONDITIONS (January, 2007)

An offshore or coastal mobile exploratory drilling rig or coastal mobile developmental drilling rig will be considered a “new discharger” only for the duration of its discharge in an area of biological concern.

New source means any building, structure, facility, or installation from which there is or may be a “discharge of pollutants”, the construction of which commenced:

- (a) After promulgation of standards of performance under Section 306 of CWA which are applicable to such source, or
- (b) After proposal of standards of performance in accordance with Section 306 of CWA which are applicable to such source, but only if the standards are promulgated in accordance with Section 306 within 120 days of their proposal.

NPDES means “National Pollutant Discharge Elimination System”.

Owner or operator means the owner or operator of any “facility or activity” subject to regulation under the NPDES programs.

Pass through means a Discharge which exits the POTW into waters of the United States in quantities or concentrations which, alone or in conjunction with a discharge or discharges from other sources, is a cause of a violation of any requirement of the POTW’s NPDES permit (including an increase in the magnitude or duration of a violation).

Permit means an authorization, license, or equivalent control document issued by EPA or an “approved” State.

Person means an individual, association, partnership, corporation, municipality, State or Federal agency, or an agent or employee thereof.

Point Source means any discernible, confined, and discrete conveyance, including but not limited to any pipe ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, landfill leachate collection system, vessel, or other floating craft, from which pollutants are or may be discharged. This term does not include return flows from irrigated agriculture or agricultural storm water runoff (see 40 CFR §122.2).

Pollutant means dredged spoil, solid waste, incinerator residue, filter backwash, sewage, garbage, sewage sludge, munitions, chemical wastes, biological materials, radioactive materials (except those regulated under the Atomic Energy Act of 1954, as amended (42 U.S.C. §§2011 et seq.)), heat, wrecked or discarded equipment, rock, sand, cellar dirt and industrial, municipal, and agricultural waste discharged into water. It does not mean:

- (a) Sewage from vessels; or
- (b) Water, gas, or other material which is injected into a well to facilitate production of oil or gas, or water derived in association with oil and gas production and disposed of in a well, if the well is used either to facilitate production or for disposal purposes is approved by the authority of the State in which the well is located, and if the State determines that the injection or disposal will not result in the degradation of ground or surface water resources.

NPDES PART II STANDARD CONDITIONS
(January, 2007)

Primary industry category means any industry category listed in the NRDC settlement agreement (Natural Resources Defense Council et al. v. Train, 8 E.R.C. 2120 (D.D.C. 1976), modified 12 E.R.C. 1833 (D. D.C. 1979)); also listed in Appendix A of 40 CFR Part 122.

Privately owned treatment works means any device or system which is (a) used to treat wastes from any facility whose operation is not the operator of the treatment works or (b) not a “POTW”.

Process wastewater means any water which, during manufacturing or processing, comes into direct contact with or results from the production or use of any raw material, intermediate product, finished product, byproduct, or waste product.

Publicly Owned Treatment Works (POTW) means any facility or system used in the treatment (including recycling and reclamation) of municipal sewage or industrial wastes of a liquid nature which is owned by a “State” or “municipality”.

This definition includes sewers, pipes, or other conveyances only if they convey wastewater to a POTW providing treatment.

Regional Administrator means the Regional Administrator, EPA, Region I, Boston, Massachusetts.

Secondary Industry Category means any industry which is not a “primary industry category”.

Section 313 water priority chemical means a chemical or chemical category which:

- (1) is listed at 40 CFR §372.65 pursuant to Section 313 of the Emergency Planning and Community Right-To-Know Act (EPCRA) (also known as Title III of the Superfund Amendments and Reauthorization Act (SARA) of 1986);
- (2) is present at or above threshold levels at a facility subject to EPCRA Section 313 reporting requirements; and
- (3) satisfies at least one of the following criteria:
 - (i) are listed in Appendix D of 40 CFR Part 122 on either Table II (organic priority pollutants), Table III (certain metals, cyanides, and phenols), or Table V (certain toxic pollutants and hazardous substances);
 - (ii) are listed as a hazardous substance pursuant to Section 311(b)(2)(A) of the CWA at 40 CFR §116.4; or
 - (iii) are pollutants for which EPA has published acute or chronic water quality criteria.

Septage means the liquid and solid material pumped from a septic tank, cesspool, or similar domestic sewage treatment system, or a holding tank when the system is cleaned or maintained.

Sewage Sludge means any solid, semisolid, or liquid residue removed during the treatment of municipal wastewater or domestic sewage. Sewage sludge includes, but is not limited to, solids removed during primary, secondary, or advanced wastewater treatment, scum, septage, portable toilet pumpings, Type III Marine Sanitation Device pumpings (33 CFR Part 159), and sewage sludge products. Sewage sludge does not include grit or screenings, or ash generated during the incineration of sewage sludge.

NPDES PART II STANDARD CONDITIONS
(January, 2007)

Sewage sludge use or disposal practice means the collection, storage, treatment, transportation, processing, monitoring, use, or disposal of sewage sludge.

Significant materials includes, but is not limited to: raw materials, fuels, materials such as solvents, detergents, and plastic pellets, raw materials used in food processing or production, hazardous substance designated under section 101(14) of CERCLA, any chemical the facility is required to report pursuant to EPCRA Section 313, fertilizers, pesticides, and waste products such as ashes, slag, and sludge that have the potential to be released with storm water discharges.

Significant spills includes, but is not limited to, releases of oil or hazardous substances in excess of reportable quantities under Section 311 of the CWA (see 40 CFR §110.10 and §117.21) or Section 102 of CERCLA (see 40 CFR § 302.4).

Sludge-only facility means any “treatment works treating domestic sewage” whose methods of sewage sludge use or disposal are subject to regulations promulgated pursuant to Section 405(d) of the CWA, and is required to obtain a permit under 40 CFR §122.1(b)(3).

State means any of the 50 States, the District of Columbia, Guam, the Commonwealth of Puerto Rico, the Virgin Islands, American Samoa, the Trust Territory of the Pacific Islands.

Storm Water means storm water runoff, snow melt runoff, and surface runoff and drainage.

Storm water discharge associated with industrial activity means the discharge from any conveyance which is used for collecting and conveying storm water and which is directly related to manufacturing, processing, or raw materials storage areas at an industrial plant. (See 40 CFR §122.26 (b)(14) for specifics of this definition.

Time-weighted composite means a composite sample consisting of a mixture of equal volume aliquots collected at a constant time interval.

Toxic pollutants means any pollutant listed as toxic under Section 307 (a)(1) or, in the case of “sludge use or disposal practices” any pollutant identified in regulations implementing Section 405(d) of the CWA.

Treatment works treating domestic sewage means a POTW or any other sewage sludge or wastewater treatment devices or systems, regardless of ownership (including federal facilities), used in the storage, treatment, recycling, and reclamation of municipal or domestic sewage, including land dedicated for the disposal of sewage sludge. This definition does not include septic tanks or similar devices.

For purposes of this definition, “domestic sewage” includes waste and wastewater from humans or household operations that are discharged to or otherwise enter a treatment works. In States where there is no approved State sludge management program under Section 405(f) of the CWA, the Regional Administrator may designate any person subject to the standards for sewage sludge use and disposal in 40 CFR Part 503 as a “treatment works treating domestic sewage”, where he or she finds that there is a potential for adverse effects on public health and the environment from poor sludge quality or poor sludge handling, use or disposal practices, or where he or she finds that such designation is necessary to ensure that such person is in compliance with 40 CFR Part 503.

NPDES PART II STANDARD CONDITIONS

(January, 2007)

Waste Pile means any non-containerized accumulation of solid, non-flowing waste that is used for treatment or storage.

Waters of the United States means:

- (a) All waters which are currently used, were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of tide;
- (b) All interstate waters, including interstate “wetlands”;
- (c) All other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, “wetlands”, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds the use, degradation, or destruction of which would affect or could affect interstate or foreign commerce including any such waters:
 - (1) Which are or could be used by interstate or foreign travelers for recreational or other purpose;
 - (2) From which fish or shellfish are or could be taken and sold in interstate or foreign commerce; or
 - (3) Which are used or could be used for industrial purposes by industries in interstate commerce;
- (d) All impoundments of waters otherwise defined as waters of the United States under this definition;
- (e) Tributaries of waters identified in Paragraphs (a) through (d) of this definition;
- (f) The territorial sea; and
- (g) “Wetlands” adjacent to waters (other than waters that are themselves wetlands) identified in Paragraphs (a) through (f) of this definition.

Waste treatment systems, including treatment ponds or lagoons designed to meet the requirements of the CWA (other than cooling ponds as defined in 40 CFR §423.11(m) which also meet the criteria of this definition) are not waters of the United States.

Wetlands means those areas that are inundated or saturated by surface or ground water at a frequency and duration to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas.

Whole Effluent Toxicity (WET) means the aggregate toxic effect of an effluent measured directly by a toxicity test. (See Abbreviations Section, following, for additional information.)

2. Definitions for NPDES Permit Sludge Use and Disposal Requirements.

Active sewage sludge unit is a sewage sludge unit that has not closed.

NPDES PART II STANDARD CONDITIONS

(January, 2007)

Aerobic Digestion is the biochemical decomposition of organic matter in sewage sludge into carbon dioxide and water by microorganisms in the presence of air.

Agricultural Land is land on which a food crop, a feed crop, or a fiber crop is grown. This includes range land and land used as pasture.

Agronomic rate is the whole sludge application rate (dry weight basis) designed:

- (1) To provide the amount of nitrogen needed by the food crop, feed crop, fiber crop, cover crop, or vegetation grown on the land; and
- (2) To minimize the amount of nitrogen in the sewage sludge that passes below the root zone of the crop or vegetation grown on the land to the ground water.

Air pollution control device is one or more processes used to treat the exit gas from a sewage sludge incinerator stack.

Anaerobic digestion is the biochemical decomposition of organic matter in sewage sludge into methane gas and carbon dioxide by microorganisms in the absence of air.

Annual pollutant loading rate is the maximum amount of a pollutant that can be applied to a unit area of land during a 365 day period.

Annual whole sludge application rate is the maximum amount of sewage sludge (dry weight basis) that can be applied to a unit area of land during a 365 day period.

Apply sewage sludge or sewage sludge applied to the land means land application of sewage sludge.

Aquifer is a geologic formation, group of geologic formations, or a portion of a geologic formation capable of yielding ground water to wells or springs.

Auxiliary fuel is fuel used to augment the fuel value of sewage sludge. This includes, but is not limited to, natural gas, fuel oil, coal, gas generated during anaerobic digestion of sewage sludge, and municipal solid waste (not to exceed 30 percent of the dry weight of the sewage sludge and auxiliary fuel together). Hazardous wastes are not auxiliary fuel.

Base flood is a flood that has a one percent chance of occurring in any given year (i.e. a flood with a magnitude equaled once in 100 years).

Bulk sewage sludge is sewage sludge that is not sold or given away in a bag or other container for application to the land.

Contaminate an aquifer means to introduce a substance that causes the maximum contaminant level for nitrate in 40 CFR §141.11 to be exceeded in ground water or that causes the existing concentration of nitrate in the ground water to increase when the existing concentration of nitrate in the ground water exceeds the maximum contaminant level for nitrate in 40 CFR §141.11.

Class I sludge management facility is any publicly owned treatment works (POTW), as defined in 40 CFR §501.2, required to have an approved pretreatment program under 40 CFR §403.8 (a) (including any POTW located in a state that has elected to assume local program responsibilities pursuant to 40 CFR §403.10 (e) and any treatment works treating domestic sewage, as defined in 40 CFR § 122.2,

NPDES PART II STANDARD CONDITIONS

(January, 2007)

classified as a Class I sludge management facility by the EPA Regional Administrator, or, in the case of approved state programs, the Regional Administrator in conjunction with the State Director, because of the potential for sewage sludge use or disposal practice to affect public health and the environment adversely.

Control efficiency is the mass of a pollutant in the sewage sludge fed to an incinerator minus the mass of that pollutant in the exit gas from the incinerator stack divided by the mass of the pollutant in the sewage sludge fed to the incinerator.

Cover is soil or other material used to cover sewage sludge placed on an active sewage sludge unit.

Cover crop is a small grain crop, such as oats, wheat, or barley, not grown for harvest.

Cumulative pollutant loading rate is the maximum amount of inorganic pollutant that can be applied to an area of land.

Density of microorganisms is the number of microorganisms per unit mass of total solids (dry weight) in the sewage sludge.

Dispersion factor is the ratio of the increase in the ground level ambient air concentration for a pollutant at or beyond the property line of the site where the sewage sludge incinerator is located to the mass emission rate for the pollutant from the incinerator stack.

Displacement is the relative movement of any two sides of a fault measured in any direction.

Domestic septage is either liquid or solid material removed from a septic tank, cesspool, portable toilet, Type III marine sanitation device, or similar treatment works that receives only domestic sewage. Domestic septage does not include liquid or solid material removed from a septic tank, cesspool, or similar treatment works that receives either commercial wastewater or industrial wastewater and does not include grease removed from a grease trap at a restaurant.

Domestic sewage is waste and wastewater from humans or household operations that is discharged to or otherwise enters a treatment works.

Dry weight basis means calculated on the basis of having been dried at 105 degrees Celsius (°C) until reaching a constant mass (i.e. essentially 100 percent solids content).

Fault is a fracture or zone of fractures in any materials along which strata on one side are displaced with respect to the strata on the other side.

Feed crops are crops produced primarily for consumption by animals.

Fiber crops are crops such as flax and cotton.

Final cover is the last layer of soil or other material placed on a sewage sludge unit at closure.

Fluidized bed incinerator is an enclosed device in which organic matter and inorganic matter in sewage sludge are combusted in a bed of particles suspended in the combustion chamber gas.

Food crops are crops consumed by humans. These include, but are not limited to, fruits, vegetables, and tobacco.

NPDES PART II STANDARD CONDITIONS
(January, 2007)

Forest is a tract of land thick with trees and underbrush.

Ground water is water below the land surface in the saturated zone.

Holocene time is the most recent epoch of the Quaternary period, extending from the end of the Pleistocene epoch to the present.

Hourly average is the arithmetic mean of all the measurements taken during an hour. At least two measurements must be taken during the hour.

Incineration is the combustion of organic matter and inorganic matter in sewage sludge by high temperatures in an enclosed device.

Industrial wastewater is wastewater generated in a commercial or industrial process.

Land application is the spraying or spreading of sewage sludge onto the land surface; the injection of sewage sludge below the land surface; or the incorporation of sewage sludge into the soil so that the sewage sludge can either condition the soil or fertilize crops or vegetation grown in the soil.

Land with a high potential for public exposure is land that the public uses frequently. This includes, but is not limited to, a public contact site and reclamation site located in a populated area (e.g., a construction site located in a city).

Land with low potential for public exposure is land that the public uses infrequently. This includes, but is not limited to, agricultural land, forest and a reclamation site located in an unpopulated area (e.g., a strip mine located in a rural area).

Leachate collection system is a system or device installed immediately above a liner that is designed, constructed, maintained, and operated to collect and remove leachate from a sewage sludge unit.

Liner is soil or synthetic material that has a hydraulic conductivity of 1×10^{-7} centimeters per second or less.

Lower explosive limit for methane gas is the lowest percentage of methane gas in air, by volume, that propagates a flame at 25 degrees Celsius and atmospheric pressure.

Monthly average (Incineration) is the arithmetic mean of the hourly averages for the hours a sewage sludge incinerator operates during the month.

Monthly average (Land Application) is the arithmetic mean of all measurements taken during the month.

Municipality means a city, town, borough, county, parish, district, association, or other public body (including an intermunicipal agency of two or more of the foregoing entities) created by or under State law; an Indian tribe or an authorized Indian tribal organization having jurisdiction over sewage sludge management; or a designated and approved management agency under section 208 of the CWA, as amended. The definition includes a special district created under state law, such as a water district, sewer district, sanitary district, utility district, drainage district, or similar entity, or an integrated waste management facility as defined in section 201 (e) of the CWA, as amended, that has as one of its principal responsibilities the treatment, transport, use or disposal of sewage sludge.

NPDES PART II STANDARD CONDITIONS (January, 2007)

Other container is either an open or closed receptacle. This includes, but is not limited to, a bucket, a box, a carton, and a vehicle or trailer with a load capacity of one metric ton or less.

Pasture is land on which animals feed directly on feed crops such as legumes, grasses, grain stubble, or stover.

Pathogenic organisms are disease-causing organisms. These include, but are not limited to, certain bacteria, protozoa, viruses, and viable helminth ova.

Permitting authority is either EPA or a State with an EPA-approved sludge management program.

Person is an individual, association, partnership, corporation, municipality, State or Federal Agency, or an agent or employee thereof.

Person who prepares sewage sludge is either the person who generates sewage sludge during the treatment of domestic sewage in a treatment works or the person who derives a material from sewage sludge.

pH means the logarithm of the reciprocal of the hydrogen ion concentration; a measure of the acidity or alkalinity of a liquid or solid material.

Place sewage sludge or sewage sludge placed means disposal of sewage sludge on a surface disposal site.

Pollutant (as defined in sludge disposal requirements) is an organic substance, an inorganic substance, a combination of organic and inorganic substances, or pathogenic organism that, after discharge and upon exposure, ingestion, inhalation, or assimilation into an organism either directly from the environment or indirectly by ingestion through the food chain, could on the basis of information available to the Administrator of EPA, cause death, disease, behavioral abnormalities, cancer, genetic mutations, physiological malfunctions (including malfunction in reproduction) or physical deformations in either organisms or offspring of the organisms.

Pollutant limit (for sludge disposal requirements) is a numerical value that describes the amount of a pollutant allowed per unit amount of sewage sludge (e.g., milligrams per kilogram of total solids); the amount of pollutant that can be applied to a unit of land (e.g., kilograms per hectare); or the volume of the material that can be applied to the land (e.g., gallons per acre).

Public contact site is a land with a high potential for contact by the public. This includes, but is not limited to, public parks, ball fields, cemeteries, plant nurseries, turf farms, and golf courses.

Qualified ground water scientist is an individual with a baccalaureate or post-graduate degree in the natural sciences or engineering who has sufficient training and experience in ground water hydrology and related fields, as may be demonstrated by State registration, professional certification, or completion of accredited university programs, to make sound professional judgments regarding ground water monitoring, pollutant fate and transport, and corrective action.

Range land is open land with indigenous vegetation.

Reclamation site is drastically disturbed land that is reclaimed using sewage sludge. This includes, but is not limited to, strip mines and construction sites.

NPDES PART II STANDARD CONDITIONS (January, 2007)

Risk specific concentration is the allowable increase in the average daily ground level ambient air concentration for a pollutant from the incineration of sewage sludge at or beyond the property line of a site where the sewage sludge incinerator is located.

Runoff is rainwater, leachate, or other liquid that drains overland on any part of a land surface and runs off the land surface.

Seismic impact zone is an area that has 10 percent or greater probability that the horizontal ground level acceleration to the rock in the area exceeds 0.10 gravity once in 250 years.

Sewage sludge is a solid, semi-solid, or liquid residue generated during the treatment of domestic sewage in a treatment works. Sewage sludge includes, but is not limited to: domestic septage; scum or solids removed in primary, secondary, or advanced wastewater treatment processes; and a material derived from sewage sludge. Sewage sludge does not include ash generated during the firing of sewage sludge in a sewage sludge incinerator or grit and screening generated during preliminary treatment of domestic sewage in treatment works.

Sewage sludge feed rate is either the average daily amount of sewage sludge fired in all sewage sludge incinerators within the property line of the site where the sewage sludge incinerators are located for the number of days in a 365 day period that each sewage sludge incinerator operates, or the average daily design capacity for all sewage sludge incinerators within the property line of the site where the sewage sludge incinerators are located.

Sewage sludge incinerator is an enclosed device in which only sewage sludge and auxiliary fuel are fired.

Sewage sludge unit is land on which only sewage sludge is placed for final disposal. This does not include land on which sewage sludge is either stored or treated. Land does not include waters of the United States, as defined in 40 CFR §122.2.

Sewage sludge unit boundary is the outermost perimeter of an active sewage sludge unit.

Specific oxygen uptake rate (SOUR) is the mass of oxygen consumed per unit time per unit mass of total solids (dry weight basis) in sewage sludge.

Stack height is the difference between the elevation of the top of a sewage sludge incinerator stack and the elevation of the ground at the base of the stack when the difference is equal to or less than 65 meters. When the difference is greater than 65 meters, stack height is the creditable stack height determined in accordance with 40 CFR §51.100 (ii).

State is one of the United States of America, the District of Columbia, the Commonwealth of Puerto Rico, the Virgin Islands, Guam, American Samoa, the Trust Territory of the Pacific Islands, the Commonwealth of the Northern Mariana Islands, and an Indian tribe eligible for treatment as a State pursuant to regulations promulgated under the authority of section 518(e) of the CWA.

Store or storage of sewage sludge is the placement of sewage sludge on land on which the sewage sludge remains for two years or less. This does not include the placement of sewage sludge on land for treatment.

Surface disposal site is an area of land that contains one or more active sewage sludge units.

NPDES PART II STANDARD CONDITIONS (January, 2007)

Total hydrocarbons means the organic compounds in the exit gas from a sewage sludge incinerator stack measured using a flame ionization detection instrument referenced to propane.

Total solids are the materials in sewage sludge that remain as residue when the sewage sludge is dried at 103 to 105 degrees Celsius.

Treat or treatment of sewage sludge is the preparation of sewage sludge for final use or disposal. This includes, but is not limited to, thickening, stabilization, and dewatering of sewage sludge. This does not include storage of sewage sludge.

Treatment works is either a federally owned, publicly owned, or privately owned device or system used to treat (including recycle and reclaim) either domestic sewage or a combination of domestic sewage and industrial waste of a liquid nature.

Unstable area is land subject to natural or human-induced forces that may damage the structural components of an active sewage sludge unit. This includes, but is not limited to, land on which the soils are subject to mass movement.

Unstabilized solids are organic materials in sewage sludge that have not been treated in either an aerobic or anaerobic treatment process.

Vector attraction is the characteristic of sewage sludge that attracts rodents, flies, mosquitoes, or other organisms capable of transporting infectious agents.

Volatile solids is the amount of the total solids in sewage sludge lost when the sewage sludge is combusted at 550 degrees Celsius in the presence of excess air.

Wet electrostatic precipitator is an air pollution control device that uses both electrical forces and water to remove pollutants in the exit gas from a sewage sludge incinerator stack.

Wet scrubber is an air pollution control device that uses water to remove pollutants in the exit gas from a sewage sludge incinerator stack.

3. Commonly Used Abbreviations

BOD	Five-day biochemical oxygen demand unless otherwise specified
CBOD	Carbonaceous BOD
CFS	Cubic feet per second
COD	Chemical oxygen demand
Chlorine	
Cl ₂	Total residual chlorine
TRC	Total residual chlorine which is a combination of free available chlorine (FAC, see below) and combined chlorine (chloramines, etc.)

NPDES PART II STANDARD CONDITIONS
(January, 2007)

TRO	Total residual chlorine in marine waters where halogen compounds are present
FAC	Free available chlorine (aqueous molecular chlorine, hypochlorous acid, and hypochlorite ion)
Coliform	
Coliform, Fecal	Total fecal coliform bacteria
Coliform, Total	Total coliform bacteria
Cont. (Continuous)	Continuous recording of the parameter being monitored, i.e. flow, temperature, pH, etc.
Cu. M/day or M ³ /day	Cubic meters per day
DO	Dissolved oxygen
kg/day	Kilograms per day
lbs/day	Pounds per day
mg/l	Milligram(s) per liter
ml/l	Milliliters per liter
MGD	Million gallons per day
Nitrogen	
Total N	Total nitrogen
NH ₃ -N	Ammonia nitrogen as nitrogen
NO ₃ -N	Nitrate as nitrogen
NO ₂ -N	Nitrite as nitrogen
NO ₃ -NO ₂	Combined nitrate and nitrite nitrogen as nitrogen
TKN	Total Kjeldahl nitrogen as nitrogen
Oil & Grease	Freon extractable material
PCB	Polychlorinated biphenyl
pH	A measure of the hydrogen ion concentration. A measure of the acidity or alkalinity of a liquid or material
Surfactant	Surface-active agent

NPDES PART II STANDARD CONDITIONS
(January, 2007)

Temp. °C	Temperature in degrees Centigrade
Temp. °F	Temperature in degrees Fahrenheit
TOC	Total organic carbon
Total P	Total phosphorus
TSS or NFR	Total suspended solids or total nonfilterable residue
Turb. or Turbidity	Turbidity measured by the Nephelometric Method (NTU)
ug/l	Microgram(s) per liter
WET	“Whole effluent toxicity” is the total effect of an effluent measured directly with a toxicity test.
C-NOEC	“Chronic (Long-term Exposure Test) – No Observed Effect Concentration”. The highest tested concentration of an effluent or a toxicant at which no adverse effects are observed on the aquatic test organisms at a specified time of observation.
A-NOEC	“Acute (Short-term Exposure Test) – No Observed Effect Concentration” (see C-NOEC definition).
LC ₅₀	LC ₅₀ is the concentration of a sample that causes mortality of 50% of the test population at a specific time of observation. The LC ₅₀ = 100% is defined as a sample of undiluted effluent.
ZID	Zone of Initial Dilution means the region of initial mixing surrounding or adjacent to the end of the outfall pipe or diffuser ports.

RESPONSE TO COMMENTS
REGARDING THE RESISSUANCE OF THE FOLLOWING NPDES PERMIT
EXXONMOBIL CORPORATION MA0000833

Introduction:

The U.S. Environmental Protection Agency (EPA) and the Massachusetts Department of Environmental Protection (MassDEP) solicited public comments from May 31 through July 26, 2007, on the draft National Pollution Discharge Elimination System (NPDES) permit to be issued to ExxonMobil Corporation (ExxonMobil). The permit is being jointly issued by EPA and MassDEP under the federal Clean Water Act and Massachusetts Clean Waters Act, respectively.

The Draft NPDES Permit (Draft Permit) is for the discharge of storm water, groundwater, hydrostatic test water, boiler condensate, fire testing water, truck wash water and effluent pond water. The facility discharges to the Island End River, which has been designated under Massachusetts Surface Water Quality Standards as a Class SB water that must be suitable for 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.

EPA-New England received timely comments from Dianne R. Phillips of Holland & Knight LLP, attorney for ExxonMobil, Cynthia Liebman of the Conservation Law Foundation (CLF), and Roger Frymire and Minka Van Beuzekom of Mystic River Watershed Association (MRWA).

Comments submitted by Ms. Van Beuzekom affirmed the approach and provisions of the draft permit. Although EPA notes those comments, no specific responses are provided below. Since some of the comments received from ExxonMobil addressed statements made in her comment letter (which she read aloud at the public hearing), Ms. Van Beuzekom's letter is attached herein as Attachment A.

In accordance with the provisions of 40 C.F.R. § 124.17, this document presents EPA's and MassDEP's joint response to comments and includes an explanation of the changes made between the Draft Permit and Final Permit. While the Final Permit is substantially similar to the Draft Permit, the agencies did revise certain aspects of the permit as a result of the comments. In addition, the agencies noted several technical errors in the permit, which have been corrected. These improvements and corrections are summarized below and are reflected in the Final Permit.

Changes Made to the Final Permit:

1. Part 1.A.1 has been revised to allow sampling of total suspended solids (TSS) using a grab sample.
2. Requirement to report total monthly flow in part I.A.18 was removed.
3. Minimum Levels (MLs) for PAHs in section I.A.1 have been revised to reflect practical quantitation levels for EPA Method 610 (HPLC).
4. Requirements for monitoring cyanide and ethanol in part I.A.1 have been reduced from monthly to quarterly.
5. A footnote has been added to the table in part I.A.1 to clarify that "Total BTEX" is to be reported as the sum of the detectable concentrations of benzene, toluene, ethylbenzene and xylenes.
6. Footnote 1 in part I.A.1 has been revised to include test methods for xylenes, MTBE and ethanol.

7. The requirement for a routine sampling program has been removed from footnote 1 in part I.A.1.
8. “Polynuclear” in the table in part I.A.1 has been changed to “Polycyclic” and Group I and Group II PAHs are identified.
9. Part I.A.1 has been revised to require monthly sampling for PAHs.
10. Part I.A.1 has been revised to require quarterly sampling for aluminum, cadmium, chromium, copper, lead, mercury, nickel, and zinc.
11. Part I.A.13 has been revised for clarification.
12. Part I.A.21.a has been revised to remove the requirement to install a fixed and secure flow control device to the inlet of the existing oil/water separator to restrict flow to its maximum design flow (3,000 gallons per minute) or less. This requirement has been replaced with one requiring certification of the maximum design flow for the treatment works and its various components and prohibiting exceedances of the certified maximum design flow.
13. Parts I.B.4.b and I.B.5 have been revised to clarify areas of inspection.
14. Part I.B.6 of the permit has been revised to allow 30 days to amend or update the SWPPP following any changes at the facility affecting the SWPPP.

The Final Permit and this response to public comments are available and can be downloaded from EPA’s web site at http://www.epa.gov/NE/npdes/permits_listing_ma.html. Copies of the Final Permit also may be obtained by writing or calling Ellen Weitzler of EPA’s Industrial Permits Branch, Office of Ecosystem Protection, 1 Congress Street, Suite 1100, Boston, MA 02114-2023; Telephone: (617) 918-1582.

Dianne R. Phillips submitted comments 1 through 66 on behalf of ExxonMobil:

COMMENT 1

APPLICATION OF BPJ AND USE OF ELGS AND GENERAL PERMITS

EPA has improperly relied upon the Remediation General Permit (RGP) and support Fact Sheet (MAG910000) published in the Federal Register September 9, 2005 (70 Fed. Reg. 53663) (hereinafter “RGP”) as its sole reference to support its proposed technology-based effluent limits. These proposed limits affect the following contaminants: (a) oil and grease (reduced from the current limit of 15 mg/l to 5 mg/l); (b) benzene (reduced from its water-quality based limit of 40 µg/l to 5 µg/l); (c) total BTEX (newly proposed at 100 µg/l where previously the elements other than benzene were simply reported); and (d) Methyl-Tertiary-Butyl-Ether (MTBE) (newly proposed at 70 µg/l where none previously existed).

Subpart A of 40 CFR Part 125 established criteria and standards for the imposition of technology-based treatment requirements in permits under Section 301(b) of the federal Clean Water Act. Where a technology-based effluent limitation does not exist for a facility or an industry, EPA may establish effluent limits on a case-by-base basis using Best Professional Judgment (“BPJ”). See 33 U.S.C. § 1342(a)(1)(B); 40 C.F.R. §§122.44(a)(1); 125.3(c)(2); see also 314 C.M.R. §3.11(6)(b) (technology-based effluent limitations for non-POTWs developed on a case-by-case basis based on best professional judgment “will consider... any technology or process *which has been demonstrated to be achievable* in the experience of the Department for the class or category of discharger” (emphasis supplied). Here, EPA has not promulgated technology-based National Effluent Limitation Guidelines (“ELG”) for discharges from petroleum bulk storage and distribution terminals (Standard Industrial Code 5171), although it

has promulgated such ELGs for the Petroleum Refining Industry, 40 CFR Part 419.¹ The Everett Terminal is a former refinery and, as described below, [reasonable analogies exist which were ignored by EPA in consideration of its exercise of BPJ].

In creating effluent limits using BPJ, permit writers must consider the following:

The appropriate technology for the category or class of point sources of which the applicant is a member, based on all available information; and any unique factors relating to the applicant. 40 C.F.R. § 125.3(c)(2); see also Office of Wastewater Management, U.S. Environmental Protection Agency NPDES Permit Writers' Manual ("NPDES Permit Writers' Manual" or "Manual") 69 (Dec. 1996). In addition, the regulations set forth additional requirements based on whether Best Practicable Control Technology ("BPT"), Best Conventional Control Technology ("BCT") or Best Available Control Technology ("BAT") applies. 40 C.F.R. § 125.3(d).

Where BAT applies,² the permit writer must consider the following:

The age of the equipment and facilities involved;

The processes employed;

The engineering aspects of the application of various types of control techniques;

Process changes;

The cost of achieving such effluent reduction; and

Non-water quality environmental impact (including energy requirements).

40 C.F.R. § 125.3(d)(3). With respect to applying BPJ to BCT,³ the permit writer must consider factors (i) – (iv) and (vi) as identified for BAT and, in addition, "[t]he reasonableness of the relationship between the costs of attaining a reduction in effluent and the effluent reduction benefits derived..." among other things. 40 C.F.R. § 125.3(d)(2).

The NPDES Permit Writer's Manual notes that BPJ allows permit writers considerable case-by-case flexibility. See, e.g., NPDES Permit Writer's Manual at 69. Nonetheless, the Manual also suggests that permit writers must strive to make permits based on BPJ "technically sound and feasible" so as to withstand scrutiny. It defines "technically sound permit conditions" as "conditions that are achievable with existing technology." Id. At 70 (emphasis added). Further, it defines "reasonable" as "conditions that are achievable at a cost that the facility can afford." Id. The Manual also states that "permit writers must consider the costs to comply when establishing BPJ permit limits for toxic and nonconventional pollutants." Id. At 73. In summary, BPJ limits must be carefully drafted to withstand scrutiny and must be technically sound, economically reasonable, based on unimpeachable information, and derived logically from the data through established procedures. Id. at 205. Failure to consider any one of the

¹ Additionally, EPA did promulgate a general permit, known as the Multi-Sector General Permit (MSGP) (reissued October 30, 2000 in 65 Fed. Reg. 64801), which included bulk storage facilities as an industrial activity eligible for coverage. However, the Everett Terminal was previously issued an individual permit developed on a case-by-case basis and thus the MSGP is inapplicable to the discharges at issue here.

² EPA has classified benzene, toluene, and ethylbenzene as a toxic pollutants, which are subject to BAT. See 33 U.S.C. § 1317(a)(2); 40 C.F.R. § 401.15. Xylene and MTBE are nonconventional pollutants, which are also subject to BAT. See 33 U.S.C. § 1311(b)(2)(f).

³ Oil and grease is a conventional pollutant subject to BCT. See 33 U.S.C. § 1311(b)(2)(E); 40 C.F.R. § 401.16.

statutory and regulatory factors constitutes an abuse of discretion. See Texas Oil & Gas Ass'n v. U.S. Env'tl. Protection Agency, 161 F.3d 923,934 (5th Cir. 1998).

RESPONSE 1

EPA's approach to developing technology-based effluent limitations for oil and grease and volatile organic compounds (VOCs – benzene, ethylbenzene, toluene, xylenes, and methyl tertiary butyl ether) on a BPJ-basis is consistent with the CWA, applicable NPDES regulations and the EPA's Permit Writer's Manual. Technology-based treatment requirements may be imposed through (1) the application of EPA-promulgated effluent limitations developed CWA § 304 (ELGs), (2) to the extent ELGs are inapplicable, on a BPJ, case-by-case basis under CWA § 402(a)(1), or (3) a combination of (1) and (2). See 40 C.F.R. § 125.3(c)(1)-(3). When developing an effluent limitation on a BPJ-basis, the permit writer must consider the BAT/BCT factors (as the case may be), "the appropriate technology for the category or class of point sources of which applicant is a member, based upon all available information" and "any unique factors relating to the applicant." Id. at § 125.3(c)(2)(i)-(ii). EPA must regulate aspects of the discharger's operations or pollutants to which ELGs do not apply on a BPJ-basis. Id. at § 125.3(c)(3).

The Permit Writers' Manual similarly instructs permit writers to derive BPJ limits by (1) transferring numerical limitations from an existing source (*e.g.*, a similar NPDES permit or an existing ELG), or (2) developing new numeric limitations. Consistent with plain text of the regulation, which requires the use of "*all* available information," the Permit Writer's Manual identifies a wide array of materials that can be used to inform BPJ permitting decisions. See Permit Writers' Manual at 71-72. These references include EPA technical guidances pertaining to the development of technology and water-quality-based limits and permit compliance system data. Notably, the list of BPJ permitting tools makes specific reference to other NPDES permits, including those from other media (*i.e.*, RCRA and SPCC). Id. at 72.

EPA's reference to the RGP in the development on a BPJ-basis of permit limits for the groundwater component of the storm water discharges at the ExxonMobil facility was reasonable and appropriate in light of the wide-latitude afforded by the regulations and guidance to the permit writer to consider available information and the fact that the Permit Writers' Manual specifically contemplates use of other NPDES permits that have been issued for similar discharges. As discussed in the fact sheet (at section 6.3.3), the groundwater contaminants of concern at ExxonMobil are similar to those at facilities surveyed in development of the RGP. Moreover, the treatment technologies used to derive these effluent limits are widely available. In developing the technology-based limits included in the RGP, EPA reviewed discharge applications and data from approximately 2,000 groundwater treatment systems at remediation sites (RGP Fact Sheet Section VI.A.2). The results of this work were used to develop Best Available Technology (BAT) treatment limitations for benzene, total BTEX and MTBE and others, like oil and grease. Therefore EPA finds that the RGP is a valid reference to support effluent limits derived for this permit.

EPA agrees that the ELGs developed for the petroleum refining point source category (40 CFR Part 419) provide a useful resource for the development of BPJ technology-based effluent limits for storm water discharges at bulk petroleum storage facilities. However, EPA finds that these ELGs do not address contaminated groundwater discharges. In the development of the current permit (issued in March, 2000), EPA was not aware of contaminated groundwater discharges and therefore applied the maximum daily 15 mg/L oil and grease limit (based on monthly sampling) as a technology based limit for discharge consisting primarily storm water discharges and groundwater (presumed uncontaminated based on ExxonMobil's 1996 NPDES application). In the fact sheet for the current permit, EPA explained the permit limit as follows: "Originally this effluent limit was established as guidance to, and as a means of establishing a categorization within, the petroleum marketing

terminals and oil production facilities categories. Performance data indicate that this effluent limitation can be achieved through proper operation of an oil/water separator and best management practices (BMP).” The 15 mg/L oil and grease effluent limit in the current permit is similar to the effluent limit guidelines under the petroleum refining point source category. These ELGs for oil and grease in contaminated runoff are 15 mg/L maximum daily and 8 mg/L 30-day average. In 40 CFR § 419.11, “runoff” is defined as “the flow of storm water resulting from precipitation coming into contact with petroleum refinery property” and “contaminated runoff” is defined as “runoff which comes into contact with any raw material, intermediate product, finished product, by-product or waste product located on petroleum refinery property”. The ELGs do not address appropriate treatment for contaminated groundwater emanating from historic or active petroleum refinery sites and thus EPA has concluded that 40 CFR Part 419 cannot be used to establish effluent limitations on such discharges from the ExxonMobil facility.

In the Fact Sheet accompanying the Draft Permit, EPA considered all the relevant BAT/BCT factors when it derived the BPJ-limits for this facility, either directly or indirectly by reference to the RGP BAT/BCT determinations. EPA, however, agrees with the commenter that this analysis should be made more explicit and has therefore presented its site-specific BPJ analysis in the following paragraphs.

BAT/BCT ANALYSIS FOR OIL AND GREASE AND VOCs

A. Introduction

The CWA sets forth different standards for the effluent limitations based upon the type of pollutant or the type of discharger involved. Existing sources that discharge pollutants directly to receiving waters were initially subject to effluent limitations based on the "best practical control technology currently available," or "BPT." *See* 33 U.S.C. § 1314(b)(1)(B). Existing sources that discharge conventional pollutants also are subject to effluent limitations based on the "best conventional pollutant control technology," or "BCT." *See* 33 U.S.C. § 1314(b)(4)(A); *see also* 40 C.F.R. § 401.16 (conventional pollutants include biochemical oxygen demand (BOD), total suspended solids (TSS) (nonfilterable), pH, fecal coliform, oil and grease). For existing sources that discharge toxic pollutants or "nonconventional" pollutants (*i.e.*, pollutants that are neither "toxic" nor "conventional") directly to receiving waters, the limitations are based on the "best available technology economically achievable," or "BAT." *See* 33 U.S.C. § 1311(b)(2)(A); *see also* 40 C.F.R. § 401.15 (list of toxic pollutants).

BAT represents, at a minimum, the best economically achievable performance in the industrial category or subcategory. *NRDC, Inc. v. EPA*, 863 F.2d 1420, 1426 (9th Cir. 1988) (citing *EPA v. National Crushed Stone Ass'n*, 449 U.S. 64, 74, 101 S. Ct. 295, 66 L. Ed. 2d 268 (1980)). BAT is the CWA's most stringent standard. "Congress intended these limitations to be based on the performance of the single best-performing plant in an industrial field." *Chem. Mfrs. Ass'n v. EPA*, 870 F.2d 177, 226 (5th Cir.1989). *See also* *Kennecott v. EPA*, 780 F.2d 445, 448 (4th Cir. 1985) (industry challenge to EPA regulations implementing BAT limits for nonferrous metals manufacturing industry point sources) ("In setting BAT, EPA uses not the average plant, but the optimally operating plant, the pilot plant which acts as a beacon to show what is possible."). EPA has not defined "economically achievable" but pollution control technology is considered to be economically achievable if their use will not cause a plant to shut down.

BCT is the next step above BPT for conventional pollutants. To implement this objective, EPA has developed a two-part cost-reasonableness test: (1) the "POTW cost-comparison test" comparing BCT to EPA's calculation of the cost of upgrading a POTW from secondary to advanced secondary treatment, and (2) the "industry cost-effectiveness test" comparing BCT to EPA's calculation of the cost per pound to upgrade a POTW from secondary treatment to advanced secondary treatment

divided by the cost per pound to upgrade from no control to secondary treatment. See 51 Fed. Reg. 24,974, 24,976 (July 9, 1986). Effluent limitations based on BCT may not be less stringent than the limitations based on “best practicable control technology currently available” (BPT). Thus, BPT effluent limitations guidelines are a “floor” below which BCT effluent limitations guidelines cannot be established.

As mentioned above, CWA § 402(a)(1) authorizes EPA to issue discharge permits on a case-by-case basis using BPJ where ELGs do not exist for either a point source category as a whole or for a particular pollutant not addressed by the ELGs promulgated for the point source category. The CWA sets up a loose framework for assessing the statutory factors in setting BAT limits.⁴ It does not require their comparison, merely their consideration.⁵ “[I]n enacting the CWA, ‘Congress did not mandate any particular structure or weight for the many consideration factors. Rather, it left EPA with discretion to decide how to account for the consideration factors, and how much weight to give each factor.’”⁶ When EPA considers the statutory BAT factors in setting effluent limits, it is governed by a standard of reasonableness.⁷ It must consider each factor but has “considerable discretion in assessing them and determining the weight to be accorded to each in reaching an ultimate BAT determination.”⁸ One court summarized the standard for judging EPA’s consideration of the BAT factors in setting effluent limits as follows: “[s]o long as the required technology reduces the discharge of pollutants, our inquiry will be limited to whether the Agency considered the cost of technology, along with other statutory factors, and whether its conclusion is reasonable.”⁹ The factors are as follows:

- (i) The age of equipment and facilities involved
- (ii) The process employed
- (iii) The engineering aspects of the application of various control techniques
- (iv) Process changes
- (v) Non-water quality environmental impacts (including energy requirements)

⁴ BP Exploration & Oil, Inc., 66 F.3d at 796, citing Weyerhaeuser v. Costle, 590 F.2d 1011, 1045 (D.C. Cir. 1978) (citing Senator Muskie’s remarks on CWA § 304(b)(1) factors during debate on CWA). See also EPA v. Nat’l Crushed Stone Ass’n, 449 U.S. 64, 74, 101 S.Ct. 295, 300, 66 L.Ed.2d 268 (1980) (noting with regard to BPT that “[s]imilar directions are given the Administrator for determining effluent reductions attainable from the BAT except that in assessing BAT total cost is no longer to be considered in comparison to effluent reduction benefits”).

⁵ Weyerhaeuser v. Costle, 590 F.2d at 1045 (explaining that CWA § 304(b)(2) lists factors for EPA “consideration” in setting BAT limits, while CWA § 304(b)(1) lists both factors for EPA consideration and factors for EPA “comparison” -- e.g., “total cost versus effluent reduction benefits” -- in setting BPT limits).

⁶ BP Exploration & Oil, Inc., 66 F.3d at 796, citing Weyerhaeuser v. Costle, 590 F.2d at 1045.

⁷ Id., 66 F.3d at 796, citing American Iron & Steel Inst. v. EPA, 526 F.2d 1027, 1051 (1975), modified in other part, 560 F.2d 589 (3d Cir. 1977), cert. denied, 435 U.S. 914, 98 S.Ct. 1467, 55 L.Ed.2d 505 (1978).

⁸ Texas Oil & Gas Ass’n, 161 F.3d at 928, citing NRDC v. EPA, 863 F.2d at 1426. See also Weyerhaeuser, 590 F.2d at 1045 (discussing EPA’s discretion in assessing BAT factors, court noted that “[s]o long as EPA pays some attention to the congressionally specified factors, the section [304(b)(2)] on its face lets EPA relate the various factors as it deems necessary”).

⁹ Ass’n of Pacific Fisheries v. EPA, 615 F.2d 794, 818 (9th Cir. 1980) (industry challenge to EPA regulations implementing BAT limits for seafood processing industry point sources). See also Chemical Manufacturers Ass’n (CMA) v. EPA, 870 F.2d 177, 250 n.320 (5th Cir. 1989), citing Congressional Research Service, A Legislative History of the Water Pollution Control Act Amendments of 1972 at 170 (1973) (in determining BAT, “[t]he Administrator will be bound by a test of reasonableness.”) (industry challenge to EPA regulations implementing BAT limits for organic chemicals, plastics and synthetic fibers industry point sources); NRDC v. EPA, 863 F.2d at 1426 (same); American Iron & Steel Inst., 526 F.2d at 1051 (same).

(vi) Cost

For a BPJ determination of BCT, the regulations require consideration of factors (i)-(v) above, as well as the following additional factors¹⁰:

(vii) The reasonableness of the relationship between the costs of attaining a reduction in effluent and the effluent reduction benefits derived; and

(viii) The comparison of the cost and level of reduction of such pollutants from the discharge from publicly owned treatment works to the cost and level of reduction of such pollutants from a class or category of industrial sources.

EPA's determination of the best performing plant in the industry and its analysis of BAT/BCT factors is presented in the following paragraphs.

B. Determination of Best Performing Plant in Industry

When applying the BAT standard for effluent limits, the CWA calls for EPA to look to the single "best" performing plant in the industry - in terms of effluent reduction - as the starting point.¹¹ See 40 C.F.R. § 125.3(c)(2)(i). EPA has also determined that in identifying the best performing technology (or technologies) it may look to any viable "transfer technologies" -- that is, technologies from another industry that can be "transferred" to the industry in question -- as well as technologies shown to be viable in research though not yet implemented at a full-scale facility.¹² Identifying the best performing technology for the industrial category provides a starting point for determining the BAT, but it is not determinative by itself. The BPJ application of the BAT standard to a particular facility is conducted on a case-by-case, site-specific basis, and a technology that works at one petroleum bulk storage and distribution terminal might not actually be feasible at another plant due to site-specific issues (*e.g.*, space limitations). Accordingly, a technology that would be infeasible at the Everett Terminal would not be the BAT for this permit, even if that technology worked at a different facility.

EPA has determined that the best performing facilities in terms of removing volatile organic compounds (VOCs – benzene, ethylbenzene, toluene, xylenes, and methyl tertiary butyl ether) and oil and grease from contaminated groundwater are utilizing liquid phase carbon adsorption preceded by oil water separation and filtration. Other industrial facilities in the area are in the process of, or have completed renovations to their storm water collection and treatment systems to prevent untreated contaminated groundwater from co-mingling with storm water, as shown by the following examples.

- At General Electric in Lynn, MA (NPDES Permit MA0003905) dry weather flows, which include groundwater infiltration and process (cooling) water are collected and treated in the consolidated drains treatment system, which includes carbon adsorption capability. In addition, various sections of storm drain and other buried gravity discharge pipes have been lined to prevent contaminated groundwater infiltration.

¹⁰ The first part of the BCT cost test is referred to as the "industry cost-effectiveness test"; the second part is known as the "POTW test."

¹¹ *E.g.*, *Texas Oil & Gas Ass'n v. United States E.P.A.*, 161 F.3d 923, 928 (5th Cir. 1998); *Association of Pacific Fisheries v. Environmental Protection Agency*, 615 F.2d 794, 816-17 (9th Cir. 1980); *American Meat Institute v. E.P.A.*, 526 F.2d 442, 462-63 (7th Cir. 1975).

¹² These approaches to determining BAT are supported by the CWA's legislative history and have been upheld by the courts. *E.g.*, *American Petroleum Institute v. E.P.A.*, 858 F.2d 261, 264-65 (5th Cir. 1988); *Pacific Fisheries*, 615 F.2d at 816-17; *BASF Wyandotte Corp. v. Costle*, 614 F.2d 21, 22 (1st Cir. 1980); *American Iron and Steel Institute v. E.P.A.*, 526 F.2d 1027, 1061 (3d Cir. 1975); *American Meat Institute*, 526 F.2d at 462-63.

- At ConocoPhillips bulk petroleum storage facility in East Boston (NPDES Permit MA0004006) a groundwater extraction system collects contaminated groundwater in the truck loading rack area. The collected groundwater is treated (via oil/water separation, filtration and carbon adsorption) and monitored at an internal outfall prior to commingling with storm water. As an extra precaution, ConocoPhillips treats all storm water discharges via oil/water separation, filtration and carbon adsorption prior to discharge into Chelsea Creek.
- At Distrigas of Massachusetts in Everett, MA (NPDES Permit MA0020010) a 24-inch storm water outfall pipe to the Mystic River was replaced in an effort to reduce or eliminate contaminated groundwater infiltration.
- At Global Petroleum bulk petroleum storage facility in Revere, MA (NPDES Permit MA0003298) storm water collection pipes were inspected and leaks were sealed in response to a gasoline release in 1997 and 1998. Global also operates a separate groundwater extraction system which collects contaminated groundwater in the truck loading rack area. The collected groundwater is treated via carbon adsorption and monitored at an internal outfall prior to commingling with storm water. In addition, the facility was required by MassDEP to install a treatment system (liquid phase carbon absorption) to treat all commingled discharges flowing through the storm water conveyance system which discharges to Chelsea Creek.

Other facilities, such as the 254 acre General Electric facility in Pittsfield, MA (NPDES Permit MA 0003891) repair drain pipes to prevent infiltration and also treat commingled storm water and dry weather flows through physical and chemical treatment systems to greatly minimize the discharge of contaminated groundwater into the Housatonic River watershed.

Under the NPDES program, discharge of storm water pollutants at bulk petroleum storage facilities is controlled through a combination of best management practice (BMP) requirements and effluent limits to ensure that the management practices are implemented. EPA has found BMPs designed to prevent the release of petroleum product to be a practical and cost effective approach to pollution control given the highly variable and weather dependent nature of storm water flow. Storm water BMPs specified in the NPDES permit include development and implementation of a storm water pollution prevention plan (SWPPP), regular inspection of areas of the facility where industrial materials or activities are exposed to storm water, and routine maintenance of all BMPs included in the SWPPP. At bulk petroleum storage facilities the NPDES permit and Spill Prevention, Control and Countermeasure (SPCC) plans required under 40 CFR § 112 work together to prevent the discharge of petroleum into the receiving waters.

In the case of groundwater discharges, EPA has found that technology-based effluent limits based on the ability of conventional treatment technologies to remove pollutants from groundwater are appropriate because, unlike storm water, contaminated groundwater discharges can be isolated so that it can be largely controlled, independent of weather conditions. In this case, the groundwater discharges can be controlled by identifying and repairing leaks in the storm water collection system, by collecting groundwater through a separate extraction system, by removing contamination source areas or by other means of isolating the areas of groundwater contamination. The effluent limits for VOCs and oil and grease are based on the treatability of petroleum constituents with carbon adsorption, a commonly used treatment technology for groundwater and wastewater treatment.

EPA has considered the challenges associated with applying a technology based effluent limit for contaminated groundwater to the total flow of storm water and other permitted discharges from outfall 001. Since there are other bulk petroleum facilities in Massachusetts that voluntarily treat all of their collected storm water and groundwater through carbon adsorption to ensure removal of

dissolved petroleum constituents, EPA finds that the collection and treatment of the total flow through carbon adsorption is feasible. Nevertheless, the permit does not mandate that the permittee treat all of the collected water through carbon adsorption in particular, only that the technology-based effluent limits be met. The permittee may choose other means by which to meet the effluent limits, as discussed below.

Although the volume contributed by contaminated groundwater may, at times, be a relatively small portion of the total flow discharging from outfall 001, EPA has established effluent limits in a manner that prevents the use of dilution of groundwater pollutants by storm water as means of complying with technology-based limits.¹³ See 40 C.F.R. § 125.3(f) (“Technology-based treatment requirements cannot be satisfied through the use of ‘non-treatment’ techniques such as flow augmentation and in-stream mechanical aerators,” absent exceptions not applicable here). The permit identifies the most stringent of the technology-based effluent limits that would apply to each separate discharge stream and applies such limit to the combined waste stream.

EPA has determined that ExxonMobil’s pollution control technology does not represent BAT or BCT. Storm water from unpaved containment areas around product storage tanks is collected in below-grade sumps equipped with lift pumps to transfer collected storm water to the gravity storm sewers that lead to the treatment works. Storm water runoff from paved areas and building roofs in the North Tank Farm flows by gravity to the treatment works. Storm water falling on paved areas, building roofs, and mounded bunker tank roofs in the South Tank Farm flows by gravity either to the North Tank Farm drainage system and the treatment works, or is pumped in force mains to a gravity portion of the South Tank Farm drainage system that then flows by gravity to the North Tank Farm and the treatment works. Contaminated groundwater infiltrates into the storm water collection system and contributes a constant flow of oil to the treatment works.

The treatment works are used to remove floating oil and settleable solids from all flows to the Island End River. The treatment system consists of a former oil-water separator, which is now used as a distribution chamber known as the separation flume, an oil water separator (OWS) (built in the late 1980’s), a two-chamber wet well with a total of 5 submersible pumps, and a 1.45 million gallon above ground storage tank, known as Tank 140. The treatment works does not include process technology to remove suspended or dissolved pollutants.

Flows from the terminal collect in the separation flume. A submerged pipe in the separation flume transfers flow by gravity into the OWS. The transfer rate may be controlled by a gate valve in the pipe between the separation flume and the OWS. The actual design capacity of the OWS and separation flume is unclear at this time (see comment 61, paragraph 4).

Effluent from the OWS and the separation flume flows into the first chamber of the wet well. The wet well is divided into two chambers by a baffle to prevent oil captured in the first chamber from flowing into the second chamber. The two chambers are hydraulically connected at the bottom of the wet well. The first chamber contains two 750 gpm pumps and one 3,000 gpm pump. The system operates in lead/lag fashion with the two 750 gpm pumps leading the 3,000 gpm pump. Water from

¹³ Effluent limit guidelines developed for other industries support EPA’s approach. Effluent limits expressed as concentration are qualified in Subpart F (general provisions) of 40 CFR § 434.61 (Coal Mining Point Source Category) as follows:

“Where waste streams from any facility covered by this part are combined for treatment or discharge with waste streams from another facility covered by this part, the concentration of each pollutant in the combined discharge may not exceed the most stringent limitations for that pollutant applicable to any component waste stream of the discharge.”

the first chamber of the wet well is transferred to Tank 140 and then overflows to discharge at the outfall (identified as outfall 001 in the draft permit fact sheet). This discharge is identified in the current permit as outfall 001A. The water level in Tank 140 remains constant at approximately 1.45 million gallons.

The second wet well chamber contains two 11,500 gpm pumps that are used to transfer treatment works effluent directly to the outfall (bypassing Tank 140) when the flow to the treatment works exceeds the 4,500 gpm capacity of the pumps in the first chamber of the wet well. This is necessary to prevent water from rising in the wet well and backing up into the oil water separator or separation flume which could result in an overflow of oil into the wet well. The flow from the second wet well chamber is identified in the current permit as outfall 001B, although it ultimately discharges to the same location as outfall 001A. Discharge monitoring data for outfall 001B is summarized in Attachment A.

To minimize exceeding the design flow of the treatment works, storm water collected inside the containment areas is stored within those containment areas, for as long as 7 days, prior to being pumped to the collection system and the treatment works. In spite of this, bypasses of Tank 140, via outfall 001B have occurred as frequently as 4 times a year since 2002.

(i) The Age of Equipment and Facilities Involved

In setting effluent limits for ExxonMobil, EPA took into consideration the age of the storm water collection and treatment equipment involved. The site has been used for petroleum refining or storage since 1920. The age of the storm water collection system is unknown. It is likely that portions of the storm water collection system date back at least to 1965 when the refinery was shut down and the site's use solely as a petroleum bulk storage facility began. The treatment works in the North Tank Farm was last updated in the late 1980s. EPA is not aware of the repair history of the storm water collection system.

Given the age of the storm water collection system, infiltration of groundwater through cracks and joints in storm water collection pipes, manholes, sumps and catch basins is not unusual. The permit authorizes the discharge of groundwater through outfall 001. However, facility age does not preclude the selection of any particular treatment technologies for contaminated groundwater discharges. Investments in constructing the existing storm water collection system were made decades ago, the equipment has likely surpassed the lifespan of the original design, and technological advances have occurred since its installation. Site cleanup to prevent discharge of contaminated groundwater into receiving waters is common at old industrial facilities. As a result, from this perspective, it would seem reasonable to upgrade the equipment at this time.

(ii) The Process Employed

The ExxonMobil Everett Terminal is engaged in the receipt, storage, and distribution of petroleum products. The spectrum of fuels handled by this facility consists of gasoline, low sulfur diesel, jet fuel, heavy oil, and fuel additives. Petroleum products are received in bulk quantities at the terminal's marine vessel dock. Product is then transferred, via aboveground piping, to aboveground storage tanks located within the facility's tank farm areas. Final distribution of product is conducted at the facility's truck loading racks.

The facility collects storm water, groundwater, hydrostatic test water, boiler condensate, fire testing water, truck wash water and effluent pond water through a below grade storm water collection system. The storm water collection system includes both manually operated containment area drainage sump pumps and gravity flow from catch basins around the site.

The ExxonMobil Everett Terminal operations also include the collection and discharge of storm water from Sprague Energy, an asphalt storage and distribution facility located on property formerly owned by ExxonMobil. All of the water discharged is collected by the facility's storm water collection system which drains to a treatment works near the eastern edge of the North Tank Farm. Discharge to the Island End River is by means of a 6-foot diameter, 1500 foot long culvert that carries water from ExxonMobil to the river.

Neither the BAT/BCT mandated by EPA in this permit would prevent or interfere with the primary production process, *i.e.*, the continued operation of the facility as a bulk petroleum storage and distribution facility.

(iii) The Engineering Aspects of Various Types of Control Techniques

In setting effluent limits for oil and grease and VOCs, EPA took into consideration the engineering aspects related to controlling these pollutant discharges via treatment technologies and source control. EPA considered the following three control techniques:

1. isolation of contaminated groundwater through storm drain inspection and repair;
2. separate collection and treatment of contaminated groundwater through an alternative groundwater extraction system (such as wells or trenches) with treatment prior to discharge to the storm water collection system; and
3. treatment of commingled contaminated groundwater and other discharges prior to discharge to the Island End River via outfall 001.

The final permit does not specify in advance that the permittee must perform specific engineering tasks in order to meet the effluent limits. Rather, the permit leaves the development of site-specific engineering to the permittee. The effluent limits derived for VOCs and oil and grease could be achieved using any of the three control techniques. They are all technically feasible and are routinely used at industrial facilities to prevent discharge of groundwater contaminants to surface water, as shown by the examples given above.

EPA controls the discharge of storm water pollutants at bulk petroleum storage facilities through a combination of best management practice (BMP) requirements and effluent limits to ensure that the management practices are implemented. EPA has found BMPs designed to prevent the release of petroleum product to be a practical and cost effective approach to pollution source control given the highly variable and weather dependent nature of storm water flow. *See* Guidance Manual for Developing Best Management Practices (EPA, October 1993) at section 1.3.

Storm water BMPs specified in the NPDES permit include development and implementation of a storm water pollution prevention plan (SWPPP), regular inspection of areas of the facility where industrial materials or activities are exposed to storm water, and routine maintenance of all BMPs included in the SWPPP. At bulk petroleum facilities, the NPDES permit and Spill Prevention, Control and Countermeasure (SPCC) plans required under 40 C.F.R. § 112 work together to prevent the discharge of petroleum into the receiving waters.

In the case of groundwater discharges, the effluent limits for VOCs and oil and grease are based on the treatability of petroleum constituents with carbon adsorption, a commonly used treatment technology for groundwater and wastewater treatment, capable of treating these pollutants to the levels required in the permit. EPA has found that technology-based effluent limits based on the ability of conventional treatment technologies to remove pollutants from groundwater are appropriate because, unlike storm water, contaminated groundwater flow can be isolated so that it can be largely controlled, independent of weather conditions. In this case, the flow of groundwater can be controlled by identifying and repairing leaks in the storm water collection system, by collecting groundwater

through a separate extraction system, by removing contamination source areas or by other means of isolating the areas of groundwater contamination.

(iv) Process Changes

Depending on the technology that the permittee chooses to meet the effluent limits, process changes to the storm water collection system may be minimal or moderate. If the permittee chooses to isolate the groundwater by identifying and repairing leaks in the storm water collection system or by containing the groundwater outside of the collection system through separate groundwater extraction or physical barrier, then no changes to the storm water collection system or treatment works will be necessary. If the permittee chooses to treat the commingled stream of contaminated groundwater, storm water and other authorized flows, then changes to the treatment works will be necessary to add a carbon adsorption (or equivalent) treatment process. EPA does not believe that any required changes would be so disruptive that commercial use of the facility would be interrupted. EPA notes that ExxonMobil routinely moves piping, relocates product into other tanks, has several empty tanks already on site and appear to have sufficient room on which to locate a new treatment building for a filtration and carbon adsorption system if necessary. An example of ExxonMobil's flexibility is the recent switch to ethanol from MTBE as an oxygenate, a transition which required significant piping, rerouting and new equipment at the loading rack.

(v) and (vi) Cost and Non-water Quality Environmental Impacts

Depending on the technology chosen by the permittee to meet the effluent limits, the cost and non-water quality environmental impacts of the effluent limits for VOCs and oil and grease may be minimal. Inspecting and repairing storm drains is a component of facility maintenance that is essential to maintain adequate capacity at the existing treatment works and is already required under 40 CFR §122.41(e) and in the standard conditions (Part II) of the permit. Given the shallow groundwater at the ExxonMobil property, increasing groundwater infiltration continues to reduce the capacity of the collection system to collect storm water and the treatment works' capacity to treat storm water. As far as EPA is aware, original design calculations for the oil water separator do not account for increasing groundwater infiltration. Although the portion of wet weather discharge from outfall 001 that is groundwater is currently unknown, if the storm drains continue to deteriorate, that portion is likely to increase over time, reducing the capacity of the oil water separator to treat storm water.

If ExxonMobil chooses to comply with the permit by inspecting, maintaining and repairing storm drains and conducting ongoing monitoring to ensure that areas of contaminated groundwater are isolated from the storm water collection system, then there will be little (if any) additional long term energy costs or other environmental impacts as a result of the BAT/BCT limits. The reason for this is that ExxonMobil is already obligated to perform these tasks under its existing permit and the Massachusetts Contingency Plan. Therefore, EPA has determined that at least one of the technology options has no impact beyond periodic upkeep necessary to maintain proper operation of the facility's storm water collection and treatment system. With regard to the two treatment options evaluated in this BAT/BCT analysis, both would have a capital cost and long term energy impact. The following table summarizes the relative cost impact of each.

Technology Option	Cost	Non-Water Environmental Impacts
Isolate contaminated groundwater through storm drain inspection and repair	None, above normal operating and maintenance costs	None, above normal operating and maintenance impacts
Separate collection and treatment of contaminated groundwater through an alternative groundwater extraction system (such as wells or trenches) with treatment prior to discharge to the storm water collection system	Capital Cost – moderate, depending on extent of pre-design investigation required to define extent of groundwater extraction system and estimate extracted groundwater flow. Operating Cost – moderate due to relatively low flow of extracted groundwater	Construction impacts – will depend on type of groundwater extraction system used. May include some excavation and treatment or disposal of contaminated soils. Operating impacts – moderate energy use due to relatively low flow of extracted groundwater.
Treat commingled contaminated groundwater, storm water, and other discharges prior to discharge to the Island End River via outfall 001	Capital Cost – moderate, since relatively little investigation would be required and existing property, buildings and/or storage tanks could be incorporated into the treatment system design. Operating Cost – high due to relatively high volume of commingled flow.	Construction impacts – rerouting of treatment works effluent may require some excavation and treatment or disposal of contaminated soils. Operating impacts – high energy use due to relatively high volume of commingled flow.

Regarding the affordability for ExxonMobil of the Final Permit's BAT requirements, EPA believes the cost of implementing any of the potential technologies can reasonably be borne by the Company, including the cost of implementing the most expensive compliance option. ExxonMobil is highly profitable company, and is able to afford the expense associated with mandated technology for NPDES compliance. According to public filings, ExxonMobil's estimated first quarter net 2008 income was approximately \$10,900,000,000. For this permit decision, EPA has applied its best professional judgment and concluded that this technology is economically practicable for this ExxonMobil facility.

BCT is the second level of control for conventional pollutants (oil and grease, biological oxygen demand, fecal coliform, pH, and total suspended solids). In setting BCT, the CWA requires EPA to consider in addition to all the BAT factors, as well as the following:

vi. The reasonableness of the relationship between the costs of attaining a reduction in effluent and the effluent reduction benefits derived and the comparison of the cost and level of reduction of such pollutants from the discharge from publicly owned treatment works to the cost and level of reduction of such pollutants from a class or category of industrial sources

The current permit includes an oil and grease limit of 15 mg/l for the maximum daily value. This is a typical effluent limit for storm water at petroleum bulk storage facilities and reflects the capabilities of the oil/water separator to remove product in the event of an equipment leak or spill of petroleum into the storm water collection system. It is expected that with the best management practices in

place at the facility, there will not be any oil accumulation at the treatment works. However, at this facility, groundwater infiltration into the collection system contributes a constant flow of oil to the treatment works. Oil is skimmed off of the oil/water separator at least daily. In this sense, the treatment works is operating as a de facto groundwater treatment system, removing residual oil from the site subsurface.

In establishing the technology-based effluent limit for oil and grease based on best professional judgment, EPA reviewed a number of sources, including the substantial monitoring data being submitted pursuant to approved site remediation projects, reviewed a number of other EPA and state issued general permits and related effluent guidelines developed by EPA. Site remediation project in Massachusetts and New Hampshire have consistently required an effluent limit maximum value for total petroleum hydrocarbons of 5 mg/l (USEPA, 2005). Since there are not expected to be any oil and grease constituents in the discharge except for petroleum hydrocarbons, the permit includes a groundwater treatment technology-based limit for oil and grease of 5 mg/l.

The requirement that ExxonMobil meet the new oil and grease effluent limit will by itself result in no additional cost, as ExxonMobil is already required to properly maintain and inspect its storm water collection system, which EPA believes will prevent contaminated groundwater from infiltrating into the storm water system. Additionally, review of monitoring data for outfall 001 from 2002 to 2006 indicates that only one of the monthly oil and grease samples exceeded 5 mg/l or the detection limit, which ranged from 4.2 to 5.3 mg/l. The detected oil and grease result greater than 5 mg/l was 7.2 mg/l in September of 2004. It is expected that with improved flow controls (see Section 6.3.1), ExxonMobil will be able to meet the new oil and grease effluent limit.

The effluent reduction benefits expected due to implementation of the permit are reasonable in relation to the costs associated with the new BCT requirements. EPA's analysis of the likely costs is set forth above. With respect to benefits, EPA has made a qualitative judgment, in accordance with the policy objectives of the Act, which is to make reasonable further progress toward eliminating pollution in the Nation's waters, and to make such waters fishable and swimmable. See Natural Resources Defense Council, Inc. v. Costle, 568 F.2d 1369, 1380 (D.C. Cir. 1977). EPA's judgment is that the benefits to be expected in this permit are reasonably related to the level of costs required to implement one of (or a combination of) the three mitigation actions described above. Reducing oil and grease loadings into a severely impaired stretch of the Island End River not only benefits the resource by enhancing its ecological integrity (both ExxonMobil and others have noted the presence of oily sheens in the receiving waters of uncertain origin) but also provides value to the community, which uses the receiving water for recreational purposes. Impacted recreational areas include the Massachusetts Department of Conservation and Recreation Amy O'Malley Park, which includes boating access, and the Admiral's Hill Yacht Club.

Effluent limitations based on BCT may not be less stringent than the limitations based on "best practicable control technology currently available" (BPT). In light of the foregoing analysis of costs and benefits, EPA has determined that an effluent limitation of 5 mg/l for oil and grease would at a minimum constitute BPT. ("The relevant inquiry with respect to BPT . . . is whether the costs are 'wholly disproportionate' to the benefits." *Chemical Mfrs. Ass'n v. U.S. E.P.A.*, 870 F.2d 177, 205 (5th Cir. 1989)). Because BPT effluent limitations guidelines are a "floor" below which BCT effluent limitations guidelines cannot be established, EPA has established the BCT limit at 5 mg/l.

In footnote 1 of the comment, ExxonMobil suggests that the Everett Terminal is not eligible for coverage under the Multi-Sector General Permit (MSGP) because an individual permit was previously developed for the facility on a case-by-case basis. This is only partially correct. While the MSGP does include coverage for some non-storm water discharges, groundwater discharges must be uncontaminated (see paragraph 1.2.2.2 of the MSGP). Therefore, even if individual effluent limits

had not been developed prior to the issuance of the MSGP, an individual permit would still be required for the Everett Terminal.

COMMENT 2

CHARACTERIZATION OF STORM DRAIN SYSTEM AS “DE FACTO COLLECTION AND TREATMENT SYSTEM” GROUNDWATER

EPA’s misapplication of BPJ is twofold in that it is both factually and legally flawed. From a factual perspective, EPA’s misapplication of BPJ begins with its mischaracterization of the storm sewer system at the Everett Terminal, as a “de facto groundwater collection and treatment system” which contributes “a constant flow of oil to the treatment works.” See Fact Sheet at 11-12, 15. This characterization is apparently based upon the belief that the groundwater at the site is “generally contaminated” (without definition). See Fact Sheet at 12. ExxonMobil does not dispute that the site is a listed remediation site under the jurisdiction and regulation of M.G.L. c. 21E and the Massachusetts Contingency Plan, 310 CMR 40.0000 et seq. (“MCP”). Moreover, ExxonMobil acknowledges that there exist areas of soil and groundwater contamination within the 110-acre facility and that the oil-water separator (“OWS”) is used regularly to separate residual oil from the combined flows into the OWS before it is ultimately discharged.¹⁴ There is no scientific basis, however, for the assertion that pollutants in excess of appropriate limits are routinely being discharged as claimed.

RESPONSE 2

EPA has applied technology-based effluent limits appropriate for contaminated groundwater because contaminated groundwater is discharged from outfall 001. The RGP was referenced because it included technology-based effluent limits for such waste streams. As described in Section 6.2.2 of the fact sheet, the 1996 site assessment report for the Everett Terminal reported that “OHM [(oil and hazardous materials)] dissolved in groundwater is likely not migrating off this site while the facility pumping is maintained” indicating that the storm water collection pumps are the means by which off-site migration is prevented. The implication in this statement is that if the groundwater connection to the storm water collection pumps were removed, off-site migration of OHM would be likely and may require mitigation. If the collection of contaminated groundwater by the storm drains removes contamination from the subsurface, it is effectively accomplishing soil and groundwater cleanup. EPA is aware of no other possible source for the dry weather discharge except for groundwater. Indeed, the Permittee itself acknowledges in its comment above that the OWS is being “used regularly to separate residual oil from the combined” storm water and groundwater flows. However, even if further investigation were to render the statement in the 1996 assessment report incorrect, the contaminated groundwater that infiltrates into the storm water collection system results in a point source discharge of pollutants that is regulated under the Clean Water Act.

EPA does not agree with the implication of the comment that the imposition of technology-based limits depends on first demonstrating “that pollutants in excess of appropriate limits are routinely being discharged pollutants in excess of appropriate limits.” No amount of contaminated ground water should be discharged through the facility’s storm drains without first receiving appropriate

¹⁴ ExxonMobil denies that “oily water is typically skimmed off twice per day” (Fact Sheet, p. 13) and “oil is skimmed off the oil/water separator as least daily” (Fact Sheet, p. 15). Rather, what ExxonMobil reported is that the treatment works are inspected at least twice daily and the manual skimmers are operated as needed in accordance with design specifications and good industry practice.

treatment. EPA must, as a threshold matter, simply demonstrate *that* contaminated ground water is being discharged from the storm drains, and if so, must establish effluent limitations that are sufficiently stringent to at a minimum comply with the technology-based requirements of the CWA (and if necessary, the water quality-based requirements of the Act). In this case, the existence of contaminated storm water infiltration is reasonably clear from the observed accumulation of oil in the oil water separator during dry weather.

EPA concurs that the nature and volume of contaminated groundwater infiltration into the storm water collection system is not well characterized. EPA has no information to indicate whether contaminated groundwater infiltration is limited to a single reach or occurs throughout the collection system. It is also possible that the largest flows of contaminated groundwater occur during wet weather when rising groundwater elevations increase infiltration in sections of buried storm drain that are all, or largely, above the water table during dry weather. It is worth noting that the volume of groundwater infiltration—some percentage of which is contaminated—is substantial. The monthly flow discharged during August of 2007 when there was *no* rainfall and the water table was at its seasonal low was 0.088 MGD, which was likely a seasonal low groundwater flow for the year.

In this case, isolating the contaminated groundwater discharge for sampling purposes is currently impossible since it mixes with storm water flow, and possibly uncontaminated groundwater, prior to discharge at outfall 001. Therefore, EPA has had to rely on a dry weather flow sample taken in 2006 (which did not contain storm water) and available monitoring well data to identify contaminants of concern in the contaminated groundwater discharge. As described in section 6.3 of the fact sheet, recent sampling data submitted to EPA by ExxonMobil indicated elevated concentrations of petroleum products including benzene (0.3 to 2 mg/L) and MTBE (up to 17.6 mg/L) in some monitoring wells on the site. It is possible that large concentrations of pollutants are not measurable at outfall 001 because of dilution with less contaminated infiltrated groundwater and storm water. Nevertheless, since the primary pollutant sources (contaminated groundwater and storm water) are commingled, EPA must apply the more stringent of the applicable technology-based effluent limits to prevent treatment by dilution.

Following a reexamination of meeting notes from March 2006, EPA agrees that ExxonMobil reported that the oil water separator is inspected twice daily and emptied as needed, as pointed out in footnote 14 of the permit. Nevertheless, it is clear that oil accumulates in the oil water separator on a regular basis; hence the need for twice daily inspections.

COMMENT 3

STORMWATER COLLECTION AND DISCHARGE SYSTEM AS A CRITICAL COMPONENT OF THE REMEDIAL ACTION TO PREVENT OFF-SITE MIGRATION

Furthermore, ExxonMobil disputed that “the storm water collection and discharge system is being used as a critical component of the remedial action to prevent off-site migration” simply because operation of the manual sump pumps with the diked, firebank areas affects the regional groundwater flow.¹⁵ The existence of the manually operated sumps to remove stormwater from the diked areas after large precipitation events is an operational requirement

¹⁵ EPA relied upon a brief summary from a 1996 report and limited data filed in accordance with MCP requirements to reach its conclusions. However, absent specific data linking *elevated* levels of contaminated groundwater with areas of storm sewer drain infiltration, there is simply no way to confirm that “contaminated groundwater” (of an impermissible level) is improperly discharging through the drain system. Monitoring data from the discharge points shows compliance with existing permit limits.

to maintain the storage capacity of the diked areas in the event of a spill. It is expected that such intermittent sump operation could impact regional groundwater flow in the proximity of the pumps, especially where there exists a high water table. These facilities and their operational characteristics were present in 1991 and 2000 when the existing permit limits were established. Since then they have not been transformed into critical components of the “remedial action,” which is fully regulated by applicable state law.¹⁶

RESPONSE 3

EPA notes ExxonMobil’s disagreement with the contention that the storm water collection and treatment system effectively prevents off-site migration of subsurface contamination and thus impacts the remedial action.. EPA does not take the position that ExxonMobil has intentionally incorporated the storm water collection/discharge system into its remediation action plan. Regardless of how one characterizes the role of the storm water system, the fact remains that due to the deteriorating condition of the storm water collection system at the Everett Terminal, the storm water collection system has become a preferential pathway for the migration of subsurface pollutants into the Island End River and Mystic River Watershed. During site visits in 2006 and 2007, ExxonMobil acknowledged that contaminated groundwater is the source of the oil accumulating at the oil/water separator and not storm water. EPA sees no reason to disregard or discount the Permittee’s admission, especially as it is consistent with EPA’s own inferences (drawn from the available information and discussed more fully below) linking contaminated groundwater to discharges from the storm water system.

The assertion (in footnote 15) that ExxonMobil’s monitoring data indicates compliance with the *current* permit does not resolve the question of whether additional technology- and water quality-based controls on untreated contaminated groundwater into the Island End River are necessary in the *reissued* permit. Contrary to the commenter’s statement above, the full “operational characteristics” of the storm water management facilities were not presented to EPA in previous permit applications. Although EPA permit file documents indicate that groundwater infiltration was a component of the discharges from outfall 001 when previous permits were issued, there is no mention of contaminated groundwater discharges in the permit application or in the fact sheets associated with those permits. EPA records indicate that EPA first became concerned about the amount of oil collecting in the oil water separator and apparent breaches of the separator and wet well baffles during an NPDES compliance evaluation inspection conducted by EPA on April 22 and May 27, 2004. EPA does not typically review site remediation reports conducted at remediation sites being mitigated under the Massachusetts Contingency Plan (MCP) and was previously unaware that contaminated groundwater was contributing toxic pollutants to the storm water discharge.

EPA also disagrees with the suggestion in footnote 15 that EPA improperly relied upon an outdated report and limited data to reach the conclusion that the storm water collection system is a component of the remediation system. Contrary to the commenter’s assertion, EPA had a sufficient basis to conclude that the storm water collection is effectively functioning (whether intentionally or not) as a component of the remediation system.

First, notwithstanding its age, the 1996 report and its conclusion that the contaminated groundwater is likely not migrating off-site due to pumping operations has continuing validity and relevance.

¹⁶ For example, if the sumps were a critical component of the remedial system, as alleged, the LSP would have been required to document such operation as part of the Phase III Remedial Action Plan through hydrogeological testing, including pilot testing, drawdown, capture zone, transmissivity, yield, etc

Indeed, as recently as 2006, ExxonMobil itself relied on the 1996 site assessment in its remedial action planning that there was no off-site migration. Meanwhile, untreated contaminated groundwater has been discharging to Island End River. EPA believes, therefore, that its reliance on this report to inform the development of permit limits was reasonable.

Second, during EPA's March 2006 site visit, ExxonMobil's Licensed Site Professional reiterated ExxonMobil's contention that there is no off-site migration of contaminated groundwater because the influence of the storm drain system created groundwater flow pattern towards the middle of the property. While EPA agrees with ExxonMobil that no migration of groundwater contamination to ExxonMobil abutters through *saturated soils* is apparent, it appears, from the groundwater flow pattern that groundwater is being pumped out of the on-site shallow saturated soils. Since EPA is not aware of any *other* groundwater pumping activities ongoing at the facility, and there is a constant flow of contaminated groundwater infiltration to the treatment works, it is reasonable to conclude that there is off-site migration through the *storm water collection system* and that, therefore, the storm water collection system is serving as a means to remove subsurface contamination.

Third, as reflected in the fact sheet, EPA analyzed available groundwater data and determined that the constituent pollutants contained in the groundwater were also appearing in the dry weather discharge from the storm drain. In sum, EPA believes that its conclusion that contaminated groundwater is being discharged through the facility's storm drains is grounded in substantial evidence and is sound.

COMMENT 4

EXXONMOBIL IS IN COMPLIANCE WITH MCP REQUIREMENTS

Lastly, ExxonMobil is currently in compliance with the MCP requirements for managing such soil and groundwater contamination. To date, the site conditions have not justified design and construction of a groundwater collection and treatment system, and none has been required. Indeed, as described in reports filed with the DEP in compliance with MCP requirements, "active remedial alternatives such as pump and treat are not possible" in many of the areas of concern identified by EPA (Fact Sheet at 11) due to operating subsurface structures, including product pipelines. ExxonMobil, through its Licensed Site Professional ("LSP") will continue to evaluate remedial alternatives and related activities as necessary to maintain full compliance with site remediation requirements, and anticipates investigating the issues raised by EPA as part of the next MCP-required review due in October 2009.¹⁷ ExxonMobil is committed to investigating the concerns raised by EPA, including undertaking appropriate studies to determine if NAPL is infiltrating the storm sewer at levels which have the potential to cause, or contribute to an in-stream excursion above the (narrative) criterion within applicable state water quality standards.¹⁸ ExxonMobil believes EPA's conclusions are simply not supported by the facts.

¹⁷ See *Notice of Audit Findings*, DEP, July 16, 2007 finding no violations of the applicable requirements of the MCP.

¹⁸ State water quality standards for Class SB water bodies are found in 314 CMR 4.05(4)(b) and present narrative criteria. With respect to issues most relevant here, the standard is as follows: "These waters shall be free from oil, grease and petrochemicals that produce a visible film on the surface of the water, impart an oily taste to the water or an oily or other undesirable taste to edible portions of aquatic life, coat the banks or bottom of the water course, or a deleterious or become toxic to aquatic life." References to taste of the water or aquatic life are inapplicable to the Island End River.

RESPONSE 4

Federal law controls point source discharges of pollutants into U.S. waters regardless of the requirements of a state contingency plan. Compliance with the MCP does not in itself satisfy the requirements of the Federal Clean Water Act. This fact is recognized by the MCA, which provides, “No provision of 310 CMR 40.0000 shall be construed to relieve any person of the necessity of complying with all other applicable federal, state or local laws.” See 310 CMR 40.0007(8). Moreover, the MCA specifically excludes point source discharges of pollutants from the definition of “hazardous wastes,” which do not “include solid or dissolved materials in irrigation return flows or industrial discharges which are point sources subject to permits under section 402 of the Federal Water Pollution Control Act of 1967 as amended the CWA’s NPDES program.”

For the reasons stated in this response to comments and in the fact sheet, EPA disagrees with ExxonMobil’s contention that remediation requirements under the MCP sufficiently address contaminated groundwater discharges into the Island End River to the extent required under the CWA.

EPA disagrees with ExxonMobil’s assertion in footnote 17 stating that DEP has found no violations of the applicable requirements of the MCP. The audit letter (DEP, 2007) specifically states that the audit findings do not apply to “actions or other aspects of the site that were not reviewed in the audit.” The audit letter asked ExxonMobil to provide information “on all surface water discharges that originate on ExxonMobil’s property and discharge to the Island End River via Outfall 001” and provide a plan to collect new data related to the “presence of NAPL on the groundwater.” Therefore, the finding of “no violations” does not apply to the surface water discharge issues related to this permit, which have not been reviewed by DEP to date.¹⁹

EPA also disagrees with the ExxonMobil’s interpretation of state water quality standards described in footnote 18. Water Quality Standards are intended to protect designated uses whether or not they are being attained (314 CMR 4.02). ExxonMobil erroneously concludes that certain designated uses for Class SB water bodies do not apply to the Island End River. The water quality classes and criteria in 314 CMR 4.05 (4)(b) for Class SB waters specifically states:

These 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. In certain waters, habitat for fish, other aquatic life and wildlife may include, but is not limited to, seagrass. Where designated in the Tables to 314 CMR 4.00 for shellfishing, these waters shall be suitable for shellfish harvesting with depuration (Restricted and Conditionally Restricted Shellfish Areas). These waters shall have consistently good aesthetic value.

Although not a designated shell fishing area, designated uses for the Island End River are as described above, and contrary to commenter’s suggestion, include aquatic life uses.

COMMENT 5

In ExxonMobil's view, EPA also failed to give due consideration to the complexity, site history, age and geographical extent of the Everett Terminal in developing draft permit limits and conditions that are substantially different than the limits and conditions in place since approximately 1990. The Everett Terminal discharge system consists of over 13,500 linear feet

¹⁹ The request for information was prompted by the discovery of oil discharges downstream of a NPDES monitoring location in the Island End River that appeared to emanate from the Everett facility (a fact which the Permittee disputes).

(almost 3 miles) of gravity drain lines and approximately 7,000 feet (over 1 mile) of forced mains ranging in size from less than 12 inches in diameter up to 60 inches in diameter and over 100 vertical structures constructed approximately 40 to 80 years ago which culminate at the treatment works before discharging into the Island End River, a Class SB water-body within a state "Designated Port Area" dedicated to water-dependent industrial uses.²⁰

RESPONSE 5

The fact that EPA may impose different and more stringent limits in a newly reissued permit by itself presents no infirmity and, in fact, is commonplace:

[b]ecause of technological and other changes, abatement measures that may have met EPA's requirements at the time the existing permit was issued may no longer suffice when the permit is reevaluated for renewal. Congress made it clear when it enacted the Clean Water Act that its goal was not merely to reduce pollution in navigable waters but to eliminate it. 33 U.S.C. 1251(a)(1) and (2). The statute expressly provides for effluent limitations that will "result in reasonable further progress toward the national goal of eliminating the discharge of all pollutants * * * [where] such elimination is technologically and economically achievable * * *." 33 U.S.C. 1311(b)(2)(A).

In the Matter of: Rubicon Inc., 2 E.A.D. 551, 554 (CJO 1988). Earlier permit conditions or technical analyses are not "grandfathered" into later permits. If that were the case, there would be no need for maximum five-year terms for NPDES permits or detailed permit renewal application requirements. The CWA demands that the permit issuer reevaluate the record at the permit reissuance stage and determine whether new permit conditions are warranted based on the best, reasonably available information and the current understanding of the relevant law and science. Analyses undertaken in support of past permits, and permit conditions included in past permits, may continue to be relied upon and used for current permits only if a contemporary consideration of the issues indicates that these analyses and permit conditions remain valid.

EPA acknowledges that the Everett Terminal is a large facility with a long industrial history, and that EPA is permitting against a backdrop of considerable technical complexity. The commenter does not identify how taking into account any of the factors cited above (age, geographic expanse, etc.) bear on any specific permit limit. While it may be that the river is "dedicated" to heavy industrial uses through its designation as a Designated Port Area by the State, this fact does not override the continuing force and applicability of the CWA and the Massachusetts Surface Water Quality Standards, including uses that have been designated for Class SB waters.

²⁰ The Island End River is heavily contaminated from historic coal tar processing originating on property adjacent to the ExxonMobil Everett Terminal. According to a MassDEP Internal Briefing Memorandum, relied upon as a reference to EPA's Fact Sheet, as recently as 2006 before river sediment remediation was begun, "sheens continued to be produced by heavily contaminated sediments in the river bottom." Robertson, Stephen J., 2006, *MassDEP Internal Briefing memorandum to Edward Kunce, Arleen O'Donnell, Philip Griffiths, Janine Commerford, and Edward Coletta regarding EVERETT – Former Coal Tar processing Facility, Release Tracking No. 3-0309, Island End River Cleanup*, March 23, 2006, page 2. The river remediation project, which is expected to cost between \$45 and 47 million, includes enclosing approximately 1.9 acres of the most heavily contaminated sub-aqueous sediments and dredging an additional 72,000 cubic yards of sediments with concentrations of greater than 1% polycyclic aromatic hydrocarbons (PAH) which are believed to be causing the sheens. *Id.* at pp. 3-4. Although EPA reports the cleanup work of the most highly-contaminated sediments in the Island End River as "completed" (Fact Sheet, p. 6), that does not appear to be the case based on recent observations.

EPA believes it adequately accounted for the facts and circumstances of Everett facility given the information reasonably available to it. It should be noted that many of the factors cited by the commenter counsel in favor of issuing a relatively conservative permit in a reasonably expeditious manner, which highlight the severe existing impairments in the receiving waters. Moving forward with a reasonable and protective permit is particularly important with respect to the water quality-based limits for PAHs given their tendency to persist in the sediments and to bioaccumulate in the ecosystem. Because of the large flows from the facility, EPA is concerned about the potential for pollutants in the discharge (particularly PAHs) from outfall 001 to recontaminate the water column and sediments in the Island End River. The re-evaluation of technology-based limits for oil and grease and VOCs is also necessary and appropriate given the relatively long lapse since the permit was last issued and the condition of the facility's sprawling and aging storm water infrastructure. Although ExxonMobil operates a large petroleum bulk storage and distribution business at the Everett Terminal, with many millions of gallons of petroleum products handled each year, the company has not maintained its aging storm water collection system or prevented contaminated groundwater from entering the storm drains discharging to the Island End River.

EPA notes that, despite the technical complexity faced by EPA in the permit development process, there is very little to no uncertainty (by the Permittee's own admission) regarding the source of the contaminated ground water flow. More uncertainty exists with respect as to the volume of contaminated groundwater flow in the storm water discharges. Through hydrological modeling, it may be possible to estimate how much groundwater is discharged in a particular storm using empirical data. But wet weather modeling is highly complex and depends on the intensity and length of the storm, the time of year, as well as recent storm events because groundwater infiltration depends on how high the water table is when the storm begins and how fast it rises during the storm event (the higher the water table, the higher the infiltration rate). Given that infiltrated groundwater flow occurs even under dry weather when the water table is low, and that there is clear evidence that this flow is contaminated based on empirical observations by EPA's technical staff, EPA does not believe further characterization or modeling of the data is necessary. The Everett terminal is not unique in this situation. Through the NPDES permit program, EPA has been working diligently with public and private entities to address infiltration and inflow issues in old storm drains and municipal sewers throughout the Boston area. Through substantial public and private investment in infrastructure, that effort has resulted in significant improvements in water quality in the lower Charles River (see EPA press release 4/17/2007 at <http://yosemite.epa.gov/opa/admpress.nsf/dc614f1d30c3fd66852572a000657b5a/aa8fddf6d5e3857a852572c000490a5f!OpenDocument>). EPA is currently working towards similar improvements in lower Mystic River watershed (see EPA press release of 4/17/07 at <http://yosemite.epa.gov/opa/admpress.nsf/b853d6fe004acebf852572a000656840/15c8c80466456dd6852572c0004de300!OpenDocument>).

EPA disagrees with the last sentence of footnote 20 based on consultation with MassDEP. Stephen Roberson, MassDEP project manager for the Island End River contaminated sediment cleanup responded to the comment as follows in a September 17, 2007 email to MassDEP's Rosemary Knox which was forwarded to EPA's Ellen Weitzler:

"I am not sure what 'recent observations' gave rise to this comment, but I believe that the recently-completed \$45 million remediation project did, in fact, accomplish most of the cleanup that is necessary for coal tar contaminated sediments in the IER. The project successfully removed and/or isolated over 70,000 cubic yards of the most heavily contaminated sediments in the IER, and specifically targeted those areas known to have been the primary cause of past coal tar related sheens in the IER. It is likely that sheens will continue to be observed on the surface of the IER from time to time in the future, due to

numerous factors, including wastewater discharges from the ExxonMobil facility, surface runoff from surrounding areas of Everett and Chelsea, known and unknown breaches in subsurface drain lines, and other causes. As has been the case in the past, different parties may offer differing explanations for the source of these sheens, and Exxon Mobil may have reasons to assert that coal tar residues continue to be the sole or primary cause of continuing sheens in the IER. But before these assertions are presumed to be true, though, I think it would be prudent to seek some confirmation of these claims, through direct observations, "fingerprint" analyses, or some other equally reliable means.

It is possible, of course, that some sheens may still be produced by the remaining coal gasification wastes in the area -- either from residual wastes left behind in the river bottom, or from the contaminated materials that are known to have been used extensively for the filling of adjacent upland areas, including the former IER oxbow. But I am confident that the majority of the sheen-producing sediments within the IER itself (those known to be contaminated with coal gasification wastes, at any rate) have been removed or isolated through the implementation of the recent Release Abatement Measure.

Please feel free to pass this comment along to EPA. I would be happy to discuss this further with you or anyone else involved in this matter. Thanks again for bringing the memo to my attention."

Even if ExxonMobil were correct about the status of the sediment cleanup, this would not result in less stringent permit limits for ExxonMobil's discharges. The capacity of the receiving water to accept pollutant discharges is dictated by the designated uses of the receiving water, the existing conditions in the receiving water (which is impaired for priority organics such as PAHs), and the available dilution. Since the water quality goal for the Island End River has not yet been achieved due to past industrial discharges into it, EPA is obligated, under the CWA, to limit discharges of pollutants such as PAHs (major constituents of coal tar residues) and prevent further accumulation of contaminated sediments.

COMMENT 6

In addition to these factual problems, EPA's development of effluent limits using BPJ is legally flawed in that there is no evidence in the record that the regulatory factors were properly considered with respect to the Everett Terminal. Rather, ExxonMobil contends EPA blindly applied the effluent limits developed as part of the RGP without consideration of the site-specific characteristics and the required regulatory factors. Specifically, with regard to the basis for its BPJ decision, EPA states it "established technology based effluent limits using BPJ for contaminants in the groundwater based on review of commonly available and utilized groundwater treatment technologies at remediation sites." Fact Sheet, p. 14. Additionally "EPA reviewed a number of sources, including the substantial monitoring data being submitted pursuant to approved site remediation projects, reviewed a number of other EPA and state issued general permits and related effluent guidelines developed by EPA" citing the RGP issued in 2005. Fact Sheet, p. 16. Further, EPA considered "discharges at similar facilities in Massachusetts"²¹ and established technology-based effluent limits "based on

²¹ Comparisons to the so-called "Chelsea Creek" facilities, do not support EPA's BPJ determination here because, among other things, the lower, technology-based limits were imposed where existing groundwater pump and treat systems were already installed as required by the MCP and where prior NPDES "Exclusion letters" (the regulatory predecessor to the RGP) were already in place. *See, e.g.*, Global Petroleum Corporation, NPDES Permit No. MA0003425 (Fact Sheet, p. 10); Global REVC0 Terminal, LLC, NPDES Permit No. MA0003298 (Fact Sheet, p. 7); Chelsea Sandwich, LLC,

treatability using liquid phase carbon adsorption, a proven technology capable of removing benzene and other petroleum hydrocarbons from water to non-detectable levels." Fact Sheet, p. 19. Lastly, EPA concluded that "[m]onitoring reports from gasoline remediation sites in New England demonstrate that using best available technology (e.g. air stripping and/or carbon adsorption) a MTBE limit of 70 µg/L can be consistently met by a properly designed and maintained treatment system" citing the RGP. There is no discussion in the record to suggest that EPA relied upon anything other than the RGP (and other terminals where the RGP was applied to preexisting groundwater pump & treat systems required by the MCP) in establishing these technology-based limits for oil & grease, benzene, total BTEX and MTBE, and there is not a single mention of consideration of the regulatory factors enumerated in 40 C.F.R. § 125.3(d).

To comply with the regulations, EPA must first consider "the appropriate technology for the category or class of point sources of which the applicant is a member, based on all available information" as well as unique, site-specific factors. 40 C.F.R. § 125.3(c)(2). The Everett Terminal point source "category or class" is unique and consists of a commingled stream which includes process-related flows, storm runoff, and *assuming arguendo* "contaminated groundwater." This stream flow rate varies unpredictably from a low of approximately 60,000 gallons per day ("gpd") to over 6 million gpd and is collected over literally miles of conduits, much of it uncontrolled gravity-based piping, before reaching the treatment works. Additional factors including the age of the piping and the process employed (largely gravity-based conduits and required operational sumps in firebank diked areas) are also relevant. Likewise, EPA must consider "engineering aspects of the application of various types of control techniques" and necessary "process changes" before imposing a new technology-based requirement.

There is nothing within the entire RGP record to support the conclusion that the technology investigated for development of that limited scope, general permit is "appropriate" for the site-specific individual permit at issue here when considering the regulatory factors. As described in ExxonMobil's prior correspondence dated February 5, 2007 (incorporated herein by reference)²², the RGP was conservatively developed for sites without an individual permit operating an on-going groundwater treatment system as required by the MCP. See USEPA 2005 *Fact Sheet, Proposed Remediation General Permit Under the National Pollutant Discharge Elimination System (NPDES) for Discharges in Massachusetts and New Hampshire* at 9-10, 16.

The discharges and technology studied as part of the RGP were identified as "low volume" typically designed with flow rates of a few gallons per minute up to about 40 gallons per minute for a maximum flow of approximately 40,000 gpd. Id. at 29, 37, 57. Thus, the maximum flow rate of the technology reviewed for the RGP is approximately two-thirds the rate of the *lowest* daily flow rate experienced at the Everett Terminal. Additionally, the discharges and technology reviewed for the RGP were of "short duration" ranging from a few days to 2 years. Id. The individual permit at issue here has been in place for decades and is in the process of renewal for another 5-year term. Because the flows regulated by the RGP were the result of an

NPDES Permit No. MA0003280 (Fact Sheet, p. 8); see also Response to Comments, pp. 17-18 (EPA rejects commenter which urged requirement of groundwater treatment technology be imposed with lower, technology-based effluent limits at all terminals due to known contamination, not just those with preexisting pump & treat systems).

²² EPA, in correspondence dated February 26, 2007, committed to taking "these [comments] into consideration as the draft permit and fact sheet are finalized" although neither ExxonMobil's correspondence or the issues raised are referenced in the Fact Sheet subsequently issued May 31, 2007.

operating groundwater treatment system (e.g. the technology which supports the BPJ determination), the flows were generally uniform and regular. At the Everett Terminal, the discharge flows vary widely and are unpredictable because the flow volume is dominated by precipitation. Any technology-based effluent limit imposed as part of the individual permit at issue here based on BPJ must be supported by technology which meets these unique, site-specific criteria. Nothing in the record supports application of the technology relied upon in the RGP to the site-specific, unique factors at issue in this case.²³

Additionally, due to the scope and nature of the general permit process, including an acknowledged "very conservative" approach, the RGP effluent limits are inappropriate for application to an individual permit regulating a commingled discharge of an industrial facility into a Class SB water body located within a Designated Port Area, reserved for water-dependent industrial uses. The RGP permit effluent limits in many cases correspond with the Maximum Contaminant Level ("MCL") or other advisory guidelines for *drinking water* (e.g. benzene, MTBE). *Id.* at 34, 47, 50. In addition to applying a drinking water standard, "because a general permit is designed for a variety of potential situations, the effluent limitations (other than for metals) have been set conservatively at zero dilution." *Id.* at 38. Neither drinking water standards nor an effluent limitation with zero dilution are appropriate in this case.

RESPONSE 6

A) EPA used the Remediation General Permit MAG91000 (RGP) and associated fact sheet as a reference in developing technology-based effluent limits for benzene, total benzene, toluene, ethylbenzene, and xylenes (BTEX), oil and grease and MtBE. Water quality-based effluent limits for this permit were developed during previous permit cycles.

Contrary to the assertion in footnote 21, EPA has applied technology-based effluent limits to groundwater treatment system effluent even when no previous "exclusion letters" existed (see Conoco Phillips NPDES Permit MA0004006). In fact, in that case, a previously commingled discharge of storm water and groundwater was reconfigured and more stringent, technology-based effluent limits were applied to a new internal groundwater discharge outfall. ExxonMobil is aware of this facility since, as the party responsible for the groundwater treatment system at the Conoco Phillips property, ExxonMobil is responsible for ensuring that the discharges from the internal outfall meet the new effluent limits.

In response to concerns expressed by ExxonMobil in their comments regarding the development of technology based effluent limits, EPA has explained its decision making in a site specific BAT/BCT analysis which is presented in Response 1.

B) EPA disagrees with ExxonMobil's contention that the site specific conditions at the Everett Terminal are different than those at other industrial facilities with groundwater discharges. Although the ongoing collection, treatment and discharge of contaminated groundwater are the consequence of

²³ Indeed, the RGP Fact Sheet specifically states that where the "discharge under this permit indicates some unusual circumstances where the effluent limitation for benzene or the other BTEX compounds may be problematic or human health criteria based limits are needed, EPA-NE will issue an individual permit," presumably with limits higher than the RGP ultra-conservative limits and at the human health criteria limit (higher than the effluent limit for benzene in ExxonMobil's current permit). *Id.* at 47. Additionally, in its Response to Comments for the RGP, EPA again confirms that use of the ultra-conservative permit limitations via the RGP is a "choice, rather than a mandate" and that operators have the option of applying for a site-specific individual permit to address unique factors. *See, e.g.,* Response to Comments at 6.

the state of disrepair of ExxonMobil's storm water collection system, rather than driven by a groundwater cleanup action, the result is the same. Contaminated groundwater is being removed from the subsurface and discharging to the Island End River with minimal treatment in an oil/water separator. ExxonMobil has previously indicated to EPA that, in spite of the ongoing discharge of minimally treated contaminated groundwater to the Island End River, it has no current program or plan for storm water drainage pipe inspection and repair.

Although the commenter implies that "contaminated groundwater" may not actually be a part of the commingled discharge, in fact, ExxonMobil staff have acknowledged to EPA during a site visit (November 1, 2006, documented in EPA meeting notes) that the oil which collects in the oil/water separator originates from the flow of contaminated groundwater to the treatment works.

Additionally, while all bulk petroleum storage facilities in the Region are similarly equipped with an oil/water separator to treat storm water, continuous accumulation of oil in the separator, as occurs at ExxonMobil, is not typical. The storm water management practices in place at ExxonMobil and the other facilities in the area are designed to prevent storm water from coming into contact with petroleum products. Therefore, the oil/water separator usually serves to prevent an unusual product spill from discharging into the Island End River. ExxonMobil has certified that the management practices ExxonMobil has committed to in its Storm Water Pollution Prevention/Best Management Practice Plan (SWPPP) have been fully implemented.

C) The fact sheet for the RGP anticipated the typical discharges to be up to about 40,000 gallons per day. In implementing the RGP, EPA has found that the typical discharge being covered is, indeed around 40,000 gallons per day (gpd). However, several atypical sites are being covered by the RGP which treated groundwater discharges as high as 200,000 to 400,000 gpd. These typical low flows identified in the RGP fact sheet were not intended to imply that effluent limits would be less stringent if applied to a larger discharge. In fact, the RGP does not include flow limits because the effluent limits are equally applicable to larger facilities.

Similarly, there are no duration limits for permittees discharging under the RGP. The RGP covers short term construction dewatering and hydrostatic test water discharges as well as long term groundwater pump and treat systems.

D) EPA disagrees that the RGP effluent limits, derived for contaminated groundwater discharges, are inappropriate. In developing technology-based effluent limits for this permit, EPA is consistent with the Clean Water Act's prohibition against using dilution as a treatment technique. In this case, contaminated groundwater being is being diluted with storm water in the treatment works. However, according to 40 C.F.R. 125.3(f):

"Technology-based treatment requirements cannot be satisfied through the use of "non-treatment" techniques such as flow augmentation and in-stream mechanical aerators. However, these techniques may be considered as a method of achieving water quality standards on a case-by-case basis when:

1. The technology-based treatment requirements applicable to the discharge are not sufficient to achieve the standards;
2. The discharger agrees to waive any opportunity to request a variance under section 301(c), (g), or (h) of the Act; and
3. The discharger demonstrates that such a technique is the preferred environmental method to achieve the standards after consideration of alternatives such as advanced waste treatment, recycle, and reuse, land disposal, changes in operating methods, and other available methods."

Although treatment of petroleum contaminated groundwater with oil/water separation comprises a portion of best available technology for treatment of petroleum contaminated groundwater, dissolved constituents would typically be removed by filtration followed by activated carbon adsorption. However, in this case, since areas of contaminated groundwater infiltration in the storm water collection system have not been identified and repaired, groundwater pollutants are diluted with storm water prior to discharge. Although the concentrations of groundwater pollutants are effectively reduced most of the time using this approach, treatment by dilution is specifically prohibited by Clean Water Act. Since none of the exceptions outlined in the dilution prohibition regulation (40 C.F.R. 125.3(f)) apply in this case, the draft permit includes the most stringent of the technology-based effluent limits that would apply to each separate discharge stream.

If ExxonMobil were to develop and implement a plan to remove contaminated groundwater from the discharge (for instance, by inspecting and repairing storm drains with the goal of eliminating the discharges of contaminated groundwater to the treatment works) EPA would reevaluate the application of technology-based effluent limits for groundwater treatment to this permit. However, despite encouragement from EPA over approximately the past two years, thus far, ExxonMobil has not indicated a willingness to do this.

The commenter mistakenly implies that the presence of the discharge in a “designated port area” (DPA) has an impact on water quality standards for the receiving water, the Island End River. The Massachusetts Office of Coastal Zone Management (CZM) uses the DPA designation as a planning and management tool to ensure the navigability and accessibility of the port area. There are no exceptions to the Class SB water quality standard for the lower Mystic River due to this designation. The Class SB waters “are designated as a habitat for fish, other aquatic life, and wildlife, including for the reproduction, migration, growth and other critical functions, and for primary and secondary contact recreation.” See 314CMR 4.05(4)(b). Through the NPDES permit program and other Clean Water Act initiatives, EPA works to continually improve surface water quality with the goal of achieving all of the designated uses identified in the Massachusetts water quality standards.

EPA has not proposed to apply drinking water standards to discharge effluent limits in this permit. The technology-based effluent limits in this permit reflect readily available groundwater treatment technology. The fact that the technology-based effluent limit for benzene is the same as the MCL for benzene in drinking water is coincidental.

COMMENT 7

With respect to the proposed MTBE effluent limitation of 70 µg/l, the inappropriateness of that application to the Everett Terminal is especially pronounced. First, MTBE has never even been monitored on a regular basis in the discharge. EPA relies upon a single, pretreatment data point of a sample taken August 2, 2006 with results of 318 µg/l, completely ignoring the July 18, 2006 results which ranged from 32.4 µg/L to 49.6 µg/L. See Fact Sheet at 19-20.²⁴ It is unreasonable to set an effluent limit based upon a single data point without first requiring a period of monitoring. This is especially true where MTBE is no longer used in any products stored at the Everett Terminal. Additionally, as described in the Response to Comments for

²⁴ At the Public Meeting, EPA acknowledged it had only a single data point but claimed there was “lots of groundwater data” showing historic MTBE in the groundwater. However, the area where residual MTBE is mostly found in soil and groundwater relates to an identifiable spill in September 2003 from Tank 171 which spill was addressed under MCP requirements. More importantly, the spill occurred in an area where no drainage structures were located so it is unlikely significant contaminated groundwater infiltration exists at a level to adversely impact the surface water quality standards of the Island End River.

the RGP (p. 47), "EPA recognizes that there is no federal water quality standard set for MTBE at this time and that preliminary studies have indicated that acute and chronic criteria for both fresh and marine waters could be substantially higher than the current groundwater and drinking water limits in MA (70 µg/l)." ²⁵ Furthermore, as recognized in the RGP Fact Sheet (p. 51) and Response to Comments (p. 46), MTBE is significantly more difficult to treat with the technology studied (and relied upon here) requiring more air capacity if using air stripper technology and additional carbon capacity with more frequent carbon change-outs if using carbon treatment technology. Both of these factors greatly increase the cost of system operation and maintenance. There is no evidence in the record that EPA considered, in any fashion, these additional factors. ExxonMobil is willing to investigate whether MTBE has the potential to cause or contribute to an in-stream excursion of state water quality standards as part of its Best Management Practices ("BMP") plan and its on-going work under the MCP, but disputes that EPA can reach that conclusion based on the information in the record.

RESPONSE 7

EPA disagrees that establishing a permit limit for MTBE is inappropriate. Groundwater monitoring data summaries from 2005, submitted by ExxonMobil to EPA in support of the permit development, indicated elevated MTBE in many monitoring well samples with concentrations as high as 6,000 and 17,000 µg/L in two wells. Therefore, EPA did not rely solely on a single data point in establishing the permit limit.

EPA applies technology-based effluent limits to the commingled discharges which reflect the most stringent standards that would be applied to each individual discharge using Best Available Technology. However, the permit does not require that the effluent limits be met using any specific technology. Since MTBE is no longer used by the facility, it is highly likely that the source of MTBE in the discharges from outfall 001 is solely contaminated groundwater. Therefore, ExxonMobil may choose to meet the effluent limit by reducing or eliminating the infiltration of contaminated groundwater by inspecting and repairing leaks in the storm water collection system.

The comment suggests that effluent limits are only appropriate if the pollutant has the "potential to cause or contribute to an in-stream excursion of state water quality standards". This is incorrect. Effluent limits are also appropriate if technology is available to remove or reduce a pollutant from the discharge, as is the case for MTBE. As discussed in the fact sheet (section 5.1.2), water quality-based effluent limits are required when EPA finds that technology-based limits are not stringent enough to maintain or achieve water quality standards in the receiving water. In this case, due to dilution available in the Island End River, and the fact that MTBE is not known to bio-accumulate in the aquatic environment, EPA finds that technology based limits are appropriate for MTBE.

COMMENT 8

[A] With respect to the proposed oil & grease limit of 5 mg/L, EPA acknowledges that the long-standing petroleum industry standard is 15 mg/L based on existing OWS technology (as currently employed at the Everett Terminal). Fact Sheet, p. 15. See also 40 C.F.R. Part 419 (Effluent Limitation Guideline for Petroleum Refining Point Source Category). "Originally this effluent limit was established by EPA-Headquarters as guidance to, and as means of

²⁵ Moreover, as described in the RGP Response to Comments (p. 46) MTBE is not bioaccumulative and therefore should not be subject to a zero dilution policy, as well as a conservative drinking water standard, especially here where there is only a single, isolated data point linking the presence of MTBE to the discharge flow.

establishing a categorization within, the petroleum marketing terminals and oil-production-facilities categories." 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 No. MA0020869 (Sprague Energy), January 29, 2007, p. 10.

Nevertheless, EPA proposes reducing the effluent limitation to 5 mg/L because oil is actually being captured by the existing oil-water separator and it appears to EPA that at least some of that oil is originating from the groundwater.²⁶ Thus, EPA asserts that because the oil is coming from the groundwater as opposed to storm water runoff, it should apply technology-based treatment limits that are associated with groundwater pump and treat systems, and again cites the RGP as authority. Fact Sheet, p. 16.

[B] As indicated above, ExxonMobil believes that the RGP standards are inappropriate for the Everett Terminal and EPA's proposed application here does not properly consider the required regulatory factors. Because oil & grease is a conventional pollutant, by regulation EPA was also required to consider "[t]he reasonableness of the relationship between the costs of attaining a reduction in effluent and the effluent reduction benefits derived . . ." among other things. 40 C.F.R. § 125.3(d)(2). As EPA failed to consider any cost associated with the treatment technology it reviewed and relied upon, it did not meet this additional regulatory criteria. Moreover, there is nothing to suggest that even if EPA considered the additional costs associated with this new technology-based limit, that the minimal effluent benefits derived from a reduction of 15 mg/L to 5 mg/L in the discharge to the Island End River would be justified under the circumstances.

[C] Furthermore, there is nothing in the record to suggest that EPA considered the analogy which can be found in the petroleum refining industry ELG promulgated by EPA, 40 C.F.R. Part 419. In that ELG, EPA specifically considers discharge limits for wastewater consisting of "contaminated runoff." "Contaminated runoff" is water which has come in direct contact with raw materials, free product, and related sources and likely to contain oil and oil-related pollutants, and means something more than "regular" storm runoff. See 40 C.F.R. § 419.11(g); 50 Fed. Reg. 28516, 28522 (July 12, 1985) (clarifying that the intention is to include the waste stream when there is direct contact with raw materials or petroleum products from spills, etc. and to distinguish it from more typical runoff, including in tank farm areas, where no direct contact with petroleum products occurs). EPA has determined the effluent limit for "wastewater consisting solely of contaminated runoff" (not commingled with any other process wastewater) to be an oil and grease limit of 15 mg/L recognizing that this limit is appropriate for water which has come in direct contact with petroleum products and is "contaminated" not unlike the situation at the Everett Terminal.

[D] Moreover, there is no evidence that the standard of 15mg/L for oil and grease has the potential to cause a violation of the state water quality standards. Specifically, State water quality standards for Class SB water bodies are found in 314 CMR 4.05(4)(b) and present narrative criteria. With respect to oil and grease, the standard is as follows: "These waters shall be free from oil, grease and petrochemicals that produce a visible film on the surface of

²⁶ Although ExxonMobil disputes that oil is skimmed "at least daily" as asserted by EPA (Fact Sheet, p. 15), even if it was, that does not change the fact that the existing OWS is working as designed and is actually capturing oil properly. As noted above (and as acknowledged by EPA), ExxonMobil has met its permit requirements, and only a single sample for the period 2002 to 2006 exceeded the lower proposed limit of 5 mg/L (September 2004, 7.2 mg/L). Fact Sheet, p. 16. This is strong evidence that the OWS, and treatment works generally are working properly and there is no need for further conditions or stricter effluent limits.

the water, impart an oily taste to the water or an oily or other undesirable taste to edible portions of aquatic life, coat the banks or bottom of the water course, or are deleterious or become toxic to aquatic life." Effluent limits of 15 mg/L will not produce a visible sheen, nor are they toxic to aquatic life. References to an oily taste are inapplicable to the Island End River as neither water nor shellfish are consumed.

[E] Lastly, there is no logical distinction between oil from one source versus another. The Everett Terminal flow discharge consists of a commingled stream of process-related flows, storm water runoff, and groundwater infiltration (which arguably is a source of oil for purposes of this discussion). We can find no precedent for applying a lower technology-based effluent limit for one of several different sources/process streams to an entire commingled stream (especially without some sort of weighted apportionment based on flow volume). In addition to the reasons why the RGP should not be applied to the Everett Terminal described above, EPA has not adequately supported its decision, which effectively applies one technology-based effluent limit for oil and grease to the contaminants coming from storm water (15 mg/L) and a different technology-based effluent limit when the contaminant comes from groundwater (5 mg/L). This is simply illogical and unsupported.²⁷

RESPONSE 8

A) EPA has issued technology-based effluent limits for groundwater discharge because both EPA and ExxonMobil have agreed that groundwater discharges to outfall 001 are contaminated. At a November 1, 2006 meeting, in responding to a question from EPA, ExxonMobil's Tom Budde acknowledged that the most likely source of the oil was groundwater contamination and offered no other explanation. The fact that oil accumulates in the oil/water separator, even during extensive periods of dry weather when groundwater is the sole source of influent to the treatment works, further supports this opinion. The storm water management practices that ExxonMobil implements to prevent releases of product to the storm drains, in combination with the treatment works provide the total storm water pollution control system. Management practices used to prevent releases to the treatment works include:

- inspection of storm water that collects in diked areas and removal of any petroleum sheen prior to discharge in the storm drains,
- roof cover over the loading dock to prevent incidental spills from entering the storm drains, and
- regular inspection, testing and maintenance of product piping, tanks and valves, in accordance with ExxonMobil's Spill Prevention Control and Countermeasure (SPCC) plan.

Aside from the minimal and infrequent flows associated wash water discharges, there is very little opportunity for storm water to come into contact with petroleum product and generate the oil accumulation that is apparent in the oil water separator. In the storm water management scheme implemented by ExxonMobil, the oil/water separator provides a "safety net" to capture oil released when other release prevention practices fail.

²⁷ Additionally, by proposing to set the compliance limit for conventional pollutant, oil & grease, at the detection limit of EPA-approved Method 1664A, it has concluded essentially that ExxonMobil is not permitted to discharge oil & grease at all, effectively overruling years of EPA policy and regulation of the petroleum industry.

Contaminated groundwater is, by definition²⁸, a different waste stream that will not be controlled by the management practices in place to prevent petroleum contamination to storm water upstream of the treatment works. Therefore, EPA has developed effluent limits on a BPJ limits for the pollutants anticipated to be present in the contaminated groundwater.

B) As discussed in the BAT/BCT analysis presented in response 1, ExxonMobil may choose to meet the technology based effluent limits for groundwater by eliminating or reducing contaminated groundwater discharges to outfall 001. This could be accomplished by inspecting and repairing storm drains. As the storm drains continue to deteriorate over time, the result will be continuing increases in groundwater flow which will continue to erode the capacity of the treatment works to treat storm water, as discussed in further detail in response 10 below. EPA finds that inspecting and repairing storm drains is part of a regular maintenance program that should be ongoing. Therefore, it is likely that the new effluent limits can be achieved without any new costs specifically attributed to treatment. It is not clear the basis on which the commenter concludes the benefits from reducing the oil and grease effluent limitation from 15 mg/L to 5 mg/L would be “minimal.” To the contrary, reducing oil and grease discharges to the Island End River, which is designated as a habitat for fish and other aquatic life, as well as primary and secondary recreation, and which is actually used for such purposes, would appear to benefit this long and severely impaired public resource.

C) EPA agrees that the appropriate effluent limit for “wastewater consisting solely of contaminated runoff” is 15 mg/L for oil and grease. However, EPA disagrees with the interpretation of 40 CFR § 419.11 that “contaminated runoff” may include groundwater. In the same section (40 CFR §419.11(b)), “runoff” is defined as “the flow of storm water resulting from precipitation coming into contact with petroleum refinery property”. The discharge from outfall 001 is not solely contaminated runoff. It is a commingling consisting primarily of contaminated runoff and contaminated groundwater (as defined above). During extended periods of dry weather, the discharge from outfall 001 is primarily, if not entirely, composed of contaminated groundwater. Therefore EPA has applied the effluent limit appropriate for contaminated groundwater.

D) Under the CWA EPA is obligated to apply technology-based effluent limits when they are stricter than water quality-based limits.

E) As discussed in further detail in response 1 (section B), in developing effluent limits for outfall 001, EPA has sought to discourage the dilution of groundwater pollutants by storm water in compliance with NPDES regulations which prohibit treatment by dilution. *See also* 40 C.F.R. § 125.3(f) (technology-based treatment requirements may not be satisfied with “non-treatment” techniques such as flow augmentation). It is not acceptable to determine compliance after mixing (or diluting) the different waste streams with each other unless the effluent limits applicable to them are the same. EPA does not have sufficient information at this time regarding the composition of the discharge relative to storm water and groundwater to derive a flow-proportioned limit. The permittee may gather data and make a demonstration regarding the application of such a limit. If the permittee chooses to make a demonstration, EPA will evaluate the information and determine if a permit modification is warranted.

F) ExxonMobil’s suggestion (in footnotes 26 and 27), that EPA may not impose stricter effluent limits than have been imposed in previous permits or policy, is incorrect. *See* Response 5 above.

²⁸ “Contaminated ground water” is defined in the effluent limit guidelines for the landfills point source category (40 CFR §445.2(a)) as “water below the land surface in the zone of saturation which has been contaminated by activities associated with waste disposal”. For the purposes of this NPDES permit, EPA has determined that activities associated with petroleum production and storage is analogous to activities associated with landfill waste disposal.

Congress generally intended CWA technology standards to be “technology-forcing” mechanisms that would reduce adverse environmental impacts to the extent achievable with the use of certain levels of available technology. Clearly, the purpose of setting technology-based effluent limits is to make further progress toward eliminating discharges of pollutants—not merely to maintain the status quo.

COMMENT 9

Monitoring and Analytical Issues

[A] In addition to its challenges relating to BPJ, ExxonMobil also contends that EPA's monitoring and analytical requirements are problematic with respect to ethanol, cyanide, PAHs and mercury. With respect to monitoring requirements for ethanol and available cyanide, ExxonMobil knows of no certified Massachusetts laboratory which performs the EPA methods required.²⁹ Specifically, the only method for analyzing available cyanide listed in 40 C.F.R. Part 136 with "a detection limit less than or equal to 2.0 µg/l" as required by footnote 5 of the draft permit is OIA 1677. According to Lisa J. Toucet, Laboratory Certification Officer for the Massachusetts Department of Environmental Protection, there is no certification currently offered for the analysis of available cyanide using method OIA 1677. Because ExxonMobil must use a Massachusetts-certified lab and methodology to comply with the jointly-issued permit, it does not appear they will be able to meet this reporting requirement as written. With respect to ethanol, according to Ms. Toucet, Massachusetts does not offer certification for either EPA method 1666 or method 1671 either. Additionally, EPA did not specify which method was required to be used which is typically required pursuant to 40 C.F.R. § 122.48.

[B] Next, the Permit requires ExxonMobil to achieve analytical minimum levels (MLs) for seven Group II PAH chemicals that are not achievable using an approved analytical method in 40 CFR Part 136 by a certified laboratory in Massachusetts. The following table compares the ML in the proposed permit to the ML for each regulated PAH that is achievable with EPA Method 610 (HPLC), the Part 136 method with the lowest MLs for these chemicals.³⁰ Additionally, these MLs are inconsistent with MLs used by EPA for PAHs in other recent permits for petroleum bulk storage facilities. See, e.g., 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 No. MA0020869 (Sprague Energy), January 29, 2007, p. 12 (identifying the Group I PAH MLs as ranging from 2.0 µg/L to 10.0 µg/L well in excess of the draft permit MLs here).

²⁹ ExxonMobil also disputes the factual basis for imposition of the new monitoring requirements for cyanide and mercury, neither of which are used in current products stored on-site. ExxonMobil does not believe the single, pretreatment sample results identifying these contaminants justifies these entirely new obligations. Rather, ExxonMobil suggests that it investigate, through implementation of its BMP plan and follow-up requirements of the MCP, whether either of these chemicals has the potential to cause or contribute to an in-stream excursion of a state water quality criterion.

³⁰ Note that all of these MLs for Method 610 are calculated; the method reports method detection limits (MDLs) that must be multiplied by 3.18 and rounded to the nearest 1, 2, or 5ⁿ, where n is an integer. See EPA Revised Assessment of Detection and Quantification Approaches, EPA 821-B-04-005 (Oct. 2004). EPA's description in the Fact Sheet (p. 17) referring to "the practical quantitative level (PQL)" as the basis for setting the permit limits for PAHs ignores the confusion which arises when precise "Minimum Levels" (ML) are not used to describe compliance limits. See, e.g., Technical Support Document for Water Quality-based Toxics Control, EPA/505/2-90-001 (March 1991) at 111-12 (discouraging use of PQL or MDL as a means of setting compliance limits).

Constituent	PAH Group	Permit ML (µg/L)	EPA Method 610 ML (µg/L)
Benzo(a)anthracene	I	0.05	0.05
Benzo(a)pyrene	I	2	0.05
Benzo(b)fluoranthene	I	0.1	0.05
Benzo(k)fluoranthene	I	2	0.05
Chrysene	I	5	0.50
Dibenzo(a,h)anthracene	I	0.1	0.10
Indeno(1,2,3-cd)pyrene	I	0.15	0.10
Acenaphthene	II	0.5	5.00
Acenaphthylene	II	0.2	5.00
Anthracene	II	2	2.00
benzo(ghi)perylene	II	0.1	0.20
Fluoranthene	II	0.5	0.50
Fluorene	II	0.1	0.50
Naphthalene	II	0.2	5.00
Phenanthrene	II	0.05	2.00
Pyrene	II	0.05	1.00

Shaded cells where Permit ML < Method 610 ML

ExxonMobil requests that EPA identify the approved method in 40 CFR Part 136 (i.e., EPA Method 610, as reflected in the current permit, see Part I.A.3.g) which can be used to achieve any ML required by the permit. Furthermore, EPA must coordinate with the Massachusetts DEP to assure that any method that it identifies can be certified by the DEP for laboratories in Massachusetts.

[C] ExxonMobil also requests that the permit allows the use of “zero” for reporting results for non-detection versus “<MDL” so that the DMR is not misinterpreted for non-compliance with the PCS database which ignores the “<” symbol.³¹ This is standard reporting protocol in many EPA Regions. This is especially important where compliance limits are set at what is essentially lab detection and reporting limits.

[D] With respect to Whole Effluent Toxicity (WET) testing, none of the results have indicated a reasonable potential to cause or contribute to an excursion above the State's water quality criterion, including toxicity. Indeed, as suggested in the current permit (Footnote 6), “[a]fter submitting 4 consecutive satisfactory toxicity test results for each outfall ..., the permittee may request a reduction in the frequency of required toxicity testing” which was done by letter dated June 4, 2003 (copy enclosed).³² Based on these results, ExxonMobil believes that performing this analysis twice a year for the next five years is unnecessary and should be eliminated or reduced. Any reasonable potential to cause or contribute to an in-stream excursion above the state's narrative criterion are addressed by the chemical-specific limits which are sufficient to attain and maintain applicable state water quality standards and, therefore, WET testing is not required. See 40 C.F.R. § 122.44(d)(1)(v); see also Permit Writers’ Manual, p. 100. As described in the Manual, “WET tests are relatively expensive.

³¹ This issue is evidenced by EPA's factual misstatement (p. 17) erroneously indicating that “all sixteen priority pollutant PAHs were detected in effluent samples from Outfall 001” during the last three sampling events of 2006 when in reality these were reported as “<”(less than) the detection limit but the less than symbol could not be read by the PCS system.

³² To date, EPA has not acted on ExxonMobil's request.

Therefore, the test frequency should be related to the probability of any discharger having whole effluent toxicity." Id. at 131-32.

[E] In summary, ExxonMobil believes there should be no change in its permit requirements related to PAHs. Additionally, for cyanide, mercury and MTBE, ExxonMobil proposes to investigate through its BMP plan and any on-going MCP compliance requirements whether these contaminants have a potential to cause or contribute to an in-stream excursion of a state water quality criterion. For ethanol, because there is no Massachusetts certified lab capable of performing the required analysis, ExxonMobil proposes to monitor this potential pollutant through implementation of its BMP Plan.

RESPONSE 9

A) Both EPA and MassDEP are unclear as to the basis for ExxonMobil's assertion that it must use a Massachusetts-certified lab and methodology to comply with the jointly-issued permit. Any EPA method listed in 40 CFR Part 136 may be used to meet the permit requirements. Standard NPDES Region I monitoring requirements are provided in Part II.C.1.d of the permit. They state: "Monitoring results must be conducted according to test procedures approved under 40 CFR Part 136 or, in the case of sludge use or disposal, approved under 40 CFR Part 136 unless otherwise specified in 40 CFR Part 503, unless other test procedures have been specified in the permit." Neither the federal NPDES permit nor federal regulations limit test procedures only to those offered for state certification in Massachusetts. The approved available cyanide analytical method, OIA-1677, is now an EPA approved method. The availability (or non-availability) of test procedures at State laboratories for the purposes of complying the MCP regulations, does not bear on the validity of, or justify the removal of, monitoring conditions required by the federal NPDES permit.

EPA acknowledges that cyanide and mercury are no longer stored on site. However, the August 2006 dry weather flow sample, taken prior to treatment in the Treatment System, indicated 81 µg/l of total cyanide. This level is above EPA's National Water Quality Criteria guidance recommendations for available cyanide in salt water of 1 µg/l. Similarly, 0.31 µg/L of total mercury was detected in the dry weather flow sample collected at the facility in August 2006. The EPA chronic and acute water quality criteria for mercury in salt water are 0.94 µg/L and 1.8 µg/L, respectively. While below the water quality criteria, due to the persistent and toxic nature of mercury in the aquatic environment, further data collection is warranted to evaluate the reasonable potential for discharges of mercury to exceed water quality criteria.

The cyanide and mercury monitoring requirements in the permit are fully consistent with Section 308(a) of the Clean Water Act (CWA) 33 USC § 1318(a) which authorizes EPA to require any person to provide information to assist in "Developing or assisting in the development of any effluent limitation, or other limitation, prohibition, or effluent standard, pretreatment standard, or standard of performance under this Act". See also 402(a)(1).

B) EPA approves of ExxonMobil's request to use EPA Method 610 (HPLC) for PAH analyses. The MLs have been adjusted accordingly. Although the method detection limits are somewhat higher for Group II PAHs, they are lower for the Group I PAHs which are more toxic and of greater concern. EPA agrees that utilizing more than one analytical method for a single class of pollutants is not practical in this case.

The purpose of the MLs is to provide a monitoring threshold which acknowledges that the effluent limit is less than the practically achievable detection levels. The intention of the MLs is not to provide an alternative effluent limit. Any detectable level of a single PAH, or cumulative PAHs, above 0.031 µg/L exceeds the permit effluent limit. However, the current permit sets enforcement levels at the ML. EPA is obligated to update the MLs with changes in analytical technology. The

MLs for the Everett Terminal had not been updated since 1991. In the case of Sprague Energy, the example cited by the comment, PAHs are being monitored only (without an effluent limit) which provides EPA with greater flexibility.

C) EPA acknowledges the error made in interpreting DMRs using the agency's new data management software (ICIS). Since the public comment period, EPA has corrected this problem. Because the minimum levels are greater than the actual effluent limits for PAHs, the permit requires that the analytical result be reported as less than the detection limit when appropriate. The DMR summary provided in the fact sheet has been updated and corrected and is attached to this response to comments (see Attachment B). This mistake only affected data from the last four months of 2006 out of 60 months included on the DMR summary and had no impact on EPA's permit determinations.

D) Although WET testing conducted during last five years appears to have provided satisfactory test results so far, ExxonMobil failed to submit, and possibly conduct, the wet chemistry data required in the WET test protocol attached to the current permit and therefore did not properly execute the analysis. EPA has determined that semi-annual monitoring is necessary to assess continuing compliance with the permit's toxicity limit ($LC_{50} > 50\%$).

E) See sections A through D of this response above. EPA has no disagreement with ExxonMobil's proposal to investigate cyanide, mercury and MTBE levels in discharges from the Everett Terminal in addition to the monitoring and reporting requirements included in the permit. EPA has found that incorporating monitoring programs into the discharge monitoring reports allows for the most efficient utilization of EPA resources to ensure that such monitoring programs are implemented.

COMMENT 10

Proposed Operational Restrictions

[A] The Everett Terminal, in excess of 110 acres and located in a historically industrial area, is comprised of both a North and South Tank Farm as well as marine facilities. It was formerly an operating refinery. The method of managing water discharge has undergone changes since its operation as a refinery, including many upgrades to its wastewater treatment system. During the late 1980s a completely new treatment works was designed and constructed to eliminate use of an effluent holding pond as a means of managing storm water and other discharges. These facilities consist of an API OWS and associated facilities, which were subject to full NPDES permitting in the 1990-91 time frame, and satisfactorily renewed in 2000. From at least 1990, groundwater infiltration as a result of the age of the drain lines was an acknowledged portion of the discharge flow, which also included storm water and process-related wastewater. The existence of historic contamination, not unusual with refinery operations, was also evident from this time period having been identified and reported on August 21, 1986 and first listed as a Confirmed Disposal Site under Release Tracking Number ("RTN") 3-00310 on January 15, 1987 (according to the DEP release tracking database). At the time of ExxonMobil's 1990 permit application, the Island End River was classified as a Class SC water-body suitable for industrial use.

[B] As described in the accompanying detailed page-by-page comments, ExxonMobil believes EPA does not fully understand the operation of the treatment works and has erroneously characterized discharges through outfall 001B as a "bypass." As such, it incorrectly concluded that the "current permit prohibits bypasses of the OWS through outfall 001B 'except during naturally occurring precipitation from severe weather incidents like a hurricane'" (page 15). Rather, as evidenced by the current permit reference to permit limits and conditions for both outfalls, 001A and 001B (Part A.1 and A.2), these are separately

permitted process streams with the process culminating in 001B "only authorized when the flow to the oil/water separator exceeds 3000 gpm." (Current Permit, p. 3). EPA erroneously quotes "boilerplate" language from Part 1.A.3.m as suggesting discharge through 001B is prohibited except in severe weather incidents. This misunderstanding is further illustrated by the Fact Sheet description that the "draft permit is intended to prevent frequent discharges of untreated storm water and groundwater" Fact Sheet, p. 15. Outfall 001B does not discharge untreated storm water and groundwater. Moreover, the process which includes Outfall 001B is an integral part of the entire treatment works.

The treatment system which was completely redesigned and constructed in 1989 to include these two process streams each with permitted effluent limits, was successfully permitted in 1991 and renewed in 2000 and complies with all applicable "bypass" requirements found in standard permit conditions and regulations. See also 314 C.M.R. § 3.19 (13) (State Standard Permit Conditions allowing a "bypass" of any portion of a treatment works where effluent limitations are not exceeded and it is necessary "to assure efficient operation of treatment facilities" as in ExxonMobil's case). The only issue which came up as part of the original permitting of the system was EPA's request to increase the pump size for the pump which was discharging to Tank 140 (and thus Outfall 001A) from 1,900 gpm to 3,500 gpm to ensure the proper flow through that process stream. Subsequently, in 1992, after the pumping change, Camp Dresser & McKee Inc., the system designer, indicated that "[i]ncreasing the separator capacity to match the third pump performance would appear to be a prudent course of action for Exxon and would allow treatment of additional stormwater."³³ Moreover, ExxonMobil is required under the existing permit and applicable regulations, 40 C.F.R. § 122.41(e), to properly operate the treatment works within their design parameters, which include the interconnected nature of the entire system.

Under these circumstances, ExxonMobil believes EPA's proposed permit conditions, eliminating outfall 001B and restricting flow through the OWS to 3,000 gpm, are entirely inappropriate and infeasible. As recognized by EPA, "[w]hile the NPDES permit will establish appropriate effluent limits, the NPDES program is not in a position to assess the feasibility of the many alternatives there are likely to exist to meet potential permit requirements."³⁴ We know of no case where previously permitted outfalls were eliminated with the stroke of a pen, and similar operational restrictions were imposed without apparent regard for how the entire system operates, and without sufficient time to investigate and redesign the treatment works as needed.³⁵ ExxonMobil understands it is responsible for complying with the applicable regulations and effluent limits, but it should be permitted to determine, based upon its own operational needs and industry standards, how best to accomplish this, especially where permit limits were not exceeded. Eliminating outfall 001B and restricting flow to outfall 001A to 3,000 gpm will not accommodate the total volume of flow and the peak flow regularly experienced at the Everett Terminal.

³³ A copy of CDM's March 24, 1992 letter and calculations is included.

³⁴ December 7, 2006 letter from Ellen B. Weitzler to Mr. Rosendo Cruz.

³⁵ The three month period to install a fixed flow control device is entirely insufficient to accommodate the system changes needed to effectuate this condition, especially when coupled with the complete elimination of outfall 001B. These requirements would necessitate a complete redesign of the system.

[C] Lastly, ExxonMobil agrees with concept of an emergency discharge³⁶ evidenced in the draft permit (Part 1.A.14) for extraordinary weather events, but believes that EPA's proposal as drafted is infeasible based on its existing facilities as described herein (including the requirement to manage "peak flow" as well as "total flow"). The "peak flow" requirement is entirely new, and inconsistent with prior permits and the original system design. To the extent EPA is seeking a system evaluation and/or redesign, ExxonMobil suggests that instruction be reflected in a requirement to investigate the situation and report to EPA as part of implementation of its BMP rather than infeasible and unnecessary operational restrictions.

RESPONSE 10

A) EPA disagrees with the characterization of the receiving water implied in the comment. Class SC waters are “designated as a habitat for fish, other aquatic life and wildlife, including for the reproduction, migration, growth and other critical functions, and for secondary contact recreation. They shall also be suitable for certain industrial cooling and process uses.” See 314 CMR 4.05 (4)(c). Class SC industrial uses never included use as receiving water for oil and hazardous materials, as suggested in the comment. Additionally, Island End River is currently classified as Class SB water. As discussed in Response 4, Class SB waters “are designated as a habitat for fish, other aquatic life, and wildlife, including for the reproduction, migration, growth and other critical functions, and for primary and secondary contact recreation.” See 314CMR 4.05(4)(b).

B) EPA acknowledges a mistake in the description in section 6.3.1.1 of the fact sheet. Outfall 001B is intended as a bypass of Tank 140, not the entire treatment works. EPA’s inartful description does not change its ultimate determination. ExxonMobil’s statement that it has been required under the existing permit and applicable regulations to properly operate the treatment works within their design parameters is certainly true, but begs the question of whether the existing treatment system is adequate. In this case, EPA has sufficient reason to believe that discharges from outfall 001B are not consistently subjected to adequate treatment under the current system, and that improvements to the treatment system are required to meet the technology-based requirements of the CWA. When outfall 001B is used, all flow is still treated in the treatment works, but at a flow rate that exceeds the design capacity of the treatment system. ExxonMobil has claimed that the treatment works was designed for a 10-year storm, which is the design criteria EPA asked for in the permit. However, infiltration appears to have reduced the effective hydraulic capacity of the collection and treatment system to treat large storms. The evidence of this is ExxonMobil’s use of outfall 001B much more frequently than once in 10 years. ExxonMobil’s recent use of outfall 001B is about 4 to 6 times per year. Indeed, EPA’s misunderstanding of the treatment system is partly due to the higher concentrations of PAHs detected in discharges from outfall 001B compared to outfall 001A, despite the fact that discharges from outfall 001B do not bypass the treatment works. PAHs were measured above the effluent limit (0.031 µg/L) in 36% of the samples from outfall 001A and in 77% samples from outfall 001B. Total PAH concentrations ranged from 0 (below detection) to 9 µg/L at outfall 001A and from 0 to 28 µg/L at outfall 001B. It is unclear whether this is (i) because the flow is going through the treatment works at a higher rate without adequate detention time, (ii) because it is bypassing additional treatment in Tank 140, (iii) because higher flows include a greater mass of PAHs from groundwater contamination or (iv) due to a combination of these factors. In addition, the oil staining, which is clearly visible up the walls and baffles in the separation flume, oil water separator, and wet

³⁶ Because the treatment works were designed to provide some level of treatment no matter what the flow volume, any emergency discharge provision or "overflow" should not be considered a bypass. The ELG's from other industries relied on by EPA refer to "*untreated overflow*." See, e.g., 40 C.F.R. § 423.12(b)(10).

wells and caked on top of separation baffles between these processes, indicates a history of repeated treatment works failures where discharges exceeded the capacity of the system to remove oil. This oil staining and caking was documented by EPA during site visits in 2005 and 2006.

ExxonMobil's reference to issues raised by EPA on the 1991 permit is not determinative of the 2008 permit. As stated above, earlier permit conditions or technical analyses are not "grandfathered" into later permits. The CWA demands that the permit issuer reevaluate the record at the permit reissuance stage and determine whether new permit conditions are warranted based on the best, reasonably available information and the current understanding of the relevant law, technology and science. Analyses undertaken in support of past permits, and permit conditions included in past permits, may continue to be relied upon and used for current permits only if a contemporary consideration of the issues indicates that these analyses and permit conditions remain valid. EPA has evaluated the record pertaining to this permit reissuance and has determined that the existing treatment works are providing an insufficient level of treatment to the storm water and groundwater discharging from the facility and are required to be improved.

EPA disagrees with the commenter's understanding that the permit "eliminates" any outfalls. Outfall 001B is not a physically distinguishable outfall as the discharges that make up outfall 001A and 001B are, in fact, from the same source. Overall the permit is more stringent and consistent with storm water management at other facilities in the region, effluent limit guidelines for storm water at other industrial facilities and best available technology for storm water management.

The commenter claims that the proposed permit conditions are infeasible, but has not provided any specific reasons to substantiate this position. Although the commenter asserts that EPA "acted without apparent regard for how the entire system operates," in fact EPA carefully considered the nature and operation of the treatment works, concluded that such system provided inadequate treatment, and presented the factual basis underlying its analysis. As described elsewhere in this response to comments, while EPA has established effluent limits to comply with applicable technology-based standards in the Act. The permit only requires that the technology-based effluent limits be met, but does not dictate any particular mode of compliance. Instead, ExxonMobil is free to choose the mode of compliance and, in the course of doing so, retains the ability to consider its own operational needs and industry standards.

EPA has removed the three month compliance schedule to install a fixed flow device, because all statutory deadlines for meeting various treatment technology-based effluent limitations established pursuant to the CWA have expired. When technology-based effluent limits are included in a permit, compliance with those limitations is from the date the issued permit becomes effective. *See* 40 CFR 125.3(a)(1). Compliance schedules and deadlines not in accordance with the statutory provisions of the CWA cannot be authorized by an NPDES permit. To the extent immediate compliance with permit limits is not possible, EPA intends to issue an administrative compliance order that will provide ExxonMobil with sufficient time to investigate and redesign the treatment works as needed.

C) EPA notes ExxonMobil's concern regarding the requirement to treat the peak flow as well as the total flow. Part I.A.14 of the permit has been revised to specify that only the total volume of storm water and groundwater which would result from a 10-year 24-hour precipitation event be treated. EPA's intent is to bring the ExxonMobil facility into conformance with similar bulk petroleum storage facilities in the area where flow through oil/water separators is strictly controlled to ensure that the maximum design detention time is not exceeded. In these facilities, storm water is temporarily stored in diked areas and flow equalization tanks, if necessary, prior to flowing through the oil/water separator and discharging to the receiving water. In this scenario, for most storm events, all of the storm water is treated to a minimum level through the oil water separator. However, currently these facilities do not have a bypass route and bypasses are prohibited in the permit (unlike

ExxonMobil's current permit), despite the reality of extreme rain events from time to time. In the ExxonMobil permit, EPA seeks to define a reasonable design storm for bulk petroleum storage facilities to ensure that the first flush and the total flow from the vast majority of rain events is treated to a consistent minimal level and that bypasses are limited only to very large rain events. The function of Tank 140, as a component of the existing treatment works, (other than to dilute contaminated groundwater) is unclear since Everett Terminal staff report that no oil accumulates in it, despite the accumulation of oil at the treatment works. It is possible that Tank 140, or a similar storage tank, would be better utilized for flow equalization upstream of the treatment works.

COMMENT 11

Specific Response to Mystic River Watershed Association Comments

Representatives of the Mystic River Watershed Association ("MyRWA") made comments in the Public Hearing on July 11, 2007 and in writing. One area of concern expressed by MyRWA was the sheen at the outfall of the Island End River which reportedly has been observed multiple times and which was shown in pictures and video clips submitted.

Based on inspections and investigations performed in 1985-86, ExxonMobil understands that a number of discharge pipes (possibly as many as 10) are connected to the 1,600 foot-long outfall pipe between its exit at the Everett Terminal after the discharge monitoring point and before it reaches the river.³⁷ Any one of these other sources could easily have caused the sheens attributed to ExxonMobil. Although the outfall is colloquially known as "the ExxonMobil outfall," in reality a number of different flows from various and unknown sources infiltrate the outfall pipe before it reaches the river, not including the potential impact of infiltrating groundwater to this pipe itself. These inspections also indicated that there is a large volume of sediment and silt built up in the outfall pipe which could be contributing to the sheens. ExxonMobil does not operate or control this 1,600 outfall pipe.³⁸

In summary, records identified in ExxonMobil's files, some of which were previously submitted to EPA indicate that as many as 10 different pipes and conduits connect with the 1,600 pipe between where it leaves the Everett Terminal and its discharge at the Island End River. Additional copies of these records are submitted herewith, including the following:

Petro-Chemical Associates, Inc., Inspection of the Flume Outfall at Exxon Bulk Storage Terminal, Everett, Massachusetts on June 25, 1985

³⁷ Based on information recently discovered in ExxonMobil's files, it appears this information was provided to EPA (Mr. T. E. Landry) in connection with NPDES Permit No. MA0000833 by letter dated February 27, 1987. Another copy of these records and investigations is enclosed with these comments. A portion of these records were submitted to EPA in response to the Agency's April 14, 2006 Section 308(a) request by response letter dated May 24, 2006. However, additional documents responsive to this request item have recently been located and are among the records submitted herewith.

³⁸ One of the Chapter 91 Licenses (No. 4622 dated September 25, 1962) authorizing a "license to fill solid in Island End River" is based on the condition that the licensee "shall provide for by-pass drainage for all existing drains, drainage ditches, overflow sewer lines, etc., which now discharge into the area to be filled." Therefore, it appears the steel pipe which was added to the original box culvert, was installed in connection with these obligations and is owned by the successor to Eastern Gas and Fuel Associates, the Chapter 91 licensee. See also Chapter 569 of the Acts and Resolves of 1966 making irrevocable License no. 4962 "to fill solid an existing drainage ditch and to place and maintain pipe drains and appurtenant structures in Island End river." Based on ExxonMobil's records, it appears these documents were among those submitted to EPA in connection with its NPDES permit in 1987.

Petro-Chemical Associates, Inc., Visual Inspection of 1,600-foot Flume Outfall at Exxon Bulk Storage Terminal, Everett, Massachusetts, February 4, 1985

Camp Dresser & McKee Inc., Site Plan Existing Storm Sewer Effluent Pipe, Exxon Company, USA-Everett Terminal, Everett, MA, October 23, 1986

Therefore, it is impossible to conclude that any sheen observed at the Island End River originates with the Everett Terminal discharge. ExxonMobil will investigate whether discharge from the Everett Terminal is causing or contributing to the observed sheen at the Island End River as part of its BMP plan and in compliance with any MCP requirements, but its historic compliance with its discharge limits indicates the water leaving its facility does not contain contaminants at such a level so as to cause a visible sheen.

MyRWA also expressed concern that vegetation was coming out of the outfall. However, any speculation that the former effluent pond located at the Everett Terminal is the source of material discharging directly into the river is simply unsupported. There is no direct connection from the former effluent pond to the outfall as asserted by Roger Frymire in his comments at the Public Hearing, July 11, 2007. That connection was eliminated at the time the new OWS was commissioned in the 1989-1990 time frame. Currently, a manually-operated pump on the pond surface operates to skim rising volumes of storm water from the top of the pond so it will not overflow its banks during periods of heavy precipitation. This pump is piped to the head of the treatment works for processing before discharge. Thus, it is impossible for vegetation from the edge of the pond to be discharged through the outfall without first going through the entire treatment works, which would remove any such vegetation.

Additionally, although reported as collecting groundwater and rainwater (Fact Sheet, p. 12), the November 12, 1996 Phase II Report summary relied on by EPA elsewhere, clearly states "[h]olding pond cross-sections indicate that the area surrounding the current holding pond is minimally impacted by OHM suggesting that there is no direct hydraulic connection between the pond and groundwater." (p. ii). Therefore, operation of the manual pump transports recent storm water to the treatment works which is unlikely to be a source of contamination.

With regard to MyRWA's concerns related to the three (3) outfall pipes observed along the shoreline of the Mystic River (and shown on an aerial photo portion submitted by MyRWA), none of these outfalls are associated with the Everett Terminal (including its marine facilities). Enclosed is a plan of land of the area from 1966-67 prepared by William S. Crocker, Inc. which clearly shows that outfall EEx05 and EEx04 (as designated by MyRWA) are beyond the ExxonMobil property line (shown as 428.65') and the outfall labeled EEx03 originates on property northerly of the marine facilities (identified as Allied Concrete Corporation) and simply passes through the ExxonMobil parcel.

RESPONSE 11

A) EPA disagrees with the assertion in the comment that since ExxonMobil complies with its NPDES permit, contaminated groundwater from the ExxonMobil site could not be contributing to or creating oil sheen in the Island End River. The effluent from Tank 140 enters the 1,600 foot outfall pipe at a box culvert located near the property line and east of the former effluent pond. In the box culvert the effluent pipe is submerged all or part of the time and difficult to access without a confined space entry into the box culvert. So, ExxonMobil samples outfall 001A effluent at an above ground sampling port near Tank 140. From this sampling location, the discharge enters a 1,000 foot buried gravity pipeline which carries it to the box culvert. Therefore, it is possible that contaminated groundwater infiltrates into the discharges to outfall 001 beyond the sampling location.

B) The effluent pond is described as a receptor of both groundwater and storm water in the ExxonMobil's most recent NPDES permit application (2004) and by ExxonMobil staff during site visits. In addition, a site description that included this characterization was submitted to ExxonMobil for review in the development of the fact sheet. ExxonMobil made some corrections to the site description and returned it on May 26, 2006 but did not make any changes to the description of the effluent pond. Therefore, there is a contradiction between the 1996 Phase II report and documents prepared more recently by ExxonMobil.

C) EPA understands that as part of an ongoing MassDEP effort to audit the remedial activities undertaken at the ExxonMobil facility, further investigations are planned to identify the origins of the sheen that is visible both in the box culvert on the ExxonMobil property (observed by EPA during a 2007 site visit) and at 1,600 foot outfall pipe discharge location in the Island End River.

COMMENT 12

Conclusion

For the reasons stated herein and in the accompanying Draft Permit and Fact Sheet Comments, ExxonMobil does not believe the cited effluent limits and permit conditions are appropriate under the circumstances and asks EPA to modify the final permit and Fact Sheet accordingly. ExxonMobil requests the opportunity to meet and further discuss these issues in an effort to cooperatively develop an appropriate final permit which addresses EPA's concerns. ExxonMobil also suggests, in light of these voluminous comments and corrections identified in the enclosed detailed comments, that EPA consider reissuing a revised draft permit for public comment before the final permit is issued.

RESPONSE 12

Re-noticing a revised draft permit is neither necessary nor appropriate. The comments received on the draft permit did not raise substantial new questions regarding the Region's determinations. No significant changes to the permit have been made. In addition, re-noticing a revised draft would entail significant delay and forestall water quality improvements in the Island End River.

COMMENT 13

Part I.A.1. - Flow

EPA has added a requirement to report monthly total flow. The current permit required reporting of average monthly and daily maximum flow rates. Monthly total flow can be calculated from this information. EPA has not justified why it is necessary to present the same data in multiple formats. ExxonMobil requests EPA justify the need for this information or remove this requirement.

RESPONSE 13

EPA agrees and has revised the permit to require only average monthly and daily maximum flow rates.

COMMENT 14

Part I.A.1 – Total Suspended Solids (TSS)

The monitoring requirements for TSS indicate the sample type shall be a composite sample. ExxonMobil believes this may be a typographical error as it differs from the current permit sample type for this parameter and from all other parameters in the Draft Permit. A grab

sample is appropriate for this discharge because Tank 140 provides pollutant homogeneity. If we assumed incorrectly, ExxonMobil requests an explanation of this change, as no discussion of this is in the Fact Sheet.

RESPONSE 14

EPA acknowledges the typographical error and has revised the permit to require that TSS be monitored with a grab sample.

COMMENT 15

Part I.A.1. – Oil and Grease (O&G)

The EPA has decreased the O&G limit currently set forth in the Everett Terminal’s NPDES permit from 15 mg/L to 5 mg/L. As described in ExxonMobil’s General Comments, EPA has not complied with the non-discretionary requirements of 40 CFR 125.3(c) and (d) to demonstrate that the 5 mg/L O&G limit is applicable here. Therefore, the proposed limit does not meet the regulatory requirements that EPA must adhere to for BPJ-based limits.

Additionally, the permit limit of 5 mg/l is the detection limit for EPA Method 1664A. EPA must address the reporting and compliance implications for analytical results that are non detectable at this limit.

RESPONSE 15

In response to concerns expressed in this and previous comments, EPA has explained its decision making regarding oil and grease technology based effluent limits in a site specific BAT/BCT analysis which is presented in response 1.

Since the effluent limit is 5 mg/L, the detection limit of 5 mg/L for EPA Method 1664A is acceptable.

COMMENT 16

Part I.A.1. - Mercury

EPA has established a monthly monitoring/reporting requirement in the Draft Permit that is based on a data point measured on the influent to the Oil Water Separator (OWS) system and not representative of the final discharge. As described in ExxonMobil's General Comments, there is no evidence that mercury is a source material found in distribution terminals. ExxonMobil requests that this requirement be removed from the permit. If not, the final permit should include a monthly monitor and report-only requirement for a period of one year, through implementation of ExxonMobil's Best Management (BMP) plan, after which an evaluation of “reasonable potential” can be performed to assess the potential impacts on water quality and/or human health.

RESPONSE 16

Mercury was identified as a potential pollutant in the dry weather sampling, so the source of the pollutant is the groundwater. Since mercury bioaccumulates in fish and other aquatic life and is highly toxic to humans and wildlife, there are particular concerns about its potential impacts to water quality as a result of mercury discharges from the Everett Terminal. EPA has determined that a monitoring requirement for mercury is appropriate given its potential for adverse impacts on the environment and human health, the complexity and variability of the discharge and the fact that water quality or technology-based effluent limits may be warranted in the future. The designated uses of

the Island End River include habitat for fish and other aquatic life, as well as primary and secondary recreation, so EPA is concerned about the risk of mercury discharges via contaminated groundwater or storm water. The data for mercury and other metals will be reviewed for the next permit reissuance or sooner to evaluate the need for effluent limits in the reissued permit or in a permit modification, if necessary. However, EPA finds that a quarterly mercury monitoring frequency will be adequate for this purpose and has revised the permit accordingly. EPA recommends that ExxonMobil continue to work to improve storm water and groundwater management practices at the Everett Terminal towards the goal of reducing or eliminating discharges of pollutants to the Island End River.

COMMENT 17

Part 1.A.1. - Available Cyanide

EPA has established a monthly monitoring/reporting requirement for Available Cyanide based on analysis of a sample that was collected from the influent to the OWS system and not representative of the discharge. As described in the General Comments, there is no evidence that available cyanide is a source material found in distribution terminals and the one sample measured total cyanide only. ExxonMobil requests that this requirement be removed from the permit. If not, the final permit should include a monthly monitor and report-only requirement for a period of one year, through implementation of ExxonMobil's Best Management (BMP) plan, after which an evaluation of "reasonable potential" can be performed to assess the potential impacts on water quality and/or human health.

Additionally, the permit requires a PQL of 2 µg/l which is not achievable using an approved analytical method in 40 CFR Part 136 that can be certified by the Massachusetts DEP.

RESPONSE 17

Since the processes currently in use to treat discharges from outfall 001 (physical separation) do not include any that are specifically useful for cyanide removal, EPA finds that monitoring cyanide in discharges from outfall 001 is appropriate. EPA notes that cyanide is most likely associated with groundwater contamination resulting from past industrial activities at the site and not with current bulk petroleum storage and distribution activities. When the permit is reissued in 5 years, EPA will evaluate the cyanide data collected, the composition of the discharge, and, if necessary, apply technology or water quality based effluent limits. However, EPA finds that reducing the cyanide monitoring frequency to quarterly sampling will provide sufficient data to evaluate cyanide discharges in 5 years and has made this change to the permit. Analyses of available cyanide (free cyanide plus those cyanide forms that can readily disassociate to release free cyanide) will allow comparison of effluent data to water quality criteria for cyanide which are expressed as free cyanide.

The NPDES permit does not require that the analytical method be certified by MassDEP. Available cyanide can be measured using method OIA-1677 (see EPA-821-R-04-00, "Method OIA-1677, DW Available Cyanide by Flow Injection, Ligand Exchange, and Amperometry", January 2004). The minimum level (ML) for this method is 2.0 µg/L with a method detection limit of 0.5 µg/L.

COMMENT 18

Part 1.A.1 – Polynuclear Aromatic Hydrocarbons (PAHs)

With respect to contributing to Island End sediment Group II PAH concentrations, if the Everett Terminal discharges at the recommended water quality criteria there is no potential for the discharge to cause or contribute to the exceedance of a surface water quality criterion. EPA is not authorized to establish water quality-based effluent limits (WQBELs) for a pollutant

unless there is a reasonable potential for that pollutant to cause or contribute to a water quality standards violation (40 CFR 122.44(d)(1)). EPA has not performed a reasonable potential analysis for these PAHs as required at 40 CFR 122.44(d)(1)(ii) and therefore cannot justify the WQBELs for these pollutants in the proposed permit.

ExxonMobil proposes that the EPA should first perform a proper reasonable potential analysis for the Group II PAHs following the procedures in the *Technical Support Document for Water Quality-based Toxics Control* (March 1991) to determine which, if any of these chemicals have a technically justified basis for WQBELs. Because several of the Group II PAHs have no water quality criteria, the limits for these chemicals must be deleted. For any PAHs that EPA determines have a reasonable potential to cause or contribute a water quality criterion exceedance, EPA should calculate the WQBELs using the appropriate water quality criterion from the Recommended National Water Quality Criteria (2004).

See also ExxonMobil's General Comments.

RESPONSE 18

Water quality-based effluent limits were established in ExxonMobil's NPDES permit in 1990. Section 402(o) of the CWA sets forth the general rule prohibiting backsliding from effluent limitations contained in previously issued permits that were based on § 402(a)(1)(B), 301(b)(1)(C), 303(d), or 303(e). Except under very limited circumstances, section 402(o) bars EPA from allowing permit holders to "backslide" or weaken BPJ-based limits or WQBELs contained in an NPDES permit. Thus, permits issued with these types of limitations may not be reissued, renewed, or modified to contain less stringent effluent limitations than the previous permit unless the proposed new limitations comply with the antidegradation rule contained in § 303(d)(4), or the permit falls into one of the statutory exceptions to this ban on backsliding. See also 40 CFR 122.44(l). Under section 402(o)(3), when attempting to backslide from WQBELs under either the antidegradation rule or an exception to the antibacksliding rule, relaxed permit limits must not result in a violation of the applicable water quality standard. EPA has determined that no exception to the prohibition against backsliding applies and, furthermore, that relaxation and/or elimination of the Group II PAH limits would be inconsistent with section 402(o)(3). Although EPA has not yet developed new water quality criteria for acenaphthylene, benzo(ghi)perylene, naphthalene, or phenanthrene, these group II PAHs remain as priority pollutants. The commenter has provided no basis for removing effluent limits for these toxic pollutants from the permit. The designated uses of the Island End River include habitat for fish and other aquatic life, as well as primary and secondary recreation. The Island End River is already impaired for priority organics. EPA is concerned that increased Group II PAH discharges via contaminated groundwater and/or storm water will contaminate the sediments in the Island End River and the potentially bioaccumulate in aquatic life in the Mystic River Watershed. The MLs have been changed in response to new analytical methods that are now available which allow consistent monitoring and enforcement at levels closer to the existing effluent limits.

In light of designated and existing uses of the Island End and Mystic Rivers, as described here and in response 4, and concerns over the bioaccumulative nature of PAHs, EPA finds that a conservative approach to minimize further PAH contamination is reasonable

COMMENT 19

Part 1.A.1 – Volatile Organic Compounds – Benzene

The Draft Permit contains a new discharge limit for benzene. It has been reduced from 40 µg/L, which was a 1991 water quality based effluent limit, to 5 µg/L which EPA-Region I has established as a "technology-based" limit for groundwater remediation systems. As described

in ExxonMobil's General Comments, ExxonMobil does not believe this proposed effluent limit is justified.

RESPONSE 19

EPA disagrees with the comment. EPA has explained its decision making for technology based benzene effluent limits in a BAT/BCT analysis which is presented in response 1.

COMMENT 20

Part 1.A.1. – Volatile Organic Compounds – BTEX

The Draft Permit contains a new discharge limit of 100 µg/L for BTEX. For the same reasons provided in Comment 7 regarding benzene, ExxonMobil objects to the imposition of this limit and requests that a monitoring and reporting-only requirement be maintained within the permit. (See ExxonMobil's General Comments)

Also, to the extent EPA imposes an effluent limit for Total BTEX, ExxonMobil requests that a footnote be added to the Draft Permit for the summation of BTEX compounds, to allow for the use of “zero” for non-detection values versus using the laboratory’s Minimum Detection Limits, so that the total value is not overstated. This is standard reporting protocol in many EPA Regions.

RESPONSE 20

EPA disagrees with the comment in the first paragraph. EPA has explained its decision making for technology based BTEX effluent limits in a BAT/BCT analysis which is presented in response 1.

EPA agrees to include a footnote in section I.A.1 so that the total BTEX may be the sum of the detectable results.

COMMENT 21

Part 1.A.1 – Volatile Organic Compounds – Ethanol

EPA has established a monthly monitoring requirement for ethanol without developing a basis that it may have an impact on the water quality or human health. It appears that the basis in the Fact Sheet is to monitor because it is used in the facility. ExxonMobil requests that this requirement is removed from the Draft Permit. If not, the final permit should include a monthly monitor and report-only requirement for a period of one year through implementation of ExxonMobil's Best Management (BMP) plan, after which an evaluation of “reasonable potential” can be performed to assess the potential impacts on water quality and/or human health. Additionally, the Draft Permit does not provide an analytical method for this compound. See also ExxonMobil's General Comments.

RESPONSE 21

The storage and handling of millions of gallons of ethanol at the Everett Terminal, and other facilities in the Boston area is relatively new (since 2006). However, relatively little data are available regarding the fate and transport of ethanol discharges into surface water from the storage and handling of large quantities of this substance. What is known is that ethanol is highly soluble, not likely to be removed in an oil water separator, and can increase the solubility of other pollutants. Ethanol is potentially toxic to aquatic life. EPA seeks to identify the impact, if any, that ethanol storage and handling may have on storm water quality discharges from outfall 001. However, EPA

has concluded that quarterly ethanol monitoring will be adequate to provide with sufficiently representative data to identify any potential environmental concerns and has amended section I.A.1 of the permit accordingly.

Where an analytical method is not specified, the permittee may use any method approved under 40 CFR Part 136, as stated in section II.C.d of the permit.

COMMENT 22

Part 1.A.1 – Volatile Organic Compounds – Methyl Tertiary-butyl Ether (MTBE)

The Draft Permit contains a new groundwater treatment-technology based discharge limit of 70 µg/L for MTBE. For the reasons stated in the General Comments, ExxonMobil requests that this requirement be removed from the Permit.

If not removed, the final permit should include a monthly monitor and report-only requirement for a period of one year, through implementation of ExxonMobil's Best Management (BMP) plan, after which an evaluation of “reasonable potential” can be performed to assess the potential impacts on water quality and/or human health.

RESPONSE 22

EPA disagrees with the comment. Response 7 addresses the commenter’s concerns regarding the application of technology-based effluent limits for MTBE.

COMMENT 23

Part 1.A.1 – Whole Effluent Toxicity (WET) testing and associated Chemical Analyses

EPA has continued WET testing in the Draft Permit at the frequency established in the current NPDES permit based on anti-backsliding requirements even though the previous tests have shown no reasonable potential to cause or contribute to an excursion above the State’s narrative criterion for toxicity. The current permit (Part I, Footnote 6, third paragraph) provides for reduced testing frequency after 4 consecutive satisfactory test results. ExxonMobil requested EPA reduce the test frequency in a letter dated June 4, 2003, and has not received a response from EPA. The Fact Sheet to this draft Permit does not address this issue. Based on 7 years of satisfactory test results, ExxonMobil requests that EPA reduce the frequency of this testing to annual and the same language from Part I.A.1, Footnote 6 of the current permit be added to the Draft Permit under Footnote 9.

RESPONSE 23

As discussed in response 9, EPA finds that semi-annual monitoring is necessary to enforce the permit’s toxicity limit ($LC_{50} > 50\%$) which was continued from the previous permit.

COMMENT 24

Foot Note 1

- 1) The language implies that there is a requirement to develop a “routine sampling program”. The Fact Sheet and permit do not discuss the purpose or objectives for this new requirement. ExxonMobil suggests that EPA remove this requirement or provide guidance addressing the purpose and objectives of the program.**
- 2) The permit requires all samples be analyzed per 40 CFR Part 136, or alternative methods approved by EPA. 40 CFR Part 136 does not specify methods for analyzing samples for xylene or MTBE. ExxonMobil requests EPA specify in the Permit that**

the methods used for benzene is also acceptable for MTBE and Xylene (i.e., EPA Method 602 as stated in the current permit for Xylene, see Part I.A.3.r(2)). The Permit also needs to specify the method for analyzing ethanol. Furthermore, EPA has not established sampling and handling requirements, acceptable detection limits, or QA/QC for the analysis.

RESPONSE 24

1. EPA agrees since the permit specifies clearly the frequency and type of sampling to be conducted and reported. Footnote 1 has been revised to remove the requirement for a routine sampling program.
2. Footnote 1 has been revised to include test methods for xylene (EPA Method 602), MTBE and ethanol. Sampling and handling procedures, detection limits and quality assurance requirements shall be as specified for those test methods.

COMMENT 25

Foot Note 4

ExxonMobil requests that “untreated” be deleted from the last sentence in Footnote 4 because the overflow does flow through the OWS system. As further detailed in ExxonMobil's General Comments and herein in comments 20, 21, and 22 on the Fact Sheet, the water discharged to currently permitted Outfall 001B flows through and receives treatment by the OWS system, including both the original and new OWS, but does not flow through Tank 140. Outfall 001B is only used to prevent overflow to the two separators during peak flow events (greater than ~ 3000 GPM). The existing OWS provides industry-standard treatment, and therefore the discharge during these events is not “untreated”.

RESPONSE 25

The permit intends “overflow” to be flow that is not treated in the oil water separator. Flow through the oil water separator is limited to the maximum design flow. The permit requires that all groundwater and storm water flows (generated by the equivalent of a 10 year storm event) be treated in the oil water separator. Flows beyond that volume (overflows) are permitted to bypass the oil water separator and therefore would be untreated. Related discussion is provided in Response 10.

As the system is currently configured, “bypass” flows only bypass Tank 140. They flow through the treatment works without any flow control. The bypass pumps (to outfall 001B) prevent the treatment works from flooding the area during heavy rain events, but do not control the flow through the oil water separators. Therefore, during a heavy rain event, the flows through the oil water separator may exceed the design flow and not receive adequate treatment.

COMMENT 26

Foot Note 5

The Permit requires a PQL of 2 µg/l for analysis of Available Cyanide. As described in the General Comments, this is not achievable using an approved analytical method in 40 CFR Part 136 by a certified laboratory in Massachusetts.

RESPONSE 26

Neither the permit nor federal regulations limit test procedures only to those offered for state certification in Massachusetts. Any EPA method listed in 40 CFR Part 136 may be used to meet the permit requirements. Available cyanide analytical method OIA-1677 is now EPA-approved.

COMMENT 27

Part I.A.8

ExxonMobil requests that “detergent laden” be added prior to “floor wash water to be consistent with the Fact Sheet, Section 6.4.2 As stated in ExxonMobil’s Comment 36 on the Fact Sheet, both the Fact Sheet and Draft Permit prohibit the discharge of detergent laden floor washings to Outfall 001 which is consistent with the EPA’s Multi-Sector General Permit for Storm Water Associated with Industrial Discharges. ExxonMobil interprets this to mean that floor washings free of detergents are approved for discharge to Outfall 001, which is not stated as such in the Permit, Part I.A.8.

RESPONSE 27

ExxonMobil has misinterpreted the permit. No floor washings from interior spaces are allowed to discharge from Outfall 001. Floor washings are process water, not storm water.

The Multi-Sector General Permit (MSGP) allows pavement wash waters (MSGP paragraph 1.2.2.2.7) not floor washings. As stated in both the 2000 permit (paragraph I.A.3.1) and in this permit (paragraph I.A.12), no chemicals (including detergents) are allowed from any source without prior EPA and MassDEP approval.

COMMENT 28

Part I.A.13

This condition prohibits the discharge of sludge and/or bottom deposits from storage tank(s), basin(s), and/or diked area(s). ExxonMobil is concerned that this condition could be interpreted as excluding any existing sediments (e.g., erodible soils) from diked areas or the former effluent holding pond that are entrained with storm water. ExxonMobil requests that diked areas and basins be removed from this condition. If the intention is to prohibit the discharge (e.g., reinjection) of sludges and bottom deposits once they are physically removed from the collection and treatment system, then the condition should be stated as such.

RESPONSE 28

The requirement in part I.A.13 is intended to prevent the discharge of accumulated solids into the treatment system as a result of catch basin sump or tank cleaning. EPA agrees to revise the language to clarify this intention.

COMMENT 29

Part I.A.14

EPA uses the term “overflow” in this condition, but this term is not defined within the Draft Permit, Fact Sheet, or Part II General Conditions accompanying the Draft Permit. Lacking definition of this term, it is unclear how this condition applies to the facility's discharge. ExxonMobil requests that “overflow” be defined as the excess storm water commingled with minimal amounts of non-storm water that exceeds the calculated 10-year, 24-hour storm event or equivalent precipitation volume, and is authorized for discharge as part of the final permit. We suggest adding “or equivalent” to the precipitation event to address consecutive storm events that may occur producing a comparable amount of rainfall.

Additionally, the Draft Permit states that the facilities must be designed, constructed and operated to treat the peak flow and total volume of storm water. The requirement to include peak flow in the design criteria is not consistent with the cited basis in 40 CFR §423.12(b)10

stating that “Any untreated overflow from the facility designed, constructed and operated to treat the volume” The requirement to design, construct and operate the facility for peak flow is a new requirement that is not in ExxonMobil's current permit [see Part I.B.2.a(2)] and the justification to include this requirement was not addressed in the Fact Sheet. ExxonMobil requests that EPA remove “peak flow” from the condition to be consistent with the current permit and the cited basis in 40 CFR 423.12(b)10.

RESPONSE 29

EPA disagrees with the definition of overflow proposed in the comment. EPA intends that the treatment works be designed, constructed and operated to treat the total volume of storm water and non-storm water discharges from a 10-year 24-hour storm. “Overflow” is intended to include storm water and non-storm water flow which exceeds the design capacity of the storm water collection, storage and treatment system. Part I.A.14 defines what the design capacity should be. Part I.A.14 is also intended to provide specificity to the more vague language of the current permit which prohibited “bypass”, or overflow, “except during naturally occurring precipitation from severe weather incidents such as a hurricane”, but did not define the flow or duration of rainfall for a severe weather incident.

The treatment works need not be designed to meet the peak flow of the 10-year 24-hour storm, so long as ExxonMobil provides storage to equalize the peak flow volume prior to the treatment works and ensure that flow through the treatment works does not exceed the design capacity of the treatment works. This requirement is similar to the condition in section I.A.2.a.(2) of the current permit except that in the new permit, the condition applies to all discharges (including groundwater) which discharge through outfall 001. EPA has revised the language in part I.A.14 of the permit to clarify the reference to peak flow volume.

With regards to consecutive storm events, the intention of part I.A.14 is not to compare discharged flows generated from specific rain events with the design flow. Instead, EPA seeks to ensure that the storm water collection and treatment system has been designed and is operated and maintained for a specific theoretical condition, namely a 10-year 24-hour storm event. If ExxonMobil demonstrates, through evaluation by a qualified engineer, that the system, as it is designed and operated, is capable of treating the total volume of storm water and groundwater flow generated by a 10-year, 24-hour storm event, then overflows will be presumed to exceed those conditions. EPA may periodically review the frequency of overflows and compare them with coinciding weather conditions and may request further evaluation in accordance with Chapter 308(a) of the Clean Water Act if overflow frequency appears excessive.

COMMENT 30

Part I.A.17

Compliance with this requirement to report “any size sheen attributable from the discharge” is difficult to evaluate, because there is no area post-treatment where open flow occurs that is exclusively water from the facility. As described in ExxonMobil's General Comments, observations of sheens at the Island End River cannot be linked to ExxonMobil's discharge. ExxonMobil requests this requirement be deleted or clarified to reflect the known conditions.

RESPONSE 30

EPA has retained this provision in a modified form in order to address the concern articulated by the commenter. The condition now provides “any size sheen observed at the point of discharge to Island End River.” Even though ExxonMobil is not the sole source of pollutant discharges to this area, there

is, in EPA's view, a reasonable basis for concluding that an oil sheen observed at the Island End River may be attributable, at least in part, to ExxonMobil's discharge. EPA understands that a MassDEP investigation is currently ongoing to identify the source of oil discharges into the Island End Rivers and that no findings so far have excluded the ExxonMobil property as a potential source area.

The same permit condition was in both ExxonMobil's 2000 permit (paragraph I.A.3.o) and 1991 permit (paragraph I.A.1.k).

COMMENT 31

Part I.A.18

"Polycyclic" should be changed to Polynuclear to be consistent with Part I.A.1. ExxonMobil requests the compounds and method limits be presented as a table which also identifies the compounds as Group I or Group II PAHs. See also ExxonMobil's General Comments.

ExxonMobil also requests that the condition include the use of "zero" for reporting results for non-detection versus "<MDL" so that the data provided on the monthly Discharge Monitoring Reports is not misinterpreted for non-compliance, as the Permit Compliance System database ignores the "<" symbol. This is standard reporting protocol in many EPA Regions.

RESPONSE 31

Although they are one and the same, EPA agrees that the terms should be consistent. Since "polycyclic" is the current EPA standard language, part I.A.1 has been revised accordingly. EPA also agrees, for the sake of clarity, to identify the group I and II PAH compounds in Part I.A.1.

EPA acknowledges the error (see response 9) made in interpreting the "<" signed using the agency's new data management software and has corrected this error. The new DMR summary is attached to this response to comments. However, since the minimum levels are specified in the permit, analytical data must be reported with the detection level.

COMMENT 32

Part I.A.19

The permit requires a copy of the laboratory case narrative, without specifying what information is expected in the narrative. ExxonMobil requests that EPA specify the components of the laboratory case narrative or allow the laboratories to follow standard NELAC protocol.

RESPONSE 32

EPA finds that the NELAC Institute (TNI) standard protocol provides adequate laboratory case narrative.

COMMENT 33

Part I.A.21.a

The permit requires flow control on the OWS within three months of the effective date of the permit. As described in ExxonMobil's General Comments, this requirement fails to consider the processes employed and the engineering aspects of the application of this type of control technique.

RESPONSE 33

EPA finds that the flow control device requirement in Part I.A.21 can be made to be more flexible and has modified it to require that the flow through the oil/water separator not exceed design flow, removing the specific requirement to install a flow control device. Flow control may be achieved through pump controls or other means. A requirement to certify the design flow has been added. The time frame for implementation has also been removed, because statutory deadlines for complying with the technology based requirements of the CWA have expired. A schedule of compliance will be addressed through an administrative compliance order.

COMMENT 34

Part I.A.21.b

Regarding this requirement to provide notification to the EPA of any changes to the existing system, ExxonMobil is re-evaluating the design capacity of the entire OWS system, including the original OWS (also referred to as the Separation Flume) and what is referred to as the “new” Oil Water Separator. We hope to demonstrate the ability of both of these components to treat greater flow rates than currently represented in the permit renewal application. Note that this evaluation is being done to provide EPA with additional confidence regarding the design and operation of the oil water separators. We believe that the historic effluent monitoring data for TSS and O&G, which the separators are designed to treat, demonstrate that the treatment equipment is properly designed and operated and achieves exemplary performance for gravity oil-solids separators at all flows that are treated in the equipment. ExxonMobil will submit this evaluation to EPA for notification and approval.

RESPONSE 34

Based on effluent data from outfall 001B and observations made at the site, EPA believes that discharges from outfall 001B are not consistently subjected to adequate treatment in the treatment works under the current configuration. EPA agrees that a re-evaluation of the design capacity of the entire treatment works is necessary. EPA anticipates that all flows will be incorporated into this evaluation, including estimations of groundwater contributions during periods of season high groundwater table and heavy rain events.

COMMENT 35

Part I.B.3

The Draft Permit requires that the Storm Water Pollution Prevention Plan (SWPPP) be consistent with the most current Multi-Sector General Permit (MSGP) for Storm Water Discharges Associated with Industrial Activities (October 2000). The current MSGP requires a certification that no non-storm water discharges are included, which is inapplicable to the ExxonMobil combined discharge of storm water, groundwater, steam condensate, truck wash water, etc. ExxonMobil requests that the permit language include this exception to the MSGP.

RESPONSE 35

The commenter misunderstands the MSGP. Paragraph 4.4.1 of the MSGP requires certification that all outfalls have been tested or evaluated for the presence of non-storm water, not that there be no non-storm water discharges. Therefore, the requirement is applicable to ExxonMobil’s combined discharges.

COMMENT 36

Part I.B.5

The Draft Permit requires inspection of all “areas identified in the SWPPP” on a quarterly basis. ExxonMobil is unclear as to what the EPA means by “areas” and requests further clarification. The inspection frequency and areas to be inspected should be determined by ExxonMobil within the Best Management Practices section of the SWPPP, and therefore the specific inspection frequency should be removed from the permit.

RESPONSE 36

Part I.B.5 of the permit requires quarterly inspections of all areas where industrial materials or activities are exposed to storm water. EPA has included this requirement in all recent individual industrial storm water permits in Massachusetts to ensure a consistent minimal level of inspection at industrial facilities. Allowing the discharger to set the inspection frequency and determine the inspection areas would not ensure that areas of concern are routinely and adequately addressed. Parts I.B.4 and I.B.5 have been revised to clarify the requirement.

COMMENT 37

Part I.B.6

The Draft Permit requires amendments or updates to the SWPPP within 14 days for any changes affecting the SWPPP. ExxonMobil objects to the short timeframe and refers to the MSGP which does not dictate any such timeframe for changes. Also, ExxonMobil notes that this requirement is not set forth within any of the so-called "Chelsea Creek" oil terminal NPDES permits issued by the EPA. ExxonMobil requests the removal of the specific 14-day timeframe from the Draft Permit.

RESPONSE 37

EPA has revised the part I.B.6 of the permit to allow 30 days to amend or update the SWPPP following any changes at the facility affecting the SWPPP. A reasonable deadline for amending or updating the SWPPP is important to ensure that SWPPP changes are made in a timely fashion. EPA acknowledges that the requirements in section I.B of the permit are different than those used in the Chelsea Creek permits issued by EPA in 2005. EPA’s approach to SWPPP requirements in NPDES permits at industrial facilities has changed since then. The 30 days timeframe for amending or updating the SWPPP is consistent with other similar facilities, which have generally been able to meet this deadline. The SWPPP requirements in the ExxonMobil permit are consistent with those in individual permits for storm water discharges issued in 2007 including PJ Keating (MA0029297) and Avon Custom Mixing Service, Inc. (MA0026883).

COMMENT 38

Section 1, first paragraph – The discussion incorrectly describes the information submitted in the permit application and incorrectly describes the discharge from Outfall 001B.

- A) ExxonMobil applied for the re-issuance of a National Pollutant Discharge Elimination System (NPDES) permit to discharge storm water, groundwater infiltration, steam condensate, tank water bottoms, and potable water (used for garage floor washing, hydrostatic testing, truck washing, fire testing, landscape watering, and safety showers) through Outfall 001 into the Island End River following treatment in the oil/water separator (OWS) system (e.g., treatment works).**

ExxonMobil applied to retain both Outfalls 001A and 001B, which discharge to the final Outfall 001.

- B) The final sentence of the paragraph states, “The current permit also authorizes the direct discharge of the same discharges without treatment during heavy rain events through outfall 001B.” This statement is incorrect and does not reflect the information provided with the permit application and discussed during site visits with the permit writer. Comments provided herein include a correct description of Outfall 001B.**

RESPONSE 38

The comment refers to section 1 of the fact sheet. EPA acknowledges that ExxonMobil applied to retain outfall 001B. EPA has included a revised description of outfall 001B flow in response 1 (see section B of the BAT/BCT analysis). However, EPA finds that no changes to the final permit are warranted as a result of the description correction.

COMMENT 39

Section 1, second paragraph - ExxonMobil wishes to correct or update the list of fuels listed in the Fact Sheet. The Everett Terminal currently handles the following classes of products: gasoline; ethanol; light distillate fuel oils; heavy distillate fuel oils; and fuel additives.

RESPONSE 39

EPA acknowledges the addition of ethanol to the list. EPA understands that “light distillate fuel oils” includes low sulfur diesel and jet fuel. EPA also finds that no changes to the final permit are warranted as a result of this description correction.

COMMENT 40

Section 2.1, first paragraph – ExxonMobil wishes to clarify that some of the data summarized on the referenced tables in Attachment A of the draft permit materials (specifically PAHs in 2006), incorrectly includes laboratory detection limits reported with a “less than” symbol on the monthly Discharge Monitoring Reports (DMRs), as actual detectable concentrations in the effluent samples. These should be reported as ND.

RESPONSE 40

EPA acknowledges the error (see response 9) made in interpreting the “<” signed using the agency’s new data management software and has corrected this error. The new DMR summary is attached to this response to comments.

COMMENT 41

Section 2.1, second paragraph, final sentence – “Dry weather flows were sampled on July 18, 2006.” ExxonMobil also submitted data from samples of “dry weather flow” collected on August 2, 2006.

RESPONSE 41

Correction noted. The data collected on August 2, 2006 was also taken into consideration in the development of the fact sheet.

COMMENT 42

Section 6.1, first paragraph second sentence - ExxonMobil would prefer that the Fact Sheet refer to the products stored in more generic terms. In this case, we recommend that this sentence should read, "The facility, which comprises approximately 110 acres (including Sprague Energy), consists of a marine bulk product receiving and shipping facility, known as the Marine Facility, a light fuel (gasoline and light distillates) storage area known as the North Tank Farm, and a heavy fuel oil and asphalt storage area known as the South Tank Farm. Figures 2 and 3 show the layouts of the North and South Tank Farms, all collectively comprising the bulk storage and distribution facility (the Everett Terminal)."

RESPONSE 42

EPA notes the comment. The fact sheet will not be reissued (this response to comments explains any changes to the draft permit and serves as an addendum to the fact sheet). No changes to final permit have been made as a result of this comment.

COMMENT 43

Section 6.1, General Comment - Section 6.1.3 indicates that transformers and electrical starters are located throughout the North Tank Farm. This equipment is also present at the Marine Facility described in Section 6.1.1 and at the South Tank Farm described in Section 6.1.2.

RESPONSE 43

EPA notes the comment. The fact sheet will not be reissued (this response to comments explains any changes to the draft permit and serves as an addendum to the fact sheet). No changes to the final permit have been made as a result of this comment.

COMMENT 44

Section 6.1.3, second paragraph, last sentence - The first of the two buried tanks listed should identify the contents as being heating oil for the administration building.

RESPONSE 44

EPA notes the comment. The fact sheet will not be reissued (this response to comments explains any changes to the draft permit and serves as an addendum to the fact sheet). No changes to the final permit have been made as a result of this comment.

COMMENT 45

Section 6.2, Table 1 -

- A) The components in the groundwater infiltration contribution are described as "Groundwater containing residual contamination from current and historical releases of oil and hazardous materials." This appears to assert that all groundwater infiltration is contaminated. The Fact Sheet and draft permit do not set forth the criteria or definition that would allow the permittee to determine what groundwater is contaminated. This description may lead to the permittee treating or eliminating all infiltrating groundwater regardless of whether it meets or exceeds MassDEP GW-1, GW-2 or GW-3 standards or even the discharge limits of the RGP. As stated elsewhere, EPA, MassDEP and ExxonMobil should establish criteria for determining what infiltrated groundwater is contaminated, and should be eliminated or treated. In addition, ExxonMobil relies on its General Comments.**

- B) The components listed for the groundwater infiltration contribution are described as “Groundwater containing residual contamination from current and historical releases of oil and hazardous materials.” This asserts that all groundwater infiltration is "contaminated". ExxonMobil suggests this component description be changed to read “Groundwater, some containing residual contamination from historical releases of oil and hazardous materials.”**
- C) The components in the former Effluent Holding Pond contribution are described as “Groundwater” containing residual contamination from current and historical releases of oil and hazardous materials.” As described in the General Comments, groundwater infiltration is not a significant source of water in the pond. The placement of the pump, near the surface of the pond and the lack of agitation in the pond indicate this flow is storm water from the surface of the pond.**

RESPONSE 45

In response to A) and B), EPA disagrees with the comment. Neither EPA nor ExxonMobil (based on the information provided to EPA) have data to quantify whether all or only some of the groundwater infiltrating into the storm water collection system is contaminated. Even if some groundwater enters the storm drain uncontaminated, it becomes contaminated when it commingles with contaminated groundwater.

In response to C): The assertion made in the comment that there is no hydraulic connection that allows groundwater to enter the effluent pond contradicts numerous other recent statements by ExxonMobil. EPA has no data to indicate that the groundwater recharge of the effluent pond is not significant. See further discussion in response 11.

COMMENT 46

Section 6.2.1, second paragraph – This paragraph is inaccurate. An accurate description of this storm water in context with the other paragraphs in section 6.2.1 would say, “Storm water falling in open paved areas and on building roofs in the North Tank Farm flow by gravity to the treatment works. Storm water falling on paved areas, building roofs, and mounded bunker tank roofs in the South Tank Farm flow by gravity either to the North Tank Farm drainage system and the treatment works, or is pumped in forces mains to a gravity portion of the South Tank Farm drainage system that then flows by gravity to the North Tank Farm and the treatment works.”

RESPONSE 46

EPA notes the comment. No change to the final permit has been made as a result of this comment.

COMMENT 47

Section 6.2.1, third paragraph, second sentence - This sentence is inaccurate. Rain water from the roof does not fall on to the loading rack pad. The loading rack roof has a system of gutters that drain water from the roof to downspouts running down alternating roof columns. The downspouts tie into the North Tank Farm drainage system.

RESPONSE 47

EPA notes the comment. At the time of the initial site visit, in March of 2006, there were no gutters on the loading rack roof. No changes to the final permit have been made as a result of this comment.

COMMENT 48

Section 6.2.2 – As stated previously in our comments we believe EPA, MassDEP and ExxonMobil should establish a criteria for determining what infiltrated groundwater is contaminated.

RESPONSE 48

EPA disagrees with the comment. It is not necessary for EPA to establish criteria pertaining to infiltrated groundwater prior to imposing a water quality- or technology-based effluent limitation at point of discharge. Effluent limits are set based on the pollutants found in the discharge and the nature of their source. In this case, ExxonMobil itself concedes in the comment below that groundwater, “some containing residual contamination from historical releases of oil and hazardous materials,” have infiltrated the storm water treatment system.

COMMENT 49

Section 6.2.2, third paragraph – As described in ExxonMobil's General Comments, this paragraph contains many inaccuracies, errors, misrepresentations and baseless conclusions as follows:

- A) First and second sentences – The EPA contends that “groundwater infiltration contributes a constant flow of oil to the treatment system”. This statement has no technical basis or evidence to support it. Therefore the contention, in this Fact Sheet, that ExxonMobil is intentionally operating the OWS as a “de facto groundwater treatment system” is unfounded.**

The Fact Sheet states "Contaminated groundwater infiltration into the collection system contributes a constant flow of oil to the treatment works." This statement is without basis and inconsistent with MCP status reports submitted to Mass DEP that we are aware of. ExxonMobil requests the EPA remove this statement from the Fact Sheet and re-evaluate any conclusions or conditions based on the statement that there is a “constant flow of oil to the treatment works”.

Our observations indicate that the oil we suspect is leaching into the drainage system from areas of soil contamination is dependent upon ground temperature, and possibly groundwater level. The flow of oil is affected by the temperature of the seasons, and is negligible in the late fall, winter and early spring.

- B) The components listed for the groundwater infiltration contribution are described as “Groundwater containing residual contamination from current and historical releases of oil and hazardous materials.” This asserts that all groundwater infiltration is "contaminated" and that on-going (aka "current") releases exist, which is inaccurate. ExxonMobil suggests this component description be changed to read “Groundwater, some containing residual contamination from historical releases of oil and hazardous materials.”**
- C) Sentence six of the Fact Sheet states "EPA finds, based on this information, that, although not initially constructed for this use, the storm water collection and discharge system is being utilized as a critical component of the remedial action to prevent off-site migration."**
As described in its General Comments, ExxonMobil disagrees with this conclusion.

RESPONSE 49

A) EPA disagrees with this comment. See response 2. Although EPA has not visited the site in every season, accumulating oil was present in the oil water separator during an “early spring” site visit on March 23, 2006. During the site visit, the operator reported that oil was being removed on a regular basis and, therefore, not negligible.

B) EPA disagrees with this comment. As described earlier, it is not clear what portion of infiltration groundwater is contaminated. Additionally, it is not clear whether the source of contamination is from a single breach in the storm drain or from multiple or systemic breaches. While dry weather samples indicate that at least some of the oil contamination in the treatment works is from historical releases (for example, analytical results showing that MTBE is infiltrating into storm drains in spite of the fact that MTBE is no longer stored on site), EPA has no information to suggest that there are or are not current releases contributing to groundwater contamination as well.

C) See response 3.

COMMENT 50

Section 6.2.2, fourth paragraph – As further detailed in Comment 12 on the Fact Sheet and ExxonMobil's General Comments, this paragraph misrepresents the groundwater flow and the impact of the secondary containment sumps on the groundwater.

RESPONSE 50

See responses 2 and 3.

COMMENT 51

Section 6.2.5 - ExxonMobil heats the No. 6 fuel oil tanks and transfer piping with steam generated by The Mystic Generating Station. Steam condensate from these operations drain to the site drainage system and is discharged at Outfall 001. Sprague heats the asphalt tanks with hot oil recirculation system from an onsite furnace. No intentional discharge occurs from those operations.

RESPONSE 51

EPA notes the comment.

COMMENT 52

Section 6.2.6 - ExxonMobil has halted the practice of allowing truck wash water to enter the site drainage system. The truck washing services used onsite collect the wash water and haul it offsite for proper treatment and disposal.

RESPONSE 52

EPA notes the comment.

COMMENT 53

Section 6.2.7 – Regarding hydrostatic test water sampling procedures, there is an incorrect reference to Part 1.A. 9 of the permit. It should refer to Part 1.A.3.r (3).

RESPONSE 53

EPA notes the comment No changes to final permit have been made as a result of this comment.

COMMENT 54

Section 6.2.8 - The description of ExxonMobil's management practices for storm water from dock secondary containment is inaccurate. The following is a more accurate description.

"The marine vessel dock has a steel drip pan located beneath each of the manifold areas where transfer lines connect to the manifold. ExxonMobil keeps these drip pans covered to exclude storm water, except during transfer operations. After transfer operations any product in the drip pans is pumped into the facility's transfer piping.

The greater area around each dock manifold is equipped with a larger area of secondary containment to manage possible leaks from flanges, valves and fittings during operation, construction or maintenance activities. Any spills to these areas are cleaned up immediately. However a small residue of oil may remain. Storm water that has come in contact with this residue is loaded onto a vacuum truck and discharged into the head of the treatment works."

RESPONSE 54

EPA notes the comment. No changes to final permit have been made as a result of this comment.

COMMENT 55

Section 6.2.9, first paragraph – The first paragraph incorrectly references the original OWS as a "distributor chamber". It still functions as an OWS, providing oil and solids separation.

RESPONSE 55

EPA is skeptical that the separation flume provides adequate treatment, as discussed in response 10.

COMMENT 56

Section 6.2.9, third paragraph, second sentence - The treatment works are inspected twice per day. Oil is not skimmed off twice per day. Oil is skimmed off as needed.

RESPONSE 56

EPA notes the comment. No changes to final permit have been made as a result of this comment.

COMMENT 57

Section 6.2.9, fourth paragraph, last sentence - The pumps in the first wet well chamber transfers water treated in the OWS system to Tank 140. What has been referred to in the past as "bypass" water does get treated by the OWS system but the treated water does not flow through (it is routed around) Tank 140.

RESPONSE 57

See response 10.

COMMENT 58

Section 6.2.9, fifth paragraph - The discussion of the water in the second wet well chamber is incomplete. In the additional information submitted with the application, ExxonMobil provided the following information regarding Outfall 001B under the heading Storm Water Management. This information more accurately and completely describes Outfall 001B.

“During storm events with intense precipitation, the rising level of water in the wet well may threaten to exceed baffle heights. In the event that no other storm water control method can sufficiently manage the excess flow, [one or] two 11,500 vertical turbine pumps are manually activated to lift the excess flow directly to the 72” culvert (001B), routed around Holding Tank No. 140. It is necessary to prevent water from rising above the system baffles so the baffles retain oil.”

The water discharged to Outfall 001B flows through and receives treatment by the combined OWS system consisting of the original OWS and the “new” OWS”, but does not flow through Tank 140. Outfall 001B is only used to prevent overflow to the two separators during heavy rainfall events. The Fact Sheet tends to characterize this flow as untreated bypass. Flow from the second wet well chamber is characteristic of water that has passed through the OWS system at flow rates that exceed the current rated capacity of the conventional OWS only, and has not passed through Tank 140. Water from the second wet well chamber discharges to Outfall 001. The ability to achieve the current permit limits for O&G during these emergency discharge events demonstrates that the OWS systems are adequate.

Outfall 001B is in the existing permit to describe the flow-from-process path, and provide a representative sampling location. EPA has eliminated Outfall 001B and provided no discussion about a sampling location for flows from this part of the treatment process. In the past this has been Outfall 001B, which has been inaccurately labeled as a “bypass.”

Additionally ExxonMobil believes the referenced section should be 6.3.1.1 and not 6.3.3.1.

RESPONSE 58

EPA disagrees that the discharges from outfall 001 (A or B) have consistently met the current permit limits. The effluent limits for PAHs are 0.031 µg/L for each of the 16 PAHs and the total sum of PAHs. The discharges have met the levels set for compliance enforcement which were based on analytical capabilities. However, on numerous occasions, concentrations of PAHs were measured which exceeded the effluent limits. Additional discussion regarding the characterization of outfall 001B is provided in response 10.

Since the effluent limits and monitoring requirements for outfall 001B are not longer in the permit, a sampling location for this location is no longer needed.

EPA agrees with the comment that the reference in the fifth paragraph of fact sheet section 6.2.9 should be to section 6.3.1.1 and not 6.3.3.1.

COMMENT 59

Section 6.2.9, seventh paragraph - This paragraph appears to be trying to describe the flow of storm water from areas within containment. If this is so, the opening sentence should read “Flow from areas of the site that are within the secondary containment are collected and manually pumped, after inspection, to the treatment works at a controlled rate typically within 1 -7 days after each rain event.”

If the sentence is describing storm water flows from areas outside secondary containment it should read, “Flow from areas that are outside secondary containment are collected, and either pumped or gravity flow to the treatment works as described in Section 6.2.1, and treated through the OWS during the rain event.”

RESPONSE 59

EPA notes the comment. No changes to final permit have been made as a result of this comment.

COMMENT 60

Section 6.3 third paragraph – As described in ExxonMobil's General Comments, EPA's rationale for basing these BPJ limits established in the 2005 RGP is unsupported.

RESPONSE 60

See response 1.

COMMENT 61

[A] Section 6.3.1 – The OWS system consists of two oil water separators. ExxonMobil believes that the operation of the separators was not fully explained in the permit renewal application and is further explained herein (as described orally during site visits and meetings). The original OWS (a corrugated plate separator (CPS)) is used for dry weather flows and first flush of storm water flows. Flows in excess of the original OWS' optimum design capacity are routed to the "new" OWS. The entire OWS system provides full treatment up to its combined optimum design capacity and partial treatment at higher flows. Storm water runoff from heavy rain events does not bypass the separator system.

[B] As described in ExxonMobil's General Comments, the facility has the obligation and duty to operate the treatment equipment correctly (40 CFR 122.41(e)). EPA's assertion that the treatment equipment is hydraulically overloaded is contradicted by the historic operating data reported in the site's discharge monitoring reports (DMR). For example, all but one of the monthly average O&G concentrations for Outfall 001A shown in EPA's DMR Summary for the Everett Terminal were less than 5.1 mg/L; the one higher value was 7.2 mg/L which is well below the current permit limit of 15 mg/L. At Outfall 001B, the DMR data likewise demonstrate that all but one monthly average O&G concentration was less than 5.1 mg/L; that concentration was 13.2 mg/L which is below the permit limit. These monitoring data for Outfalls 001A and 001B do not support the Agency's contention that the Everett Terminal oil-water separation system is hydraulically overloaded and cannot be used to justify including flow limitations on the treatment system in the permit.

[C] Any permit condition applied should not specify the flow rate and should allow flexibility in rating/re-rating the system for the optimum design flow, which is the approach used in the current permit. As indicated elsewhere, ExxonMobil is in the process of undertaking an investigation related to optimum design flow and will report the results when complete.

[D] The last sentence referring to the Standard Bypass Conditions in Part II is not applicable since bypasses of the OWS system do not occur and the permit allows discharges of "overflows" under the conditions of Part I.A.14.

RESPONSE 61

[A] A revised description of the treatment works is included in response 1. Although no changes have been made to the fact sheet, this response to comments serves as an addendum to the information in the fact sheet.

[B] As stated in the comment (part A), flows which exceed the treatment capacity of the treatment works are only partially treated prior to discharge at outfall 001B. If the discharge were solely composed of storm water, one would expect the concentrations of pollutants in the discharge from outfall 001B to be very low. As the comment points out, the "first flush" of storm water would pass long before the peak flows occur and necessitate discharge from outfall 001B. However, as the comment points out, higher concentrations of pollutants have been measured at outfall 001B than at

outfall 001A. In addition to oil and grease, from January 2002 to June 2008 PAHs were measured above the effluent limit (0.031 µg/L) in 32% of the samples from outfall 001A taken and in 58% samples from outfall 001B. Total PAH concentrations ranged from 0 (below detection) to 9 µg/L at outfall 001A and from 0 to 28 µg/L at outfall 001B. It is unclear as to whether this is because the flow is going through the treatment works at a higher rate without adequate detention time, because it is bypassing additional treatment and/or dilution in Tank 140, because higher flows include a greater mass of PAHs from groundwater contamination or due to a combination of these factors. Furthermore, the oil staining which is clearly visible up the walls and baffles in the separation flume, oil water separator, and wet wells and which is caked on top of separation baffles between separators and wet wells, indicates a history of repeated treatment works failure where discharges exceed the capacity of the system to remove oil. Photographs showing this condition (taken by EPA during site visits) are attached. Therefore, EPA believes that discharges from outfall 001B are not consistently subjected to adequate treatment in the treatment works.

[C] EPA agrees that the permit should provide flexibility in designing and operating the system. To that end, paragraph I.A.21 of the permit has been revised to allow for such flexibility, as discussed in response 33.

[D] EPA's intention in the permit is to distinguish between "overflows" and "bypasses". Although their timing cannot be anticipated, it is likely that very large rain events will occur occasionally that exceed the design capacity of the treatment works. EPA seeks to define these "overflow" conditions and allow for them. As defined in part II.B.4 of the permit, "bypasses" could occur, as unanticipated (or emergency) events where equipment failure causes the bypass, or as anticipated bypasses where equipment maintenance or improvements require a scheduled bypass. See, e.g., Notice of Anticipated Bypass, Arthur Powell (Superintendent, ExxonMobil-Everett Terminal) to Ellen Weitzler (Environmental Engineer, USEPA), August 25, 2008. Under these circumstances, part II.B.4 would still apply, and the permit condition has accordingly been retained.

COMMENT 62

Section 6.3.1.1 - Outfall 001B is not a bypass discharge. As described in ExxonMobil's General Comments, the discharge from Outfall 001B first flows through and receives treatment from the OWS system but does not flow through Tank 140. This discharge is different from Outfall 001A and is recognized as an allowable "overflow" process stream. It is necessary to operate the system to prevent system flooding and to maintain the integrity of the treatment works during severe weather incidents.

RESPONSE 62

EPA notes the comment. A new description of the discharge from outfall 001B is provided in response 1 (in section B of the BAT/BCT analysis).

COMMENT 63

Paragraph 1 Sentence 4 - Infiltrating groundwater does not contribute a constant flow of free oil to the treatment works. See Comment 12 and ExxonMobil's General Comments.

RESPONSE 63

See response 49 and 2.

COMMENT 64

Section 6.3.6.2 – EPA is basing the inclusion of MTBE limits in the permit on a sample that was collected from the influent to the OWS and it is thus not representative of the final discharge. The fate of MTBE in the OWS and subsequent storage tank has not been determined and therefore in influent sample cannot be assumed to represent the discharge at the final outfall. The Everett Terminal no longer stores or dispenses MBTE. As described in ExxonMobil's General Comments, EPA has a non-discretionary duty to demonstrate that a BPJ-based permit limit is appropriate for the Everett Terminal considering the factors at 40 CFR 125.3(c) and (d). The only condition for MTBE in the permit should be a monthly monitor and report-only requirement implemented through ExxonMobil's BMP for a period of one year, after which an evaluation of “reasonable potential” can be performed to assess the potential impacts on water quality and/or human health.

RESPONSE 64

See response 7.

COMMENT 65

Section 6.4.2 - The Fact Sheet and Draft Permit prohibit the discharge of detergent laden floor washings to Outfall 001 which is consistent with the Multi-Sector General Permit for Storm Water Associated with Industrial Discharges. ExxonMobil interprets this to mean that floor washings free of detergents are approved for discharge to Outfall 001, which is not stated as such in the Permit, Part I.A.8.

RESPONSE 65

ExxonMobil's interpretation is mistaken. As stated in part I.A.8 of the permit, discharge of floor washings from inside the maintenance garage is prohibited. The Multi-Sector General Permit (MSGP) does allow for “*pavement wash waters where no detergents are used and no spills or leaks of toxic or hazardous materials have occurred (unless all spilled material has been removed)*” (MSGP part 1.2.2.2.7). However, EPA has determined that the maintenance garage floor is not “pavement”, that wastewater generated from vehicle maintenance is process wastewater, and that the separation treatment available at the treatment works does not provide adequate treatment. This conclusion is consistent with EPA's implementation of the MSGP and the industrial storm water NPDES individual permits at other facilities in Massachusetts, such as the seven Chelsea Creek bulk petroleum storage facility permits which were issued in 2005 (see <http://www.epa.gov/region1/npdes/chelseacreekfuelterminals/index.html>).

Cynthia Liebman of CLF submitted comments 66 through 77. (Note: Footnotes provided in comments have been re-numbered to as to be distinct from footnotes provided by previous commenters)

COMMENT 66

Monitoring vs Numeric Effluent Limits

In general, EPA should more thoroughly explain how the agency determined which discharges would have numeric limits and which the facility would only have to report.

RESPONSE 66

EPA interprets this general comment as a preface to the more specific comments that follow. EPA responses to CLF's comments that follow add to the explanations provided in the fact sheet.

COMMENT 67

Maintenance garage floor washings should be regulated and treated under the NPDES permit or ExxonMobil should obtain permission to discharge from the MWRA before the final permit is issued.

The Fact Sheet states that, while some other water discharges at the Everett Terminal contain very low levels of contamination, the wash water collected via the floor drains in the maintenance garage could contain petroleum and detergents from vehicles. The draft permit prohibits maintenance garage floor washings from discharge via outfall 001. EPA suggests that ExxonMobil apply to the Massachusetts Water Resource Authority for discharge of the washings into the MWRA sewers.

These waters should be properly treated before being discharged into the Island End River. Therefore, EPA should ensure that, before a final permit is issued, ExxonMobil has sought permission from the MWRA to discharge the washings into MWRA sewers and that the washings will be treated before being discharged into a water of the United States. If EPA cannot receive confirmation that the washings will be discharged in this way before a final permit is issued, the final permit should require that ExxonMobil treats the washings so that they comply with all terms of the permit before they are discharged via outfall 001.

RESPONSE 67

The suggestion in the fact sheet that ExxonMobil obtain MWRA permission to discharge maintenance garage floor washing to the sewers was made to demonstrate that viable alternative discharge options exist for this prohibited discharge. However, ExxonMobil may choose another alternative to meet this permit requirement. For example, ExxonMobil may choose to no longer wet wash their maintenance floors, move their maintenance activities or collect and transport the floor washings to an off-site treatment facility.

COMMENT 68

Sampling protocol must ensure that discharges of pollutants of concern are detected and the facility cannot systematically evade detection.

In general, the sampling protocol is an essential component of a NPDES permit because it provides a basis for EPA to determine which pollutants are present in a facility's effluent, and whether numeric effluent limitations for various pollutants should be required. EPA is required to set effluent limitations for pollutants EPA determines may be discharged at a level that will "cause" or "have the potential to cause, or contribute to an excursion above" these water quality standards.³⁹

In the current permit, 1/month sampling frequency is defined as sampling one significant rainstorm in each calendar month. The draft permit defines the same frequency as sampling one event in each calendar month. Why did the EPA make the change, and how will the

³⁹ See 40 C.F.R. 122.44(d)(i)-(iii)

sampling protocol in the draft permit ensure that the permit is equally as, or more protective of, water quality as the current permit? If discharges of petroleum products and other pollutants at this facility would be expected to correlate with rainfall events, then ExxonMobil should be required to sample in connection with significant rainfall events. If not, then EPA should explain how the “routine sampling program” that ExxonMobil is required to implement in Part I.A.1 of the permit (see footnote 1 [of the draft permit]), will ensure the facility cannot systematically evade reporting discharges of petroleum and other pollutants by adjusting its testing schedule around operations or other variables.

RESPONSE 68

There is no intended difference between a “significant rainstorm” and an “event” in the permit language from the current and the new permit. For clarity, EPA has revised the language in footnote one of the permit to require sampling in a significant rain event.

The requirement for a routine sampling program has been removed from the permit (see response 24) since the permit specifies clearly the frequency and type of sampling to be conducted and reported.

COMMENT 69

Monitoring for pollutants contributing to whole effluent toxicity is too infrequent.

EPA offers a very terse explanation of how monitoring requirements were determined for whole effluent toxicity (WET).⁴⁰ In order to ensure that Massachusetts Water Quality Standards are met, CLF recommends that EPA increase the monitoring frequencies for pollutants contributing to whole effluent toxicity. The Massachusetts Water Quality Standards state that “[a]ll surface water shall be free from pollutants in concentrations or combinations that are toxic to humans, aquatic life or wildlife.”⁴¹ For pollutants not specifically listed in the Massachusetts regulations, the Massachusetts Water Quality Standards adopt the National Recommended Water Quality Criteria: 2002, EPA 822-R-02-047, November 2002 as the allowable receiving water concentrations for affected waters.⁴² EPA is required to set effluent limitations for pollutants EPA determines may be discharged at a level that will “cause” or “have the potential to cause, or contribute to an excursion above” these water quality standards.⁴³

By requiring ExxonMobil to monitor for chemicals contributing to WET, such as lead and chromium, only twice per year, EPA will not generate an adequate base of information to make this determination whether ExxonMobil’s discharges of metals create reasonable potential for water quality standards violation, and consequently whether effluent limitations are necessary for those pollutants. Metals contributing to whole effluent toxicity should be monitored more frequently than twice per year.

⁴⁰ Fact Sheet, 21.

⁴¹ 314 CMR 4.05(e)

⁴² *Id.*

⁴³ See 40 C.F.R. 122.44(d)(i)-(iii)

RESPONSE 69

EPA agrees with the comment. Although biannual metals analyses are required by the current permit's WET test protocol, ExxonMobil has only submitted two such results since the current permit was issued in 2000. The two samples were for outfall 001B and taken in 2007 (see 2006 and 2007 WET test wet chemistry results in Attachment B). The limited results submitted so far indicate potentially elevated levels of lead, copper, zinc nickel and aluminum. Additional data would provide a more robust statistical basis for evaluating the reasonable potential for water quality standards violation when the permit requirements are next evaluated for permit reissuance or modification. The final permit includes quarterly sampling for metals.

COMMENT 70

Whole effluent toxicity testing protocol may be insufficient.

The current permit for the Everett Terminal mandates a WET test using Mysid Shrimp as the test organism. The draft permit puts forth WET testing procedures that include Mysid Shrimp and the Inland Silversid. However, due to variation in species sensitivity, "EPA recommends a minimum of three species representing three different phyla (e.g., a fish, an invertebrate, and a plant) be used to test an effluent for toxicity."⁴⁴ EPA should explain why it has required only two species for ExxonMobil's WET testing.

RESPONSE 70

The permit requires 48-Hour Static Acute Whole Effluent Toxicity testing of aquatic organism survival in discharge from outfall 001 twice per year. Red microalgae, the marine plant species identified by EPA for WET testing in marine waters, is not included as a test species because it is only tested for chronic reproductive impacts which, for plants, takes seven to nine days.

COMMENT 71

EPA should more thoroughly explain how numeric limits for volatile organic compounds were determined.

Benzene, toluene, ethylbenzene, and three xylene compounds, collectively called BTEX, are volatile organic compounds that are highly toxic and found in high concentrations in gasoline and diesel fuel.⁴⁵ EPA does not clearly explain why some volatile organic compounds have numeric limits and others have reporting requirements. Furthermore, the relationship between the benzene numeric limitation and BTEX numeric limitation is not adequately described or justified.

The draft permit sets a maximum daily discharge limitation of 5 µg/l for benzene and 100 µg/l for BTEX. EPA states that these numeric limits are based on best professional judgment ("BPJ") and on technological capabilities of removing benzene from water.⁴⁶ This explanation lacks any detail on how a maximum daily discharge limitation of 100 µg/l for BTEX was established. EPA should explain this BPJ-based limit more thoroughly.

⁴⁴ U.S. EPA, Technical Support for Water Quality-based Toxics Control, EPA/505/2-90-001, 16 March 1991.

⁴⁵ Fact Sheet, 18.

⁴⁶ Fact Sheet, 19.

Furthermore, EPA fails to thoroughly explain how the two numeric limits interact. For example, does the permittee have a limit of 5 µg/l for benzene and a 95 µg/l limit to be applied to toluene, ethylbenzene and total xylenes in the aggregate? Why do toluene, ethylbenzene and total xylenes individually have reporting requirements and not numeric requirements like benzene?

RESPONSE 71

The effluent limit for BTEX was derived based on the treatability of using air stripping and liquid phased carbon adsorption, two technologies commonly used to remove volatile organic compounds from contaminated groundwater. Of the four gasoline constituents, benzene is the most difficult to remove since it is the least volatile, most soluble and least likely to adsorb onto activated carbon. Benzene serves as an indicator that the remaining gasoline constituents have also been treated.

Since the composition of gasoline is variable with regards to the relative proportion of benzene, toluene, ethylbenzene and xylenes, any one of the four BTEX compounds could be the dominant constituent. Therefore controlling the total of the four provides a secondary indicator for control of petroleum-related volatile organic compounds.

A recommended technology-based effluent limitation of 100 µg/L was derived by EPA in *Model NPDES Permit for Discharges Resulting From The Cleanup of Gasoline Released From Underground Storage Tanks* (EPA 1989). Using an EPA estimate that as much 15 mg/L of dissolved product remains in groundwater following free product recovery and vendor claims of 99.5 removal efficiency for BTEX removal in commercially available air strippers, EPA derived a potentially achievable total BTEX effluent concentration of 75 µg/L. EPA raised the recommendation to 100 µg/L to provide a margin of error for less than optimal field conditions. This total BTEX effluent limit is consistent with those in other individual permits for contaminated groundwater discharges in Massachusetts.

The benzene and BTEX effluent limits are independent. The aggregate effluent limit of 100 µg/L applies to the sum of the compounds. Therefore, a violation could occur with a benzene exceedance, a BTEX exceedance or both.

COMMENT 72

EPA does not adequately justify numeric discharge limits and monitoring requirements for PAHs.

[A] Polycyclic Aromatic Hydrocarbons (PAHs) are commonly found in gasoline and diesel fuel. EPA has set discharge limitations for sixteen PAHs in the draft permit.⁴⁷ Seven PAHs comprise Group I and each has a maximum daily discharge limit of 0.018 µg/L.⁴⁸ The remaining nine PAHs make up Group II and each has a maximum daily discharge limit of 0.031 µg/L. All PAHs have a quarterly monitoring requirement.⁴⁹ In the current permit, PAHs are regulated as one group.⁵⁰

⁴⁷ Part I.A.1.

⁴⁸ Id.

⁴⁹ Id.

⁵⁰ Part I.A.1.

Group I PAHs are “well known carcinogens” and Group II “can enhance or inhibit the response of the carcinogenic PAHs.”⁵¹ Furthermore, PAHs bioaccumulate in fish and shellfish and Island End River sediments have already been contaminated with coal tar residue, which is rich in PAHs. In 2004, the EPA’s National Recommended Water Quality Criteria (WQC) identified the sixteen PAHs individually and set a recommended maximum daily discharge limit of 0.018 µg/L for Group I PAHs.⁵²

[B] Given that PAHs can pose a serious threat to human health, that they are already present in the Island End River, and that this is the first time EPA will be setting limits for individual PAHs in a permit for the Everett Terminal, EPA has a responsibility to create limits that are sufficiently stringent to protect the health of humans and the environment.

EPA set the Group I discharge limit at the level recommended by WQC. EPA set the Group II discharge limit “based upon the EPA human health criterion for contaminated fish consumption in ExxonMobil’s 1991 NPDES permit.”⁵³ This explanation for the Group I and Group II numeric discharge limits and monitoring requirements contained in the draft permit does not answer some critical concerns. EPA should explain why the recommended level is stringent enough given that the Island End River has already been contaminated with bioaccumulative PAHs. Furthermore, EPA must support the contention that the 1991 permit levels for Group II are still appropriate sixteen years later.

[C] A quarterly measurement frequency leaves open large windows where violations can occur. Thus EPA should more thoroughly justify the decision to require quarterly testing for all sixteen PAHs, as opposed to monthly or weekly.

RESPONSE 72

A) The commenter has misinterpreted the current permit. The current permit regulates PAHs as a group and individually. The effluent limit for each PAH is 0.031µg/L and the total of all the PAHs is 0.031 µg/L. This was based on the 1986 Water Quality Criteria which listed “polynuclear aromatic hydrocarbons” as a priority pollutant. The 2006 National Recommended Water Quality Criteria no longer include PAHs as a categorical priority pollutant. Therefore, a categorical effluent limit is no longer applicable. Since 1986, new criteria have been developed for all but four of the individual PAHs. All of the PAHs remain priority pollutants.

B) The commenter has misunderstood the current permit. The water quality-based effluent limits for PAHs *were* initially set for individual compounds in the 1991 permit, as discussed above. The basis for those limits was explained in the fact sheet for that permit as follows:

“For the maximum protection of human health from the potential carcinogenic effects due to exposure PAHs through ingestion of contaminated water and contaminated aquatic organisms, the ambient water concentration should be zero based on the non-threshold assumption for these chemicals. However, a zero level may not be attainable at the present time. The corresponding EPA recommended criterion, set forth in 45 FR 79318 (November 28, 1980), estimated at 10^{-6} (one in a million) increase of cancer risk over the lifetime, is 31.1 nanograms per liter (ng/l) based on consumption of contaminated fish. Therefore, based upon EPA recommended human health criterion

⁵¹Fact Sheet, 15-17.

⁵² Fact Sheet, 17.

⁵³ Id.

of 31.1 ng/l for contaminated fish consumption, the effluent limit of 31.1 ng/l has been set at end of pipe of outfall 001 to prevent the discharge of PAHs at levels which pose a threat to human health.”

In the years since 1991, the National Recommended Water Quality Criteria (WQC) have been revised to reflect new health and aquatic life risk data. Whereas the 1986 WQC for PAHs was 0.031 µg/L for all sixteen PAHs (for human health assuming consumption of organisms only), WQC have now been issued for individual PAHs. The WQC for each of the seven Group I PAHs is now lower at 0.018 µg/L (EPA, 2006). The WQC for the Group II PAHs varies from 140 µg/L for fluoranthene to 40,000 µg/L for anthracene. The most recently issued WQC (EPA, 2006) do not include WQC for acenaphthylene, benzo(ghi)perylene, naphthalene, or phenanthrene. EPA believes that imposition of effluent limitations equal to or exceeding currently recommended national water quality criteria is sufficient to ensure compliance with the Massachusetts Water Quality criterion for toxic pollutants.

Although there is no justification for imposing more stringent water quality-based effluent limits for Group II PAHs at this time, EPA shares the commenter’s concern about recontamination of sediments in the Island End River, and therefore has determined that no relaxation of such limits would be appropriate.⁵⁴ The fact that the Island End River is impaired for priority organics was another factor that led EPA to this conclusion. Finally, EPA weighed the potential adverse effects these toxic pollutants have on human health as an additional consideration in its decisionmaking. EPA has also reduced the compliance thresholds for Group II PAHs to reflect lower detection limits which are now achievable.

C) EPA agrees with the commenter regarding PAH monitoring frequency and has revised the permit to require monthly monitoring for all sixteen PAHs. EPA has conducted a statistical evaluation of the monitoring frequencies (PAH Sampling Frequency Memorandum to File dated 9/19/08) and has concluded that monthly monitoring will result in greater confidence of the permittee’s compliance with the effluent limit. Monthly sampling is consistent with the sampling requirements for other organic parameters limited in the permit as well as enforcement monitoring at other bulk petroleum storage facilities in the area (see ConocoPhillips internal outfall 002 monitoring for PAHs). Therefore, the PAH monitoring frequency has been increased in the final permit from quarterly to monthly.

COMMENT 73

EPA should thoroughly explain how the numeric discharge limitation for MTBE was reached.

Methyl-tertiary-butyl-ether (MTBE) is a contaminant found in gasoline which is of particular concern because of its high solubility in water.⁵⁵ MTBE has been detected at the ExxonMobil Everett Terminal at levels as high as 381 µg/l. CLF supports EPA’s decision to include a numeric effluent limit for MTBE in the draft permit. However, EPA’s explanation of how it decided on a maximum daily discharge limit of 70 µg/l is lacking in detail.

In the fact sheet, EPA states that “[m]onitoring reports from gasoline remediation sites in New England demonstrates that using best available technology (e.g. air stripping and or carbon adsorption) a MTBE limit of 70 µ/l can be consistently met by a properly designed and

⁵⁴ Although the WQC for acenaphthylene, benzo(ghi)perylene, naphthalene, or phenanthrene is higher than the current effluent limit for Group II PAHs, these factors also led EPA to conclude that weakening these limits would not be sufficiently protective of receiving water quality.

⁵⁵ Fact Sheet, 19.

maintained treatment system.”⁵⁶ That is the totality of EPA’s explanation for choosing 70 µl as the limit for MTBE. EPA should elaborate on this limit, give evidence supporting its conclusion, and clearly state whether there is a lower level that can be consistently met using best available technology.

RESPONSE 73

EPA considered both water quality and available technologies in setting the effluent limit for MTBE. Although MTBE has been identified by as a potential carcinogen, EPA has not yet issued water quality criteria for MTBE. Although EPA has issued a drinking water advisory⁵⁷ for MTBE in drinking water, designated uses for Island End River do not include drinking water and therefore drinking water criteria do not apply to this discharge.

MTBE removal in pump and treat systems can be achieved using carbon adsorption, air stripping, chemical oxidation or biotreatment.⁵⁸ For the site remediation projects in Massachusetts (where EPA Region 1 maintains NPDES permitting authority), EPA requires monitoring and reporting of both influent and effluent samples. Monitoring reports reviewed in the preparation of the Remediation General Permit (MAG910000) showed that concentration of MTBE in water have been effectively treated to 70 µg/L or less in Massachusetts. EPA has derived the technology-based limits on the removal of petroleum-related toxic pollutants (benzene, ethylbenzene and toluene) using air stripping and carbon adsorption as best available technology. Based on the reports from groundwater treatment systems at other facilities in New England, EPA estimates that the MTBE limit of 70 µg/L is consistently achievable using this same technology.

COMMENT 74

The final permit should regulate pH in a manner consistent with Massachusetts Water Quality Standards.

The current permit states that “[t]he pH of the effluent shall not be less than 6.5 nor greater than 8.5 at any time, unless these values are exceeded due to natural causes or as a result of the approved treatment process.”⁵⁹ The draft permit states that “[t]he pH of the effluent shall not be less than 6.5 nor greater than 8.5 at any time unless these values are exceeded as a result of natural causes.”⁶⁰ The Massachusetts water quality standards for Class SB waters says that pH “[s]hall be in the range of 6.5 through 8.5 standard units and not more than .2 units outside the natural background range. There shall be no change from natural background conditions that would impair any use assigned to this Class.”⁶¹

CLF supports the change in the pH effluent limitation insofar as the draft permit disallows excursions from the 6.5-8.5 range based on the treatment process. However, CLF requests that

⁵⁶ Fact Sheet, 20.

⁵⁷ U.S. EPA, Drinking Water Advisory: Consumer Acceptability Advice and Health Effects Analysis on Methyl Tertiary-Butyl Ether (MtBE), EPA-822-F-97-009, December 1997

⁵⁸ U.S. EPA, Technologies for Treating MtBE and Other Fuel Oxygenates, EPA 542-R-04-009, May 2004.

⁵⁹ Part I.A.3c.

⁶⁰ Part I.A.3

⁶¹ 314 CMR 5.04(4)(b)(a).

EPA explain why the draft permit varies from the water quality standard and also should define what constitutes a “natural cause” of pH fluctuation.

RESPONSE 74

The Massachusetts WQSs apply to the receiving water and not directly to the outfall. There is no requirement that the language in the permit exactly mimic the WQS. However, EPA believes that the permit limit for pH is sufficient to ensure compliance with WQS.

At ExxonMobil operations do not involve pH adjustments or storage of acid or alkaline chemicals which would contribute to a water quality violation. DMR data from outfalls 001A and 001B indicate that pH has been consistently within the permitted range for the last five years.

The term “natural background range” is not defined by Massachusetts WQSs. The region affords the term “natural causes” its ordinary, plain English meaning. Rainfall is one example of a natural cause of pH fluctuation.

No changes to the permit have been made as a result of this comment.

COMMENT 75

Grab Sampling vs. Composite.

EPA guidance has stated that grab testing has a high probability of missing the toxicity peaks for variable effluents.⁶² Why did EPA choose grab testing over composite testing?

RESPONSE 75

Composite testing is used frequently to monitor wastewater treatment plant effluent and process wastewater where a 24 hour or other operational period can expect to yield consistent results and the additional expense of collecting a composite sample over a fixed period of time can be expected to yield meaningful data. In this case, early and later storm water flows collected during a rain event is collected in containment areas, the oil water separator and wet wells. Therefore the combined storm water and groundwater discharge is effectively “composited” by the nature of the collection and treatment facilities.

COMMENT 76

OWS Retrofits.

What retrofits are available for the OWS inlet to ensure that the design capacity of the OWS is not exceeded and that all discharges are treated through it?

RESPONSE 76

The permit requirement to install a “fixed and secure” flow control device has been removed from Part I.A.21.a in response to a comment from the permittee (see comment 33). In its place, the permit now specifies that the maximum design capacity of the treatment system be certified and that that design capacity not be exceeded. The selection of the flow control method is the responsibility of the permittee. Flow controls may include a locked valve on the OWS inlet pipe, a permanent restriction in the inlet pipe diameter or discharge pump selection or throttling.

⁶² U.S. EPA, Technical Support for Water Quality-based Toxics Controls, EPA/505/2-90-001, March 13, 1991.

COMMENT 77

How did EPA establish the notification levels outlined in Part 1.A.20 of the draft permit?

RESPONSE 77

The notification levels outlined in Part 1.A.20 of the draft permit are based on 40 CFR § 122.42(a).

Roger Frymire submitted the following comment:

COMMENT 78

Thank you for the opportunity to submit comments on this permit. Where it reaches the Island End River, this outfall has been one of the worst ongoing pollution problems in the Mystic Watershed during the eight years I have been a volunteer water quality monitor there.

I laud the EPA and DEP for the more stringent controls in the draft permit, but note there is no actual monitoring/reporting requirement for the diesel odors which always accompany flows here, and the sheens and slicks which have been present on about half of my 20 visits over the last four years. Both objectionable odors and visible sheens are in direct violation of the applicable state water quality standards.

At the hearing, I submitted 100MB of photographs and movie clips on CD showing slicks on two dates this year. On those two occasions, I also sampled for total Total Petroleum Hydrocarbons/Petroleum Hydrocarbon Identification. Those results were submitted with the Mystic River Watershed comments. The pipe of interest is identified as CHEx02. The main point to note here is that the hydrocarbon in greatest quantity varies from event to event, and even within the same event, but always is one of the products handled by ExxonMobil.

In December 2003, this pipe was sampled as well as three other pipes which are on the shore of the ExxonMobil Terminal facility. This data report is attached as a Word document. The three additional pipes are called EEx03, EEx04, and EEx05. The first of these had a bacterial concentration in excess of water quality standards. The first and last had a salinity reading much fresher than seawater, so are an additional source of suspect groundwater discharge from this facility.

All three pipes are at or just below the high tide mark. '03 is a bare pipe; '04 is a highly decrepit pipe which used to extend on piles beyond the piers; '05 is in a concrete seawall. An attached orthophotomap shows their approximate locations.

Also attached is a photo of the collapsing pipe EEx04. Although the salinity here was much nearer seawater, it is hard to believe such a decrepit pipe is not infiltrating significant groundwater.

Again, thank you for this opportunity to comment. I believe the new permit could go a long way towards making the Island End River more ecologically sound.

RESPONSE 78

EPA agrees that sheens, slicks and odors described by the commenter violate Massachusetts Water Quality Standards applicable to the Island End River. The source of the sheen is currently unclear. As discussed in response 12, EPA does not rule out the possibility that oily groundwater may be infiltrating into gravity pipes downstream of the outfall 001 monitoring location on the ExxonMobil property and discharging, via the 1600 foot culvert to Island End River. However, at present, EPA does not have sufficient information to definitively identify the source of the sheen, slicks and odors. During site visits to ExxonMobil, EPA could not see or sample outfall 001 (on the ExxonMobil

property) since it was beyond the culvert access point and, according to ExxonMobil personnel, is always submerged. Beyond the scope of this NPDES permit, EPA is currently working with MassDEP and concerned citizens, such as the MRWA, to identify and correct illegal discharges in the Mystic River Watershed. If it is determined that the source of objectionable odors and sheens in the Island End River is the result of discharges from ExxonMobil, EPA may reopen and modify the permit based on this new information.

Outfalls EEx03, EEx04, and EEx05, as identified on the photo attached to the comment letter (see Attachment C), are not owned by ExxonMobil and are not covered by NPDES permit MA0000833 and, therefore, are beyond the scope of this response to comments.

REFERENCES

EPA, Letter to David B. Struhs, MassDEP Commissioner authorizing SB(CSO) and B(CSO) water quality classifications, February 27, 1998.

EPA, *National Recommended Water Quality Criteria*, 4304T, Office of Water, Office of Science and Technology, 2006.

EPA, *Model NPDES Permit for Discharges Resulting From The Cleanup of Gasoline Released From Underground Storage Tanks*, Office of Water, Office of Underground Storage Tanks, June 1989.

ATTACHMENT A

Comment letter from Minka Van Beuzekom, Mystic River Watershed Association

ATTACHMENT B

**Updated Discharge Monitoring Report Summary
2002 – 2007**

**Summary of Whole Effluent Toxicity Test (WET) Wet Chemistry Results
2006 – 2007**

ATTACHMENT C

Figure 1
(see Response 78)



Figure 1 – Location of Mystic River Outfalls Described in Comment 78

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),

ExxonMobil Oil Corporation

is authorized to discharge from a facility located at

**ExxonMobil Everett Terminal
52 Beacham Street
Everett, MA 02149**

to receiving water named

Island End River/Mystic River Watershed (MA71)

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

This permit shall become effective on **(See ** below)**

This permit and the authorization to discharge shall 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 6, 2000

This permit consists of 11 pages in Part I, including effluent limitations and monitoring requirements, 25 pages in Part II, including General Conditions and Definitions, and 10 pages in Attachment A, Marine Acute Toxicity Test Procedure and Protocol.

Signed this day of

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

Glenn Haas, Director
Division of Watershed Management
Department of Environmental Protection
Commonwealth of Massachusetts
Boston, MA

** This permit will become effective on the date of signature if no comments are received during public notice. If comments are received during public notice, this permit will become effective on the first day of the calendar month immediately following 60 days after signature.

DRAFT

PART I

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

- During the period beginning from the effective date and lasting through expiration, the permittee is authorized to discharge treated effluent from **Serial Number Outfall 001** to the Island End River. The discharge is comprised of storm water, groundwater, hydrostatic test water, boiler condensate, fire testing water, truck wash water and effluent pond water. Such discharge shall: 1) be limited and monitored by the permittee as specified below; and 2) not cause a violation of the State Water Quality Standards of the receiving water.

Effluent Characteristic	Units	Discharge Limitation		Monitoring Requirements ⁽¹⁾	
		Average Monthly	Maximum Daily	Measurement Frequency ⁽²⁾	Sample Type
Flow Rate ⁽³⁾	MGD	Report	Report	Continuous	Meter
Total Flow ⁽⁴⁾	Mgal/month	Report Monthly Total	----	Continuous	Meter
Total Suspended Solids (TSS)	mg/l	30	100	1/Month	Composite
Oil and Grease (O&G)	mg/l	----	5	1/Month	Grab
Mercury	mg/l	----	Report	1/Month	Grab
Available Cyanide ⁽⁵⁾	µg/L	----	Report	1/Month	Grab
pH ⁽⁶⁾	S.U.	----	6.5 to 8.5	1/Month	Grab
<u>Polynuclear Aromatic Hydrocarbons (PAHs)⁽⁷⁾</u>					
Benzo(a)anthracene	µg/L	----	0.018	Quarterly	Grab
Benzo(a)pyrene	µg/L	----	0.018	Quarterly	Grab
Benzo(b)fluoranthene	µg/L	----	0.018	Quarterly	Grab
Benzo(k)fluoranthene	µg/L	----	0.018	Quarterly	Grab
Chrysene	µg/L	----	0.018	Quarterly	Grab
Dibenzo(a,h)anthracene	µg/L	----	0.018	Quarterly	Grab
Indeno(1,2,3-cd)pyrene	µg/L	----	0.018	Quarterly	Grab
Acenaphthene	µg/L	----	0.031	Quarterly	Grab
Acenaphthylene	µg/L	----	0.031	Quarterly	Grab
Anthracene	µg/L	----	0.031	Quarterly	Grab
Benzo(ghi)perylene	µg/L	----	0.031	Quarterly	Grab
Fluoranthene	µg/L	----	0.031	Quarterly	Grab
Fluorene	µg/L	----	0.031	Quarterly	Grab
Naphthalene	µg/L	----	0.031	Quarterly	Grab
Phenanthrene	µg/L	----	0.031	Quarterly	Grab
Pyrene	µg/L	----	0.031	Quarterly	Grab

DRAFT

Part I.A.1 (Continued)

Effluent Characteristic	Units	Discharge Limitation		Monitoring Requirements ⁽¹⁾	
		Average Monthly	Maximum Daily	Measurement Frequency ⁽²⁾	Sample Type
<u>Volatile Organic Compounds (VOCs)</u>					
Benzene	µg/l	----	5	1/Month	Grab
Toluene	µg/l	----	Report	1/Month	Grab
Ethylbenzene	µg/l	----	Report	1/Month	Grab
Total Xylenes	µg/l	----	Report	1/Month	Grab
BTEX	µg/l	----	100	1/Month	Grab
Ethanol	µg/l	----	Report	1/Month	Grab
Methyl Tertiary-Butyl Ether (MTBE)	µg/l	----	70	1/Month	Grab
<u>Whole Effluent Toxicity (WET)^(8,9)</u>					
LC ₅₀	%	----	≥50	2/year	Grab
Hardness	mg/l	----	Report	2/year	Grab
Total Solids	mg/l	----	Report	2/year	Grab
Ammonia	mg/l	----	Report	2/year	Grab
Total Organic Carbon	mg/l	----	Report	2/year	Grab
Total Cadmium	mg/l	----	Report	2/year	Grab
Total Chromium	mg/l	----	Report	2/year	Grab
Total Lead	mg/l	----	Report	2/year	Grab
Total Copper	mg/l	----	Report	2/year	Grab
Total Zinc	mg/l	----	Report	2/year	Grab
Total Nickel	mg/l	----	Report	2/year	Grab
Total Aluminum	mg/l	----	Report	2/year	Grab
Total Magnesium	mg/l	----	Report	2/year	Grab
Total Calcium	mg/l	----	Report	2/year	Grab

Footnotes:

1. All sampling shall be representative of the effluent that is discharged through outfall 001 to the Island End River. A routine sampling program shall be developed in which samples are taken at the same location. Any deviations from the routine sampling program shall be documented in correspondence appended to the applicable discharge monitoring report that is submitted to EPA. In addition, all samples shall be analyzed using the analytical methods found in 40 CFR Part 136, or alternative methods approved by EPA in accordance with the procedures in 40 CFR Part 136.
2. Sampling frequency of 1/month is defined as the sampling of one (1) event in each calendar month. Sampling frequency of quarterly is defined as the sampling of one (1) event in each quarter. Quarters are defined as the interval of time between the months of: January through

DRAFT

March, inclusive; April through June, inclusive; July through September, inclusive; and October through December, inclusive. **Quarterly sampling shall be performed concurrently with the monthly monitoring event.** The permittee shall submit the results to EPA and MassDEP of any additional testing done to 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).

3. For Flow Rate, the permittee shall report the maximum daily flow rate of water discharged by the facility during the reporting period. The maximum daily flow rate, which is to be measured in the units of millions of gallons per day (MGD), shall be based upon the totalizer flow results or an approved equivalent flow measuring device.
4. For Total Flow, the value reported represents the sum of the flow for each day that water is discharged during that month. The total monthly flow rate shall be based upon the totalizer flow results or an approved equivalent flow measuring device and shall be reported in the units of millions of gallons/month (Mgal/month). In the event of an overflow of the treatment system, the date and total daily volume of untreated overflow shall be reported for each event and submitted with the monthly discharge monitoring report.
5. Available cyanide shall be analyzed using a detection limit less than or equal to 2.0 µg/l.
6. See Part I.A.3., Page 5
7. See Part I.A.18, Page 6
8. LC50 (Lethal Concentration 50 Percent) is the concentration of wastewater (effluent) causing mortality to 50 percent (%) of the test organisms. The "50 % or greater limit" is defined as a sample which is composed of 50 % or greater effluent, the remainder being dilution water. The limit is considered to be a maximum daily limit.
9. The permittee shall conduct 48-Hour Static Acute Whole Effluent Toxicity (WET) test on effluent samples from Outfall 001 two times a year, in March and September, using one specie, Mysid Shrimp (Mysidopsis Bahia) and following the protocol in Attachment A (Marine Acute Toxicity Test Procedure and Protocol dated September 1996). Toxicity test results are to be submitted within 30 days after the sampling date with the routine Discharge Monitoring Reports (DMRs).

DRAFT

Part 1.A. (Continued)

2. The discharges either individually or in combination shall not cause or contribute to a violation of State Water Quality Standards of the receiving waters.
3. The pH of the effluent shall not be less than 6.5 nor greater than 8.5 at any time unless these values are exceeded as a result of natural causes.
4. The discharge shall not cause objectionable discoloration of the receiving waters.
5. The discharge shall not contain a visible oil sheen, foam, or floating solids at any time.
6. The discharge shall not contain materials in concentrations or combinations which are hazardous or toxic to human health, aquatic life of the receiving surface waters or which would impair the uses designated by its classification.
7. There shall be no discharge of tank bottom water and/or bilge water alone or in combination with storm water discharge or other wastewater.
8. There shall be no discharge of floor wash water from the interior of the facility maintenance garage.
9. The discharge shall not impart color, taste, turbidity, toxicity, radioactivity or other properties which cause those waters to be unsuitable for the designated uses and characteristics ascribed to their use.
10. Notwithstanding specific conditions of this permit, the effluent must not lower the quality of any classified body of water below such classification, or lower the existing quality of any body of water if the existing quality is higher than the classification.
11. The permittee shall inspect, operate, and maintain the O/W Separator(s) at the facility to ensure that the Effluent Limitations and Conditions contained in this permit are met. The permittee shall ensure that all components of the facility=s Storm Water Pollution Prevention Plan including those which specifically address the operation and maintenance of the O/W Separator(s) and other components of the storm water conveyance system are complied with.
12. Chemicals (e.g., disinfecting agents, detergents, emulsifiers, etc.) and bioremedial agents including microbes shall not be added to the collection and treatment systems without prior approval by the U. S. Environmental Protection Agency (EPA) and the Massachusetts Department of Environmental Protection (MassDEP).
13. There shall be no discharge of any sludge and/or bottom deposits from any storage tank(s), basin(s), and/or diked area(s) to the receiving waters. Examples of storage tanks and/or basins include, but are not limited to: primary catch basins, stilling basins, oil water separators, petroleum product storage tanks, baffled storage tanks collecting spills, and tank truck loading rack sumps.
14. Overflow of storm water and infiltrated groundwater shall not be subject to the limitations of outfall 001 if the collection and treatment facilities are designed, constructed, maintained and operated to treat the peak flow and total volume of storm water and groundwater which would result from a 10-year 24-hour precipitation event. The term “10-year 24 hour precipitation event” shall mean the maximum 24 hour precipitation event with a probable recurrence interval of once in 10 years. This information is available from National Oceanic & Atmospheric Administration, U.S. Department of Commerce.

DRAFT

15. No truck washing or hydrostatic testing shall occur during a storm event or following an overflow event until the potential for overflowing the treatment system has ceased.
16. EPA may modify this permit in accordance with EPA regulations in 40 Code of Federal Regulations (CFR) ' 122.62 and ' 122.63 to incorporate more stringent effluent limitations, increase the frequency of analyses, or impose additional sampling and analytical requirements.
17. The appearance of any size sheen attributable to the discharge from this facility shall be reported immediately by the permittee to the appropriate U.S. Coast Guard Officer in accordance with Section 311 of the Clean Water Act (CWA). This requirement is in addition to any reporting requirements related to EPA or MassDEP contained in this National Pollutant Discharge Elimination System (NPDES) permit.
18. Compliance/non-compliance for Polycyclic Aromatic Hydrocarbons (PAHs) will be based on the Minimum Level (ML) of analysis. The ML is defined as the level at which the entire analytical system gives recognizable mass spectra and acceptable calibration points. This level corresponds to the lower points at which the calibration curve is determined based on the analysis of the pollutant(s) of concern in reagent water. PAH analysis shall include the following compounds and their respective MLs as identified in parenthesis for each compound. benzo(a)anthracene (<0.05 µg/L), benzo(a)pyrene (<2.0 µg/L), benzo(b)fluoranthene (<0.1 µg/L), benzo(k)fluoranthene (<2.0 µg/L), chrysene (<5.0 µg/L), dibenzo(a,h)anthracene (<0.1 µg/L), indeno(1,2,3-cd)pyrene (<0.15 µg/L), and naphthalene (0.2 µg/L), acenaphthene (<0.5 µg/L), acenaphthylene (<0.2 µg/L), anthracene (<2.0 µg/L), benzo(ghi)perylene (<0.1 µg/L), fluoranthene (<0.5 µg/L), fluorene (<0.1 µg/L), naphthalene (<0.2 µg/L), phenanthrene (<0.05 µg/L), and pyrene (<0.05 µg/L).
19. The permittee shall attach a copy of the laboratory case narrative to the respective Discharge Monitoring Report Form submitted to EPA and MassDEP for each sampling event reported. The laboratory case narrative shall include a copy of the laboratory data sheets for each analysis (identifying the test method, the analytical results, and the detection limits for each analyte) and provide a brief discussion of whether all appropriate QA/QC procedures were met and were within acceptable limits.
20. 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:@
 - i One hundred micrograms per liter (100 µg/l);
 - ii Two hundred micrograms per liter (200 µg/l) for acrolein and acrylonitrile; five hundred micrograms per liter (500 µg/l) for 2,4-dinitrophenol; and one milligram per liter (1 mg/L) for antimony;
 - iii 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
 - iv 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:@

DRAFT

- i Five hundred micrograms per liter (500 µg/L);
 - ii One milligram per liter (1 mg/L) for antimony;
 - iii 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).
 - iv Any other notification level established by the Director in accordance with 40C.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.

21. Wastewater Treatment System Flow Control

- a. Within three months of the effective date of the permit, the permittee shall install a fixed and secure flow control device to the inlet of the existing oil/water separator to restrict flow to its maximum design flow (3,000 gallons per minute) or less. The flow through the oil/water separator shall not exceed its maximum design flow.
- b. Written notification and approval by EPA and the MassDEP shall be required, should the permittee propose changes to either the storm water conveyance or treatment systems which have the potential to cause the maximum design flow rate through the O/W Separator to be exceeded.

22. 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.

23. Hydrostatic Test Water Discharges

- a. The hydrostatic test water shall be monitored as described below and treated through the oil/water separator prior to being discharged through Outfall 001 to the Island End River. In addition, the flow of hydrostatic test water into the treatment system shall be controlled to prevent it from exceeding the maximum design flow rate of the treatment system.
- b. At a minimum, four (4) representative samples shall be taken of the hydrostatic test water: one (1) grab sample of the influent test water; and three (3) serial-grab samples of the hydrostatic test water effluent. The influent grab sample shall be taken approximately midway through the fill segment of the hydrostatic test procedure. The three (3) effluent serial-grab samples shall be taken over the duration of the entire discharge segment of the hydrostatic test procedure. The first effluent serial-grab sample shall be taken during the initial phase of discharge; the second around the midpoint; and the third near the end of the discharge. The effluent serial-grab samples shall be obtained before discharge into the treatment works and/or mixing with any storm water or other non-storm water flow.

These influent and effluent samples shall be analyzed for the following parameters:

DRAFT

Effluent Characteristic	Units	Sample Type
Total Suspended Solids (TSS)	mg/l	Grab
Oil and Grease (O&G)	mg/l	Grab
pH ⁽⁷⁾	S.U.	Grab
Dissolved Oxygen (DO)	mg/l	Grab
Total Residual Chlorine	mg/l	Grab
Benzene	mg/l	Grab
Toluene	mg/l	Grab
Ethylbenzene	mg/l	Grab
Total Xylenes	mg/l	Grab
Methyl tertiary-butyl ether	mg/l	Grab
<u>PAHs</u>		
Benzo(a)anthracene	µg/l	Grab
Benzo(a)pyrene	µg/l	Grab
Benzo(b)fluoranthene	µg/l	Grab
Benzo(k)fluoranthene	µg/l	Grab
Chrysene	µg/l	Grab
Dibenzo(a,h)anthracene	µg/l	Grab
Indeno(1,2,3-cd)pyrene	µg/l	Grab
Acenaphthene	µg/l	Grab
Acenaphthylene	µg/l	Grab
Anthracene	µg/l	Grab
Benzo(ghi)perylene	µg/l	Grab
Fluoranthene	µg/l	Grab
Fluorene	µg/l	Grab
Naphthalene	µg/l	Grab
Phenanthrene	µg/l	Grab
pyrene	µg/l	Grab

- c. Testing for total residual chlorine is only required when potable water or a similar source of water which is likely to contain a residual chlorine concentration is used for hydrostatic testing. Testing for MTBE is only required if the tank undergoing testing was recently (i.e., within three years of the proposed testing date) used to store gasoline containing MTBE.
- d. During discharge (i.e., approximately at the same time the three effluent grab samples are taken), the flow exiting the treatment system should be observed in order to prevent the inadvertent release of hydrocarbons to the receiving water(s). In the event that there is evidence of such a release (e.g., visible oil sheen and/or noticeable increase in turbidity of discharge water), the permittee shall immediately halt the discharge of hydrostatic test water and take steps to correct the problem.
- e. Any changes to these procedures must be approved by EPA and the MassDEP prior to their

DRAFT

implementation.

- f. The permittee shall submit a letter/report to EPA, the MassDEP, and the Director of Public Works of the municipality in which the facility is located, summarizing the results of the hydrostatic test within forty-five (45) days of completion of the test. This report shall contain: the date(s) during which the hydrostatic testing occurred; the volume of hydrostatic test water discharged; a copy of the laboratory data sheets for each analyses, providing the test method, the detection limits for each analyte, and a brief discussion of whether all appropriate QA/QC procedures were met and were within acceptable limits; and a comparison of the overall test results with the effluent limitations in this permit.
- g. The U.S. Environmental Protection Agency shall reserve the right to re-open the permit, in accordance with 40 CFR §122.62(a)(2), to limit hydrostatic test water discharges in the event that sampling results indicate that such discharge has a reasonable potential to cause or contribute to a violation of Massachusetts Water Quality Standards in the Island End River.

B. STORM WATER POLLUTION PREVENTION PLAN

1. The permittee shall develop, implement, and maintain a Storm Water Pollution Prevention Plan (SWPPP) designed to reduce, or prevent, the discharge of pollutants in storm water to the receiving waters identified in this permit. The SWPPP shall be a written document and consistent with the terms of this permit. The permittee shall comply with the terms of its SWPPP.
2. The SWPPP shall be completed or updated and signed by the Permittee within 90 days after the effective date of this Permit. The Permittee shall certify that the SWPPP has been completed or updated and that it meets the requirements of the permit. The certification shall be signed in accordance with the requirements identified in 40 CFR §122.22. A copy of this initial certification shall be sent to EPA and MassDEP within one hundred and twenty (120) days of the effective date of the Permit.
3. The SWPPP shall be consistent with the provisions for SWPPPs included in the most current version of the Multi-Sector General Permits for Storm Water Discharges Associated with Industrial Activities. (The current MSGP was issued October 30, 2000 – see 65 FR 64812-64815 section 4.) The SWPPP shall include best management practices (BMPs) for on-site activities that will minimize the discharge of pollutants in storm water to waters of the United States.
4. The SWPPP shall be prepared in accordance with good engineering practices, identify potential sources of pollution that may reasonably be expected to affect the quality of the storm water discharges, and describe and ensure implementation of practices which will be used to reduce the pollutants and assure compliance with this permit. Specifically, the SWPPP shall contain the elements listed below:
 - a. A pollution prevention team responsible for developing, implementing, maintaining, revising and ensuring compliance with the SWPPP.
 - b. A site description which includes a list of activities at the facility; a site map showing drainage areas and direction of storm water flows; receiving waters and outfall location; the location of industrial activities, storage, disposal, material handling; and all structural controls.
 - c. A summary of all pollutant sources which includes all areas where spills have occurred or could occur. For each source, identify the expected drainage and the corresponding pollutant.

DRAFT

- d. A summary of any existing storm water discharge sampling data.
 - e. A description of all storm water controls, both structural and non-structural. BMPs must include good housekeeping measures, preventative maintenance programs, spill prevention and response procedures, runoff management practices, and proper handling of salt or materials containing salt that are used for deicing activities. The SWPPP shall describe how the BMPs are appropriate for the facility. All BMPs shall be properly maintained and be in effective operating conditions.
5. All areas identified in the SWPPP shall be inspected, at least on a quarterly basis. Inspections shall occur beginning the 1st quarter after the effective date of the permit. EPA considers quarters as follows: January to March; April to June; July to September; and October to December.
 6. The permittee shall amend and update the SWPPP within 14 days for any changes at the facility affecting the SWPPP. Changes which may affect the SWPPP include, but are not limited to, the following activities: a change in design, construction, operation, or maintenance, which has a significant effect on the potential for the discharge of pollutants to the waters of the United States; a release of a reportable quantity of pollutants as described in 40 CFR Part 302; or a determination by the permittee or EPA that the SWPPP appears to be ineffective in achieving the general objectives of controlling pollutants in storm water discharges associated with industrial activity. Any amended or new versions of the SWPPP shall be re-certified by the Permittee. Such re-certifications also shall be signed in accordance with the requirements identified in 40 CFR §122.22
 7. The permittee shall certify at least annually that the previous year's inspections and maintenance activities were conducted, results were recorded, records were maintained, and that the facility is in compliance with the SWPPP. If the facility is not in compliance with any aspect of the SWPPP, the annual certification shall state the non-compliance and the remedies which are being undertaken. Such annual certifications also shall be signed in accordance with the requirements identified in 40 CFR §122.22. A copy of this annual certification shall be sent to EPA and MassDEP on, or before, every anniversary of the effective date of the permit. The permittee shall keep a copy of the current SWPPP and all SWPPP certifications (the initial certification, re-certifications, and annual certifications) signed during the effective period of this permit at the facility and shall make them available for inspection by EPA and MassDEP.

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 reports and evaluations required herein, shall be submitted to EPA at the following address:

EPA New England - Region 1
Water Technical Unit (SEW)
P.O. Box 8127
Boston, Massachusetts 02114

In addition, a second copy of each hydrostatic testing letter/report submitted in accordance with this permit shall be sent to EPA at the following address:

DRAFT

EPA New England - Region 1
OEP/Industrial Permits Branch
1 Congress Street, Suite 1100 (CIP)
Boston, Massachusetts 02114

Signed and dated Discharge Monitoring Report Form(s) and all other reports required by this permit shall also be submitted to the State at the following addresses:

Massachusetts Department of Environmental Protection
Northeast Regional Office
Bureau of Waste Prevention
205 B Lowell Street
Wilmington, MA 01887

and

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

D. STATE PERMIT CONDITIONS

1. This Discharge Permit is issued jointly by the EPA and the MADEP under Federal and State law, respectively. As such, all the terms and conditions of this permit are hereby incorporated into and constitute a discharge permit issued by the Commissioner of the MA DEP pursuant to M.G.L. Chap.21, ' 43.
2. 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 a 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.

NPDES PART II STANDARD CONDITIONS

(January, 2007)

TABLE OF CONTENTS

A. GENERAL CONDITIONS	Page
1. <u>Duty to Comply</u>	2
2. <u>Permit Actions</u>	2
3. <u>Duty to Provide Information</u>	2
4. <u>Reopener Clause</u>	3
5. <u>Oil and Hazardous Substance Liability</u>	3
6. <u>Property Rights</u>	3
7. <u>Confidentiality of Information</u>	3
8. <u>Duty to Reapply</u>	4
9. <u>State Authorities</u>	4
10. <u>Other laws</u>	4
B. OPERATION AND MAINTENANCE OF POLLUTION CONTROLS	
1. <u>Proper Operation and Maintenance</u>	4
2. <u>Need to Halt or Reduce Not a Defense</u>	4
3. <u>Duty to Mitigate</u>	4
4. <u>Bypass</u>	4
5. <u>Upset</u>	5
C. MONITORING AND RECORDS	
1. <u>Monitoring and Records</u>	6
2. <u>Inspection and Entry</u>	7
D. REPORTING REQUIREMENTS	
1. <u>Reporting Requirements</u>	7
a. Planned changes	7
b. Anticipated noncompliance	7
c. Transfers	7
d. Monitoring reports	8
e. Twenty-four hour reporting	8
f. Compliance schedules	9
g. Other noncompliance	9
h. Other information	9
2. <u>Signatory Requirement</u>	9
3. <u>Availability of Reports</u>	9
E. DEFINITIONS AND ABBREVIATIONS	
1. <u>Definitions for Individual NPDES Permits including Storm Water Requirements</u>	9
2. <u>Definitions for NPDES Permit Sludge Use and Disposal Requirements</u>	17
3. <u>Commonly Used Abbreviations</u>	23

NPDES PART II STANDARD CONDITIONS
(January, 2007)

PART II. A. GENERAL REQUIREMENTS

1. Duty to Comply

The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the Clean Water Act (CWA) and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application.

- a. The permittee shall comply with effluent standards or prohibitions established under Section 307(a) of the sludge use or disposal established under Section 405(d) of the CWA within the time provided in the regulations that establish these standards or prohibitions, even if the permit has not yet been modified to incorporate the requirements.
- b. The CWA provides that any person who violates Section 301, 302, 306, 307, 308, 318, or 405 of the CWA or any permit condition or limitation implementing any of such sections in a permit issued under Section 402, or any requirement imposed in a pretreatment program approved under Section 402 (a)(3) or 402 (b)(8) of the CWA is subject to a civil penalty not to exceed \$25,000 per day for each violation. Any person who negligently violates such requirements is subject to a fine of not less than \$2,500 nor more than \$25,000 per day of violation, or by imprisonment for not more than 1 year, or both. Any person who knowingly violates such requirements is subject to a fine of not less than \$5,000 nor more than \$50,000 per day of violation, or by imprisonment for not more than 3 years, or both.
- c. Any person may be assessed an administrative penalty by the Administrator for violating Section 301, 302, 306, 307, 308, 318, or 405 of the CWA, or any permit condition or limitation implementing any of such sections in a permit issued under Section 402 of the CWA. Administrative penalties for Class I violations are not to exceed \$10,000 per violation, with the maximum amount of any Class I penalty assessed not to exceed \$25,000. Penalties for Class II violations are not to exceed \$10,000 per day for each day during which the violation continues, with the maximum amount of any Class II penalty not to exceed \$125,000.

Note: See 40 CFR §122.41(a)(2) for complete “Duty to Comply” regulations.

2. Permit Actions

This permit may be modified, revoked and reissued, or terminated for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or notifications of planned changes or anticipated noncompliance does not stay any permit condition.

3. Duty to Provide Information

The permittee shall furnish to the Regional Administrator, within a reasonable time, any information which the Regional Administrator may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. The permittee shall also furnish to the Regional Administrator, upon request, copies of records required to be kept by this permit.

NPDES PART II STANDARD CONDITIONS

(January, 2007)

4. Reopener Clause

The Regional Administrator reserves the right to make appropriate revisions to this permit in order to establish any appropriate effluent limitations, schedules of compliance, or other provisions which may be authorized under the CWA in order to bring all discharges into compliance with the CWA.

For any permit issued to a treatment works treating domestic sewage (including “sludge-only facilities”), the Regional Administrator or Director shall include a reopener clause to incorporate any applicable standard for sewage sludge use or disposal promulgated under Section 405 (d) of the CWA. The Regional Administrator or Director may promptly modify or revoke and reissue any permit containing the reopener clause required by this paragraph if the standard for sewage sludge use or disposal is more stringent than any requirements for sludge use or disposal in the permit, or contains a pollutant or practice not limited in the permit.

Federal regulations pertaining to permit modification, revocation and reissuance, and termination are found at 40 CFR §122.62, 122.63, 122.64, and 124.5.

5. Oil and Hazardous Substance Liability

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from responsibilities, liabilities or penalties to which the permittee is or may be subject under Section 311 of the CWA, or Section 106 of the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA).

6. Property Rights

The issuance of this permit does not convey any property rights of any sort, nor any exclusive privileges.

7. Confidentiality of Information

- a. In accordance with 40 CFR Part 2, any information submitted to EPA pursuant to these regulations may be claimed as confidential by the submitter. Any such claim must be asserted at the time of submission in the manner prescribed on the application form or instructions or, in the case of other submissions, by stamping the words “confidential business information” on each page containing such information. If no claim is made at the time of submission, EPA may make the information available to the public without further notice. If a claim is asserted, the information will be treated in accordance with the procedures in 40 CFR Part 2 (Public Information).
- b. Claims of confidentiality for the following information will be denied:
 - (1) The name and address of any permit applicant or permittee;
 - (2) Permit applications, permits, and effluent data as defined in 40 CFR §2.302(a)(2).
- c. Information required by NPDES application forms provided by the Regional Administrator under 40 CFR §122.21 may not be claimed confidential. This includes information submitted on the forms themselves and any attachments used to supply information required by the forms.

NPDES PART II STANDARD CONDITIONS
(January, 2007)

8. Duty to Reapply

If the permittee wishes to continue an activity regulated by this permit after its expiration date, the permittee must apply for and obtain a new permit. The permittee shall submit a new application at least 180 days before the expiration date of the existing permit, unless permission for a later date has been granted by the Regional Administrator. (The Regional Administrator shall not grant permission for applications to be submitted later than the expiration date of the existing permit.)

9. State Authorities

Nothing in Part 122, 123, or 124 precludes more stringent State regulation of any activity covered by these regulations, whether or not under an approved State program.

10. Other Laws

The issuance of a permit does not authorize any injury to persons or property or invasion of other private rights, nor does it relieve the permittee of its obligation to comply with any other applicable Federal, State, or local laws and regulations.

PART II. B. OPERATION AND MAINTENANCE OF POLLUTION CONTROLS

1. Proper Operation and Maintenance

The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of this permit and with the requirements of storm water pollution prevention plans. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems only when the operation is necessary to achieve compliance with the conditions of the permit.

2. Need to Halt or Reduce Not a Defense

It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

3. Duty to Mitigate

The permittee shall take all reasonable steps to minimize or prevent any discharge or sludge use or disposal in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment.

4. Bypass

a. Definitions

- (1) *Bypass* means the intentional diversion of waste streams from any portion of a treatment facility.

NPDES PART II STANDARD CONDITIONS

(January, 2007)

- (2) *Severe property damage* means substantial physical damage to property, damage to the treatment facilities which causes them to become inoperable, or substantial and permanent loss of natural resources which can be reasonably expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.

b. Bypass not exceeding limitations

The permittee may allow any bypass to occur which does not cause effluent limitations to be exceeded, but only if it also is for essential maintenance to assure efficient operation. These bypasses are not subject to the provision of Paragraphs B.4.c. and 4.d. of this section.

c. Notice

- (1) Anticipated bypass. If the permittee knows in advance of the need for a bypass, it shall submit prior notice, if possible at least ten days before the date of the bypass.
- (2) Unanticipated bypass. The permittee shall submit notice of an unanticipated bypass as required in paragraph D.1.e. of this part (Twenty-four hour reporting).

d. Prohibition of bypass

Bypass is prohibited, and the Regional Administrator may take enforcement action against a permittee for bypass, unless:

- (1) Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage;
- (2) There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventative maintenance; and
- (3) i) The permittee submitted notices as required under Paragraph 4.c. of this section.
ii) The Regional Administrator may approve an anticipated bypass, after considering its adverse effects, if the Regional Administrator determines that it will meet the three conditions listed above in paragraph 4.d. of this section.

5. Upset

- a. Definition. *Upset* means an exceptional incident in which there is an unintentional and temporary noncompliance with technology-based permit effluent limitations because of factors beyond the reasonable control of the permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.
- b. Effect of an upset. An upset constitutes an affirmative defense to an action brought for noncompliance with such technology-based permit effluent limitations if the requirements of paragraph B.5.c. of this section are met. No determination made during

NPDES PART II STANDARD CONDITIONS

(January, 2007)

administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review.

- c. Conditions necessary for a demonstration of upset. A permittee who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs, or other relevant evidence that:
 - (1) An upset occurred and that the permittee can identify the cause(s) of the upset;
 - (2) The permitted facility was at the time being properly operated;
 - (3) The permittee submitted notice of the upset as required in paragraphs D.1.a. and 1.e. (Twenty-four hour notice); and
 - (4) The permittee complied with any remedial measures required under B.3. above.
- d. Burden of proof. In any enforcement proceeding the permittee seeking to establish the occurrence of an upset has the burden of proof.

PART II. C. MONITORING REQUIREMENTS

1. Monitoring and Records

- a. Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity.
- b. Except for records for monitoring information required by this permit related to the permittee's sewage sludge use and disposal activities, which shall be retained for a period of at least five years (or longer as required by 40 CFR Part 503), the permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this permit, and records of all data used to complete the application for this permit, for a period of at least 3 years from the date of the sample, measurement, report or application except for the information concerning storm water discharges which must be retained for a total of 6 years. This retention period may be extended by request of the Regional Administrator at any time.
- c. Records of monitoring information shall include:
 - (1) The date, exact place, and time of sampling or measurements;
 - (2) The individual(s) who performed the sampling or measurements;
 - (3) The date(s) analyses were performed;
 - (4) The individual(s) who performed the analyses;
 - (5) The analytical techniques or methods used; and
 - (6) The results of such analyses.
- d. Monitoring results must be conducted according to test procedures approved under 40 CFR Part 136 or, in the case of sludge use or disposal, approved under 40 CFR Part 136 unless otherwise specified in 40 CFR Part 503, unless other test procedures have been specified in the permit.
- e. The CWA provides that any person who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained under this permit shall, upon conviction, be punished by a fine of not more than \$10,000, or by

NPDES PART II STANDARD CONDITIONS

(January, 2007)

imprisonment for not more than 2 years, or both. If a conviction of a person is for a violation committed after a first conviction of such person under this paragraph, punishment is a fine of not more than \$20,000 per day of violation, or by imprisonment of not more than 4 years, or both.

2. Inspection and Entry

The permittee shall allow the Regional Administrator or an authorized representative (including an authorized contractor acting as a representative of the Administrator), upon presentation of credentials and other documents as may be required by law, to:

- a. Enter upon the permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this permit;
- b. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
- c. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and
- d. Sample or monitor at reasonable times, for the purposes of assuring permit compliance or as otherwise authorized by the CWA, any substances or parameters at any location.

PART II. D. REPORTING REQUIREMENTS

1. Reporting Requirements

- a. **Planned Changes.** The permittee shall give notice to the Regional Administrator as soon as possible of any planned physical alterations or additions to the permitted facility. Notice is only required when:
 - (1) The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source in 40 CFR§122.29(b); or
 - (2) The alteration or addition could significantly change the nature or increase the quantities of the pollutants discharged. This notification applies to pollutants which are subject neither to the effluent limitations in the permit, nor to the notification requirements at 40 CFR§122.42(a)(1).
 - (3) The alteration or addition results in a significant change in the permittee's sludge use or disposal practices, and such alteration, addition or change may justify the application of permit conditions different from or absent in the existing permit, including notification of additional use or disposal sites not reported during the permit application process or not reported pursuant to an approved land application plan.
- b. **Anticipated noncompliance.** The permittee shall give advance notice to the Regional Administrator of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements.
- c. **Transfers.** This permit is not transferable to any person except after notice to the Regional Administrator. The Regional Administrator may require modification or revocation and reissuance of the permit to change the name of the permittee and

NPDES PART II STANDARD CONDITIONS

(January, 2007)

incorporate such other requirements as may be necessary under the CWA. (See 40 CFR Part 122.61; in some cases, modification or revocation and reissuance is mandatory.)

- d. Monitoring reports. Monitoring results shall be reported at the intervals specified elsewhere in this permit.
 - (1) Monitoring results must be reported on a Discharge Monitoring Report (DMR) or forms provided or specified by the Director for reporting results of monitoring of sludge use or disposal practices.
 - (2) If the permittee monitors any pollutant more frequently than required by the permit using test procedures approved under 40 CFR Part 136 or, in the case of sludge use or disposal, approved under 40 CFR Part 136 unless otherwise specified in 40 CFR Part 503, or as specified in the permit, the results of the monitoring shall be included in the calculation and reporting of the data submitted in the DMR or sludge reporting form specified by the Director.
 - (3) Calculations for all limitations which require averaging or measurements shall utilize an arithmetic mean unless otherwise specified by the Director in the permit.
- e. Twenty-four hour reporting.
 - (1) The permittee shall report any noncompliance which may endanger health or the environment. Any information shall be provided orally within 24 hours from the time the permittee becomes aware of the circumstances.

A written submission shall also be provided within 5 days of the time the permittee becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.
 - (2) The following shall be included as information which must be reported within 24 hours under this paragraph.
 - (a) Any unanticipated bypass which exceeds any effluent limitation in the permit. (See 40 CFR §122.41(g).)
 - (b) Any upset which exceeds any effluent limitation in the permit.
 - (c) Violation of a maximum daily discharge limitation for any of the pollutants listed by the Regional Administrator in the permit to be reported within 24 hours. (See 40 CFR §122.44(g).)
 - (3) The Regional Administrator may waive the written report on a case-by-case basis for reports under Paragraph D.1.e. if the oral report has been received within 24 hours.

NPDES PART II STANDARD CONDITIONS (January, 2007)

- f. Compliance Schedules. Reports of compliance or noncompliance with, any progress reports on, interim and final requirements contained in any compliance schedule of this permit shall be submitted no later than 14 days following each schedule date.
- g. Other noncompliance. The permittee shall report all instances of noncompliance not reported under Paragraphs D.1.d., D.1.e., and D.1.f. of this section, at the time monitoring reports are submitted. The reports shall contain the information listed in Paragraph D.1.e. of this section.
- h. Other information. Where the permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to the Regional Administrator, it shall promptly submit such facts or information.

2. Signatory Requirement

- a. All applications, reports, or information submitted to the Regional Administrator shall be signed and certified. (See 40 CFR §122.22)
- b. The CWA provides that any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this permit, including monitoring reports or reports of compliance or noncompliance shall, upon conviction, be punished by a fine of not more than \$10,000 per violation, or by imprisonment for not more than 2 years per violation, or by both.

3. Availability of Reports.

Except for data determined to be confidential under Paragraph A.8. above, all reports prepared in accordance with the terms of this permit shall be available for public inspection at the offices of the State water pollution control agency and the Regional Administrator. As required by the CWA, effluent data shall not be considered confidential. Knowingly making any false statements on any such report may result in the imposition of criminal penalties as provided for in Section 309 of the CWA.

PART II. E. DEFINITIONS AND ABBREVIATIONS

1. Definitions for Individual NPDES Permits including Storm Water Requirements

Administrator means the Administrator of the United States Environmental Protection Agency, or an authorized representative.

Applicable standards and limitations means all, State, interstate, and Federal standards and limitations to which a “discharge”, a “sewage sludge use or disposal practice”, or a related activity is subject to, including “effluent limitations”, water quality standards, standards of performance, toxic effluent standards or prohibitions, “best management practices”, pretreatment standards, and “standards for sewage sludge use and disposal” under Sections 301, 302, 303, 304, 306, 307, 308, 403, and 405 of the CWA.

NPDES PART II STANDARD CONDITIONS

(January, 2007)

Application means the EPA standard national forms for applying for a permit, including any additions, revisions, or modifications to the forms; or forms approved by EPA for use in “approved States”, including any approved modifications or revisions.

Average means the arithmetic mean of values taken at the frequency required for each parameter over the specified period. For total and/or fecal coliforms and Escherichia coli, the average shall be the geometric mean.

Average monthly discharge limitation means the highest allowable average of “daily discharges” over a calendar month calculated as the sum of all “daily discharges” measured during a calendar month divided by the number of “daily discharges” measured during that month.

Average weekly discharge limitation means the highest allowable average of “daily discharges” measured during the calendar week divided by the number of “daily discharges” measured during the week.

Best Management Practices (BMPs) means schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the pollution of “waters of the United States.” BMPs also include treatment requirements, operating procedures, and practices to control plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage.

Best Professional Judgment (BPJ) means a case-by-case determination of Best Practicable Treatment (BPT), Best Available Treatment (BAT), or other appropriate technology-based standard based on an evaluation of the available technology to achieve a particular pollutant reduction and other factors set forth in 40 CFR §125.3 (d).

Coal Pile Runoff means the rainfall runoff from or through any coal storage pile.

Composite Sample means a sample consisting of a minimum of eight grab samples of equal volume collected at equal intervals during a 24-hour period (or lesser period as specified in the section on Monitoring and Reporting) and combined proportional to flow, or a sample consisting of the same number of grab samples, or greater, collected proportionally to flow over that same time period.

Construction Activities - The following definitions apply to construction activities:

- (a) Commencement of Construction is the initial disturbance of soils associated with clearing, grading, or excavating activities or other construction activities.
- (b) Dedicated portable asphalt plant is a portable asphalt plant located on or contiguous to a construction site and that provides asphalt only to the construction site that the plant is located on or adjacent to. The term dedicated portable asphalt plant does not include facilities that are subject to the asphalt emulsion effluent limitation guideline at 40 CFR Part 443.
- (c) Dedicated portable concrete plant is a portable concrete plant located on or contiguous to a construction site and that provides concrete only to the construction site that the plant is located on or adjacent to.

NPDES PART II STANDARD CONDITIONS

(January, 2007)

- (d) Final Stabilization means that all soil disturbing activities at the site have been complete, and that a uniform perennial vegetative cover with a density of 70% of the cover for unpaved areas and areas not covered by permanent structures has been established or equivalent permanent stabilization measures (such as the use of riprap, gabions, or geotextiles) have been employed.
- (e) Runoff coefficient means the fraction of total rainfall that will appear at the conveyance as runoff.

Contiguous zone means the entire zone established by the United States under Article 24 of the Convention on the Territorial Sea and the Contiguous Zone.

Continuous discharge means a “discharge” which occurs without interruption throughout the operating hours of the facility except for infrequent shutdowns for maintenance, process changes, or similar activities.

CWA means the Clean Water Act (formerly referred to as the Federal Water Pollution Control Act or Federal Water Pollution Control Act Amendments of 1972) Pub. L. 92-500, as amended by Pub. L. 95-217, Pub. L. 95-576, Pub. L. 96-483, and Pub. L. 97-117; 33 USC §§1251 et seq.

Daily Discharge means the discharge of a pollutant measured during the calendar day or any other 24-hour period that reasonably represents the calendar day for purposes of sampling. For pollutants with limitations expressed in units of mass, the “daily discharge” is calculated as the total mass of the pollutant discharged over the day. For pollutants with limitations expressed in other units of measurements, the “daily discharge” is calculated as the average measurement of the pollutant over the day.

Director normally means the person authorized to sign NPDES permits by EPA or the State or an authorized representative. Conversely, it also could mean the Regional Administrator or the State Director as the context requires.

Discharge Monitoring Report Form (DMR) means the EPA standard national form, including any subsequent additions, revisions, or modifications for the reporting of self-monitoring results by permittees. DMRs must be used by “approved States” as well as by EPA. EPA will supply DMRs to any approved State upon request. The EPA national forms may be modified to substitute the State Agency name, address, logo, and other similar information, as appropriate, in place of EPA’s.

Discharge of a pollutant means:

- (a) Any addition of any “pollutant” or combination of pollutants to “waters of the United States” from any “point source”, or
- (b) Any addition of any pollutant or combination of pollutants to the waters of the “contiguous zone” or the ocean from any point source other than a vessel or other floating craft which is being used as a means of transportation (See “Point Source” definition).

This definition includes additions of pollutants into waters of the United States from: surface runoff which is collected or channeled by man; discharges through pipes, sewers, or other conveyances owned by a State, municipality, or other person which do not lead

NPDES PART II STANDARD CONDITIONS

(January, 2007)

to a treatment works; and discharges through pipes, sewers, or other conveyances leading into privately owned treatment works.

This term does not include an addition of pollutants by any “indirect discharger.”

Effluent limitation means any restriction imposed by the Regional Administrator on quantities, discharge rates, and concentrations of “pollutants” which are “discharged” from “point sources” into “waters of the United States”, the waters of the “contiguous zone”, or the ocean.

Effluent limitation guidelines means a regulation published by the Administrator under Section 304(b) of CWA to adopt or revise “effluent limitations”.

EPA means the United States “Environmental Protection Agency”.

Flow-weighted composite sample means a composite sample consisting of a mixture of aliquots where the volume of each aliquot is proportional to the flow rate of the discharge.

Grab Sample – An individual sample collected in a period of less than 15 minutes.

Hazardous Substance means any substance designated under 40 CFR Part 116 pursuant to Section 311 of the CWA.

Indirect Discharger means a non-domestic discharger introducing pollutants to a publicly owned treatment works.

Interference means a discharge which, alone or in conjunction with a discharge or discharges from other sources, both:

- (a) Inhibits or disrupts the POTW, its treatment processes or operations, or its sludge processes, use or disposal; and
- (b) Therefore is a cause of a violation of any requirement of the POTW’s NPDES permit (including an increase in the magnitude or duration of a violation) or of the prevention of sewage sludge use or disposal in compliance with the following statutory provisions and regulations or permits issued thereunder (or more stringent State or local regulations): Section 405 of the Clean Water Act (CWA), the Solid Waste Disposal Act (SWDA) (including Title II, more commonly referred to as the Resources Conservation and Recovery Act (RCRA), and including State regulations contained in any State sludge management plan prepared pursuant to Subtitle D of the SDWA), the Clean Air Act, the Toxic Substances Control Act, and the Marine Protection Research and Sanctuaries Act.

Landfill means an area of land or an excavation in which wastes are placed for permanent disposal, and which is not a land application unit, surface impoundment, injection well, or waste pile.

Land application unit means an area where wastes are applied onto or incorporated into the soil surface (excluding manure spreading operations) for treatment or disposal.

Large and Medium municipal separate storm sewer system means all municipal separate storm sewers that are either: (i) located in an incorporated place (city) with a population of 100,000 or more as determined by the latest Decennial Census by the Bureau of Census (these cities are listed in Appendices F and 40 CFR Part 122); or (ii) located in the counties with unincorporated urbanized

NPDES PART II STANDARD CONDITIONS

(January, 2007)

populations of 100,000 or more, except municipal separate storm sewers that are located in the incorporated places, townships, or towns within such counties (these counties are listed in Appendices H and I of 40 CFR 122); or (iii) owned or operated by a municipality other than those described in Paragraph (i) or (ii) and that are designated by the Regional Administrator as part of the large or medium municipal separate storm sewer system.

Maximum daily discharge limitation means the highest allowable “daily discharge” concentration that occurs only during a normal day (24-hour duration).

Maximum daily discharge limitation (as defined for the Steam Electric Power Plants only) when applied to Total Residual Chlorine (TRC) or Total Residual Oxidant (TRO) is defined as “maximum concentration” or “Instantaneous Maximum Concentration” during the two hours of a chlorination cycle (or fraction thereof) prescribed in the Steam Electric Guidelines, 40 CFR Part 423. These three synonymous terms all mean “a value that shall not be exceeded” during the two-hour chlorination cycle. This interpretation differs from the specified NPDES Permit requirement, 40 CFR § 122.2, where the two terms of “Maximum Daily Discharge” and “Average Daily Discharge” concentrations are specifically limited to the daily (24-hour duration) values.

Municipality means a city, town, borough, county, parish, district, association, or other public body created by or under State law and having jurisdiction over disposal of sewage, industrial wastes, or other wastes, or an Indian tribe or an authorized Indian tribe organization, or a designated and approved management agency under Section 208 of the CWA.

National Pollutant Discharge Elimination System means the national program for issuing, modifying, revoking and reissuing, terminating, monitoring and enforcing permits, and imposing and enforcing pretreatment requirements, under Sections 307, 402, 318, and 405 of the CWA. The term includes an “approved program”.

New Discharger means any building, structure, facility, or installation:

- (a) From which there is or may be a “discharge of pollutants”;
- (b) That did not commence the “discharge of pollutants” at a particular “site” prior to August 13, 1979;
- (c) Which is not a “new source”; and
- (d) Which has never received a finally effective NPDES permit for discharges at that “site”.

This definition includes an “indirect discharger” which commences discharging into “waters of the United States” after August 13, 1979. It also includes any existing mobile point source (other than an offshore or coastal oil and gas exploratory drilling rig or a coastal oil and gas exploratory drilling rig or a coastal oil and gas developmental drilling rig) such as a seafood processing rig, seafood processing vessel, or aggregate plant, that begins discharging at a “site” for which it does not have a permit; and any offshore rig or coastal mobile oil and gas exploratory drilling rig or coastal mobile oil and gas developmental drilling rig that commences the discharge of pollutants after August 13, 1979, at a “site” under EPA’s permitting jurisdiction for which it is not covered by an individual or general permit and which is located in an area determined by the Regional Administrator in the issuance of a final permit to be in an area of biological concern. In determining whether an area is an area of biological concern, the Regional Administrator shall consider the factors specified in 40 CFR §§125.122 (a) (1) through (10).

NPDES PART II STANDARD CONDITIONS (January, 2007)

An offshore or coastal mobile exploratory drilling rig or coastal mobile developmental drilling rig will be considered a “new discharger” only for the duration of its discharge in an area of biological concern.

New source means any building, structure, facility, or installation from which there is or may be a “discharge of pollutants”, the construction of which commenced:

- (a) After promulgation of standards of performance under Section 306 of CWA which are applicable to such source, or
- (b) After proposal of standards of performance in accordance with Section 306 of CWA which are applicable to such source, but only if the standards are promulgated in accordance with Section 306 within 120 days of their proposal.

NPDES means “National Pollutant Discharge Elimination System”.

Owner or operator means the owner or operator of any “facility or activity” subject to regulation under the NPDES programs.

Pass through means a Discharge which exits the POTW into waters of the United States in quantities or concentrations which, alone or in conjunction with a discharge or discharges from other sources, is a cause of a violation of any requirement of the POTW’s NPDES permit (including an increase in the magnitude or duration of a violation).

Permit means an authorization, license, or equivalent control document issued by EPA or an “approved” State.

Person means an individual, association, partnership, corporation, municipality, State or Federal agency, or an agent or employee thereof.

Point Source means any discernible, confined, and discrete conveyance, including but not limited to any pipe ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, landfill leachate collection system, vessel, or other floating craft, from which pollutants are or may be discharged. This term does not include return flows from irrigated agriculture or agricultural storm water runoff (see 40 CFR §122.2).

Pollutant means dredged spoil, solid waste, incinerator residue, filter backwash, sewage, garbage, sewage sludge, munitions, chemical wastes, biological materials, radioactive materials (except those regulated under the Atomic Energy Act of 1954, as amended (42 U.S.C. §§2011 et seq.)), heat, wrecked or discarded equipment, rock, sand, cellar dirt and industrial, municipal, and agricultural waste discharged into water. It does not mean:

- (a) Sewage from vessels; or
- (b) Water, gas, or other material which is injected into a well to facilitate production of oil or gas, or water derived in association with oil and gas production and disposed of in a well, if the well is used either to facilitate production or for disposal purposes is approved by the authority of the State in which the well is located, and if the State determines that the injection or disposal will not result in the degradation of ground or surface water resources.

NPDES PART II STANDARD CONDITIONS
(January, 2007)

Primary industry category means any industry category listed in the NRDC settlement agreement (Natural Resources Defense Council et al. v. Train, 8 E.R.C. 2120 (D.D.C. 1976), modified 12 E.R.C. 1833 (D. D.C. 1979)); also listed in Appendix A of 40 CFR Part 122.

Privately owned treatment works means any device or system which is (a) used to treat wastes from any facility whose operation is not the operator of the treatment works or (b) not a “POTW”.

Process wastewater means any water which, during manufacturing or processing, comes into direct contact with or results from the production or use of any raw material, intermediate product, finished product, byproduct, or waste product.

Publicly Owned Treatment Works (POTW) means any facility or system used in the treatment (including recycling and reclamation) of municipal sewage or industrial wastes of a liquid nature which is owned by a “State” or “municipality”.

This definition includes sewers, pipes, or other conveyances only if they convey wastewater to a POTW providing treatment.

Regional Administrator means the Regional Administrator, EPA, Region I, Boston, Massachusetts.

Secondary Industry Category means any industry which is not a “primary industry category”.

Section 313 water priority chemical means a chemical or chemical category which:

- (1) is listed at 40 CFR §372.65 pursuant to Section 313 of the Emergency Planning and Community Right-To-Know Act (EPCRA) (also known as Title III of the Superfund Amendments and Reauthorization Act (SARA) of 1986);
- (2) is present at or above threshold levels at a facility subject to EPCRA Section 313 reporting requirements; and
- (3) satisfies at least one of the following criteria:
 - (i) are listed in Appendix D of 40 CFR Part 122 on either Table II (organic priority pollutants), Table III (certain metals, cyanides, and phenols), or Table V (certain toxic pollutants and hazardous substances);
 - (ii) are listed as a hazardous substance pursuant to Section 311(b)(2)(A) of the CWA at 40 CFR §116.4; or
 - (iii) are pollutants for which EPA has published acute or chronic water quality criteria.

Septage means the liquid and solid material pumped from a septic tank, cesspool, or similar domestic sewage treatment system, or a holding tank when the system is cleaned or maintained.

Sewage Sludge means any solid, semisolid, or liquid residue removed during the treatment of municipal wastewater or domestic sewage. Sewage sludge includes, but is not limited to, solids removed during primary, secondary, or advanced wastewater treatment, scum, septage, portable toilet pumpings, Type III Marine Sanitation Device pumpings (33 CFR Part 159), and sewage sludge products. Sewage sludge does not include grit or screenings, or ash generated during the incineration of sewage sludge.

NPDES PART II STANDARD CONDITIONS
(January, 2007)

Sewage sludge use or disposal practice means the collection, storage, treatment, transportation, processing, monitoring, use, or disposal of sewage sludge.

Significant materials includes, but is not limited to: raw materials, fuels, materials such as solvents, detergents, and plastic pellets, raw materials used in food processing or production, hazardous substance designated under section 101(14) of CERCLA, any chemical the facility is required to report pursuant to EPCRA Section 313, fertilizers, pesticides, and waste products such as ashes, slag, and sludge that have the potential to be released with storm water discharges.

Significant spills includes, but is not limited to, releases of oil or hazardous substances in excess of reportable quantities under Section 311 of the CWA (see 40 CFR §110.10 and §117.21) or Section 102 of CERCLA (see 40 CFR § 302.4).

Sludge-only facility means any “treatment works treating domestic sewage” whose methods of sewage sludge use or disposal are subject to regulations promulgated pursuant to Section 405(d) of the CWA, and is required to obtain a permit under 40 CFR §122.1(b)(3).

State means any of the 50 States, the District of Columbia, Guam, the Commonwealth of Puerto Rico, the Virgin Islands, American Samoa, the Trust Territory of the Pacific Islands.

Storm Water means storm water runoff, snow melt runoff, and surface runoff and drainage.

Storm water discharge associated with industrial activity means the discharge from any conveyance which is used for collecting and conveying storm water and which is directly related to manufacturing, processing, or raw materials storage areas at an industrial plant. (See 40 CFR §122.26 (b)(14) for specifics of this definition.

Time-weighted composite means a composite sample consisting of a mixture of equal volume aliquots collected at a constant time interval.

Toxic pollutants means any pollutant listed as toxic under Section 307 (a)(1) or, in the case of “sludge use or disposal practices” any pollutant identified in regulations implementing Section 405(d) of the CWA.

Treatment works treating domestic sewage means a POTW or any other sewage sludge or wastewater treatment devices or systems, regardless of ownership (including federal facilities), used in the storage, treatment, recycling, and reclamation of municipal or domestic sewage, including land dedicated for the disposal of sewage sludge. This definition does not include septic tanks or similar devices.

For purposes of this definition, “domestic sewage” includes waste and wastewater from humans or household operations that are discharged to or otherwise enter a treatment works. In States where there is no approved State sludge management program under Section 405(f) of the CWA, the Regional Administrator may designate any person subject to the standards for sewage sludge use and disposal in 40 CFR Part 503 as a “treatment works treating domestic sewage”, where he or she finds that there is a potential for adverse effects on public health and the environment from poor sludge quality or poor sludge handling, use or disposal practices, or where he or she finds that such designation is necessary to ensure that such person is in compliance with 40 CFR Part 503.

NPDES PART II STANDARD CONDITIONS

(January, 2007)

Waste Pile means any non-containerized accumulation of solid, non-flowing waste that is used for treatment or storage.

Waters of the United States means:

- (a) All waters which are currently used, were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of tide;
- (b) All interstate waters, including interstate “wetlands”;
- (c) All other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, “wetlands”, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds the use, degradation, or destruction of which would affect or could affect interstate or foreign commerce including any such waters:
 - (1) Which are or could be used by interstate or foreign travelers for recreational or other purpose;
 - (2) From which fish or shellfish are or could be taken and sold in interstate or foreign commerce; or
 - (3) Which are used or could be used for industrial purposes by industries in interstate commerce;
- (d) All impoundments of waters otherwise defined as waters of the United States under this definition;
- (e) Tributaries of waters identified in Paragraphs (a) through (d) of this definition;
- (f) The territorial sea; and
- (g) “Wetlands” adjacent to waters (other than waters that are themselves wetlands) identified in Paragraphs (a) through (f) of this definition.

Waste treatment systems, including treatment ponds or lagoons designed to meet the requirements of the CWA (other than cooling ponds as defined in 40 CFR §423.11(m) which also meet the criteria of this definition) are not waters of the United States.

Wetlands means those areas that are inundated or saturated by surface or ground water at a frequency and duration to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas.

Whole Effluent Toxicity (WET) means the aggregate toxic effect of an effluent measured directly by a toxicity test. (See Abbreviations Section, following, for additional information.)

2. Definitions for NPDES Permit Sludge Use and Disposal Requirements.

Active sewage sludge unit is a sewage sludge unit that has not closed.

NPDES PART II STANDARD CONDITIONS

(January, 2007)

Aerobic Digestion is the biochemical decomposition of organic matter in sewage sludge into carbon dioxide and water by microorganisms in the presence of air.

Agricultural Land is land on which a food crop, a feed crop, or a fiber crop is grown. This includes range land and land used as pasture.

Agronomic rate is the whole sludge application rate (dry weight basis) designed:

- (1) To provide the amount of nitrogen needed by the food crop, feed crop, fiber crop, cover crop, or vegetation grown on the land; and
- (2) To minimize the amount of nitrogen in the sewage sludge that passes below the root zone of the crop or vegetation grown on the land to the ground water.

Air pollution control device is one or more processes used to treat the exit gas from a sewage sludge incinerator stack.

Anaerobic digestion is the biochemical decomposition of organic matter in sewage sludge into methane gas and carbon dioxide by microorganisms in the absence of air.

Annual pollutant loading rate is the maximum amount of a pollutant that can be applied to a unit area of land during a 365 day period.

Annual whole sludge application rate is the maximum amount of sewage sludge (dry weight basis) that can be applied to a unit area of land during a 365 day period.

Apply sewage sludge or sewage sludge applied to the land means land application of sewage sludge.

Aquifer is a geologic formation, group of geologic formations, or a portion of a geologic formation capable of yielding ground water to wells or springs.

Auxiliary fuel is fuel used to augment the fuel value of sewage sludge. This includes, but is not limited to, natural gas, fuel oil, coal, gas generated during anaerobic digestion of sewage sludge, and municipal solid waste (not to exceed 30 percent of the dry weight of the sewage sludge and auxiliary fuel together). Hazardous wastes are not auxiliary fuel.

Base flood is a flood that has a one percent chance of occurring in any given year (i.e. a flood with a magnitude equaled once in 100 years).

Bulk sewage sludge is sewage sludge that is not sold or given away in a bag or other container for application to the land.

Contaminate an aquifer means to introduce a substance that causes the maximum contaminant level for nitrate in 40 CFR §141.11 to be exceeded in ground water or that causes the existing concentration of nitrate in the ground water to increase when the existing concentration of nitrate in the ground water exceeds the maximum contaminant level for nitrate in 40 CFR §141.11.

Class I sludge management facility is any publicly owned treatment works (POTW), as defined in 40 CFR §501.2, required to have an approved pretreatment program under 40 CFR §403.8 (a) (including any POTW located in a state that has elected to assume local program responsibilities pursuant to 40 CFR §403.10 (e) and any treatment works treating domestic sewage, as defined in 40 CFR § 122.2,

NPDES PART II STANDARD CONDITIONS

(January, 2007)

classified as a Class I sludge management facility by the EPA Regional Administrator, or, in the case of approved state programs, the Regional Administrator in conjunction with the State Director, because of the potential for sewage sludge use or disposal practice to affect public health and the environment adversely.

Control efficiency is the mass of a pollutant in the sewage sludge fed to an incinerator minus the mass of that pollutant in the exit gas from the incinerator stack divided by the mass of the pollutant in the sewage sludge fed to the incinerator.

Cover is soil or other material used to cover sewage sludge placed on an active sewage sludge unit.

Cover crop is a small grain crop, such as oats, wheat, or barley, not grown for harvest.

Cumulative pollutant loading rate is the maximum amount of inorganic pollutant that can be applied to an area of land.

Density of microorganisms is the number of microorganisms per unit mass of total solids (dry weight) in the sewage sludge.

Dispersion factor is the ratio of the increase in the ground level ambient air concentration for a pollutant at or beyond the property line of the site where the sewage sludge incinerator is located to the mass emission rate for the pollutant from the incinerator stack.

Displacement is the relative movement of any two sides of a fault measured in any direction.

Domestic septage is either liquid or solid material removed from a septic tank, cesspool, portable toilet, Type III marine sanitation device, or similar treatment works that receives only domestic sewage. Domestic septage does not include liquid or solid material removed from a septic tank, cesspool, or similar treatment works that receives either commercial wastewater or industrial wastewater and does not include grease removed from a grease trap at a restaurant.

Domestic sewage is waste and wastewater from humans or household operations that is discharged to or otherwise enters a treatment works.

Dry weight basis means calculated on the basis of having been dried at 105 degrees Celsius (°C) until reaching a constant mass (i.e. essentially 100 percent solids content).

Fault is a fracture or zone of fractures in any materials along which strata on one side are displaced with respect to the strata on the other side.

Feed crops are crops produced primarily for consumption by animals.

Fiber crops are crops such as flax and cotton.

Final cover is the last layer of soil or other material placed on a sewage sludge unit at closure.

Fluidized bed incinerator is an enclosed device in which organic matter and inorganic matter in sewage sludge are combusted in a bed of particles suspended in the combustion chamber gas.

Food crops are crops consumed by humans. These include, but are not limited to, fruits, vegetables, and tobacco.

NPDES PART II STANDARD CONDITIONS
(January, 2007)

Forest is a tract of land thick with trees and underbrush.

Ground water is water below the land surface in the saturated zone.

Holocene time is the most recent epoch of the Quaternary period, extending from the end of the Pleistocene epoch to the present.

Hourly average is the arithmetic mean of all the measurements taken during an hour. At least two measurements must be taken during the hour.

Incineration is the combustion of organic matter and inorganic matter in sewage sludge by high temperatures in an enclosed device.

Industrial wastewater is wastewater generated in a commercial or industrial process.

Land application is the spraying or spreading of sewage sludge onto the land surface; the injection of sewage sludge below the land surface; or the incorporation of sewage sludge into the soil so that the sewage sludge can either condition the soil or fertilize crops or vegetation grown in the soil.

Land with a high potential for public exposure is land that the public uses frequently. This includes, but is not limited to, a public contact site and reclamation site located in a populated area (e.g., a construction site located in a city).

Land with low potential for public exposure is land that the public uses infrequently. This includes, but is not limited to, agricultural land, forest and a reclamation site located in an unpopulated area (e.g., a strip mine located in a rural area).

Leachate collection system is a system or device installed immediately above a liner that is designed, constructed, maintained, and operated to collect and remove leachate from a sewage sludge unit.

Liner is soil or synthetic material that has a hydraulic conductivity of 1×10^{-7} centimeters per second or less.

Lower explosive limit for methane gas is the lowest percentage of methane gas in air, by volume, that propagates a flame at 25 degrees Celsius and atmospheric pressure.

Monthly average (Incineration) is the arithmetic mean of the hourly averages for the hours a sewage sludge incinerator operates during the month.

Monthly average (Land Application) is the arithmetic mean of all measurements taken during the month.

Municipality means a city, town, borough, county, parish, district, association, or other public body (including an intermunicipal agency of two or more of the foregoing entities) created by or under State law; an Indian tribe or an authorized Indian tribal organization having jurisdiction over sewage sludge management; or a designated and approved management agency under section 208 of the CWA, as amended. The definition includes a special district created under state law, such as a water district, sewer district, sanitary district, utility district, drainage district, or similar entity, or an integrated waste management facility as defined in section 201 (e) of the CWA, as amended, that has as one of its principal responsibilities the treatment, transport, use or disposal of sewage sludge.

NPDES PART II STANDARD CONDITIONS (January, 2007)

Other container is either an open or closed receptacle. This includes, but is not limited to, a bucket, a box, a carton, and a vehicle or trailer with a load capacity of one metric ton or less.

Pasture is land on which animals feed directly on feed crops such as legumes, grasses, grain stubble, or stover.

Pathogenic organisms are disease-causing organisms. These include, but are not limited to, certain bacteria, protozoa, viruses, and viable helminth ova.

Permitting authority is either EPA or a State with an EPA-approved sludge management program.

Person is an individual, association, partnership, corporation, municipality, State or Federal Agency, or an agent or employee thereof.

Person who prepares sewage sludge is either the person who generates sewage sludge during the treatment of domestic sewage in a treatment works or the person who derives a material from sewage sludge.

pH means the logarithm of the reciprocal of the hydrogen ion concentration; a measure of the acidity or alkalinity of a liquid or solid material.

Place sewage sludge or sewage sludge placed means disposal of sewage sludge on a surface disposal site.

Pollutant (as defined in sludge disposal requirements) is an organic substance, an inorganic substance, a combination of organic and inorganic substances, or pathogenic organism that, after discharge and upon exposure, ingestion, inhalation, or assimilation into an organism either directly from the environment or indirectly by ingestion through the food chain, could on the basis of information available to the Administrator of EPA, cause death, disease, behavioral abnormalities, cancer, genetic mutations, physiological malfunctions (including malfunction in reproduction) or physical deformations in either organisms or offspring of the organisms.

Pollutant limit (for sludge disposal requirements) is a numerical value that describes the amount of a pollutant allowed per unit amount of sewage sludge (e.g., milligrams per kilogram of total solids); the amount of pollutant that can be applied to a unit of land (e.g., kilograms per hectare); or the volume of the material that can be applied to the land (e.g., gallons per acre).

Public contact site is a land with a high potential for contact by the public. This includes, but is not limited to, public parks, ball fields, cemeteries, plant nurseries, turf farms, and golf courses.

Qualified ground water scientist is an individual with a baccalaureate or post-graduate degree in the natural sciences or engineering who has sufficient training and experience in ground water hydrology and related fields, as may be demonstrated by State registration, professional certification, or completion of accredited university programs, to make sound professional judgments regarding ground water monitoring, pollutant fate and transport, and corrective action.

Range land is open land with indigenous vegetation.

Reclamation site is drastically disturbed land that is reclaimed using sewage sludge. This includes, but is not limited to, strip mines and construction sites.

NPDES PART II STANDARD CONDITIONS (January, 2007)

Risk specific concentration is the allowable increase in the average daily ground level ambient air concentration for a pollutant from the incineration of sewage sludge at or beyond the property line of a site where the sewage sludge incinerator is located.

Runoff is rainwater, leachate, or other liquid that drains overland on any part of a land surface and runs off the land surface.

Seismic impact zone is an area that has 10 percent or greater probability that the horizontal ground level acceleration to the rock in the area exceeds 0.10 gravity once in 250 years.

Sewage sludge is a solid, semi-solid, or liquid residue generated during the treatment of domestic sewage in a treatment works. Sewage sludge includes, but is not limited to: domestic septage; scum or solids removed in primary, secondary, or advanced wastewater treatment processes; and a material derived from sewage sludge. Sewage sludge does not include ash generated during the firing of sewage sludge in a sewage sludge incinerator or grit and screening generated during preliminary treatment of domestic sewage in treatment works.

Sewage sludge feed rate is either the average daily amount of sewage sludge fired in all sewage sludge incinerators within the property line of the site where the sewage sludge incinerators are located for the number of days in a 365 day period that each sewage sludge incinerator operates, or the average daily design capacity for all sewage sludge incinerators within the property line of the site where the sewage sludge incinerators are located.

Sewage sludge incinerator is an enclosed device in which only sewage sludge and auxiliary fuel are fired.

Sewage sludge unit is land on which only sewage sludge is placed for final disposal. This does not include land on which sewage sludge is either stored or treated. Land does not include waters of the United States, as defined in 40 CFR §122.2.

Sewage sludge unit boundary is the outermost perimeter of an active sewage sludge unit.

Specific oxygen uptake rate (SOUR) is the mass of oxygen consumed per unit time per unit mass of total solids (dry weight basis) in sewage sludge.

Stack height is the difference between the elevation of the top of a sewage sludge incinerator stack and the elevation of the ground at the base of the stack when the difference is equal to or less than 65 meters. When the difference is greater than 65 meters, stack height is the creditable stack height determined in accordance with 40 CFR §51.100 (ii).

State is one of the United States of America, the District of Columbia, the Commonwealth of Puerto Rico, the Virgin Islands, Guam, American Samoa, the Trust Territory of the Pacific Islands, the Commonwealth of the Northern Mariana Islands, and an Indian tribe eligible for treatment as a State pursuant to regulations promulgated under the authority of section 518(e) of the CWA.

Store or storage of sewage sludge is the placement of sewage sludge on land on which the sewage sludge remains for two years or less. This does not include the placement of sewage sludge on land for treatment.

Surface disposal site is an area of land that contains one or more active sewage sludge units.

NPDES PART II STANDARD CONDITIONS (January, 2007)

Total hydrocarbons means the organic compounds in the exit gas from a sewage sludge incinerator stack measured using a flame ionization detection instrument referenced to propane.

Total solids are the materials in sewage sludge that remain as residue when the sewage sludge is dried at 103 to 105 degrees Celsius.

Treat or treatment of sewage sludge is the preparation of sewage sludge for final use or disposal. This includes, but is not limited to, thickening, stabilization, and dewatering of sewage sludge. This does not include storage of sewage sludge.

Treatment works is either a federally owned, publicly owned, or privately owned device or system used to treat (including recycle and reclaim) either domestic sewage or a combination of domestic sewage and industrial waste of a liquid nature.

Unstable area is land subject to natural or human-induced forces that may damage the structural components of an active sewage sludge unit. This includes, but is not limited to, land on which the soils are subject to mass movement.

Unstabilized solids are organic materials in sewage sludge that have not been treated in either an aerobic or anaerobic treatment process.

Vector attraction is the characteristic of sewage sludge that attracts rodents, flies, mosquitoes, or other organisms capable of transporting infectious agents.

Volatile solids is the amount of the total solids in sewage sludge lost when the sewage sludge is combusted at 550 degrees Celsius in the presence of excess air.

Wet electrostatic precipitator is an air pollution control device that uses both electrical forces and water to remove pollutants in the exit gas from a sewage sludge incinerator stack.

Wet scrubber is an air pollution control device that uses water to remove pollutants in the exit gas from a sewage sludge incinerator stack.

3. Commonly Used Abbreviations

BOD	Five-day biochemical oxygen demand unless otherwise specified
CBOD	Carbonaceous BOD
CFS	Cubic feet per second
COD	Chemical oxygen demand
Chlorine	
Cl ₂	Total residual chlorine
TRC	Total residual chlorine which is a combination of free available chlorine (FAC, see below) and combined chlorine (chloramines, etc.)

NPDES PART II STANDARD CONDITIONS
(January, 2007)

TRO	Total residual chlorine in marine waters where halogen compounds are present
FAC	Free available chlorine (aqueous molecular chlorine, hypochlorous acid, and hypochlorite ion)
Coliform	
Coliform, Fecal	Total fecal coliform bacteria
Coliform, Total	Total coliform bacteria
Cont. (Continuous)	Continuous recording of the parameter being monitored, i.e. flow, temperature, pH, etc.
Cu. M/day or M ³ /day	Cubic meters per day
DO	Dissolved oxygen
kg/day	Kilograms per day
lbs/day	Pounds per day
mg/l	Milligram(s) per liter
ml/l	Milliliters per liter
MGD	Million gallons per day
Nitrogen	
Total N	Total nitrogen
NH ₃ -N	Ammonia nitrogen as nitrogen
NO ₃ -N	Nitrate as nitrogen
NO ₂ -N	Nitrite as nitrogen
NO ₃ -NO ₂	Combined nitrate and nitrite nitrogen as nitrogen
TKN	Total Kjeldahl nitrogen as nitrogen
Oil & Grease	Freon extractable material
PCB	Polychlorinated biphenyl
pH	A measure of the hydrogen ion concentration. A measure of the acidity or alkalinity of a liquid or material
Surfactant	Surface-active agent

NPDES PART II STANDARD CONDITIONS
(January, 2007)

Temp. °C	Temperature in degrees Centigrade
Temp. °F	Temperature in degrees Fahrenheit
TOC	Total organic carbon
Total P	Total phosphorus
TSS or NFR	Total suspended solids or total nonfilterable residue
Turb. or Turbidity	Turbidity measured by the Nephelometric Method (NTU)
ug/l	Microgram(s) per liter
WET	“Whole effluent toxicity” is the total effect of an effluent measured directly with a toxicity test.
C-NOEC	“Chronic (Long-term Exposure Test) – No Observed Effect Concentration”. The highest tested concentration of an effluent or a toxicant at which no adverse effects are observed on the aquatic test organisms at a specified time of observation.
A-NOEC	“Acute (Short-term Exposure Test) – No Observed Effect Concentration” (see C-NOEC definition).
LC ₅₀	LC ₅₀ is the concentration of a sample that causes mortality of 50% of the test population at a specific time of observation. The LC ₅₀ = 100% is defined as a sample of undiluted effluent.
ZID	Zone of Initial Dilution means the region of initial mixing surrounding or adjacent to the end of the outfall pipe or diffuser ports.

PERMIT ATTACHMENT A
MARINE ACUTE
TOXICITY TEST PROCEDURE AND PROTOCOL

I. GENERAL REQUIREMENTS

The permittee shall conduct acceptable acute toxicity tests in accordance with the appropriate test protocols described below:

- Mysid Shrimp (Mysidopsis bahia or Americamysis bahia) **definitive 48 hour test.**
- Inland Silverside (Menidia beryllina) **definitive 48 hour test.**

Acute toxicity data shall be reported as outlined in Section VIII.

II. METHODS

Methods to follow are those recommended by EPA in:

Weber, C.I. et al. Methods for Measuring the Acute Toxicity of Effluents to Freshwater and Marine Organisms, Fourth Edition. Environmental Monitoring Systems Laboratory, U.S. Environmental Protection Agency, Cincinnati, OH. August 1993, EPA/600/4-90/027F.

Any exceptions are stated herein.

III. SAMPLE COLLECTION

A discharge sample shall be collected. Aliquots shall be split from the sample, containerized and preserved (as per 40 CFR Part 136) for the chemical and physical analyses. The remaining sample shall be dechlorinated (if detected) in the laboratory using sodium thiosulfate for subsequent toxicity testing. (Note that EPA approved test methods require that samples collected for metals analyses be preserved immediately after collection.) Grab samples must be used for pH, temperature, and total residual oxidants (as per 40 CFR Part 122.21).

Standard Methods for the Examination of Water and Wastewater describes dechlorination of samples (APHA, 1992). Dechlorination can be achieved using a ratio of 6.7 mg/L anhydrous sodium thiosulfate to reduce 1.0 mg/L chlorine. A thiosulfate control (maximum amount of thiosulfate in lab control or receiving water) should also be run.

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

IV. DILUTION WATER

A grab sample of dilution water used for acute toxicity testing shall be collected at a point away from the discharge which is free from toxicity or other sources of contamination. Avoid collecting near areas of obvious road or agricultural runoff, storm sewers or other point source discharges. An additional control (0% effluent) of a standard laboratory water of known quality shall also be tested.

If the receiving water diluent is found to be, or suspected to be toxic or unreliable, an alternate standard dilution water of known quality with a conductivity, salinity, total suspended solids, and pH similar to that of the receiving water may be substituted **AFTER RECEIVING WRITTEN APPROVAL FROM THE PERMIT ISSUING AGENCY(S)**. Written requests for use of an alternative dilution water should be mailed with supporting documentation to the following address:

Director
Office of Ecosystem Protection
U. S. Environmental Protection Agency-New England
One Congress Street
Suite 1100 - CAA
Boston, MA 02114-2023

It may prove beneficial to have the proposed dilution water source screened for suitability prior to toxicity testing. EPA strongly urges that screening be done prior to set up of a full definitive toxicity test any time there is question about the dilution water's ability to support acceptable performance as outlined in the 'test acceptability' section of the protocol.

V. TEST CONDITIONS AND TEST ACCEPTABILITY CRITERIA

EPA New England requires tests be performed using four replicates of each control and effluent concentration because the non-parametric statistical tests cannot be used with data from fewer replicates. The following tables summarize the accepted Mysid and Menidia toxicity test conditions and test acceptability criteria:

**EPA NEW ENGLAND RECOMMENDED EFFLUENT TOXICITY TEST CONDITIONS
FOR THE MYSID, MYSIDOPSIS BAHIA 48 HOUR TEST¹**

1. Test type	Static, non-renewal
2. Salinity	25ppt \pm 10 percent for all dilutions by adding dry ocean salts
3. Temperature (°C)	20°C \pm 1°C or 25°C \pm 1°C
4. Light quality	Ambient laboratory illumination
5. Photoperiod	16 hour light, 8 hour dark
6. Test chamber size	250 ml
7. Test solution volume	200 ml
8. Age of test organisms	1-5 days
9. No. Mysids per test chamber	10
10. No. of replicate test chambers per treatment	4
11. Total no. Mysids per test concentration	40
12. Feeding regime	Light feeding using concentrated <u>Artemia</u> nauplii while holding prior to initiating the test
13. Aeration ²	None
14. Dilution water	Natural seawater, or deionized water mixed with artificial sea salts
15. Dilution factor	≥ 0.5
16. Number of dilutions ³	5 plus a control. An additional dilution at the permitted effluent concentration (%effluent) is required if it is not included in the dilution series.
17. Effect measured	Mortality - no movement of body appendages on gentle prodding

18. Test acceptability	90% or greater survival of test organisms in control solution
19. Sampling requirements	For on-site tests, samples are used within 24 hours of the time that they are removed from the sampling device. For off-site tests, samples must be first used within 36 hours of collection.
20. Sample volume required	Minimum 1 liter for effluents and 2 liters for receiving waters

Footnotes:

1. Adapted from EPA/600/4-90/027F.
2. If dissolved oxygen falls below 4.0 mg/L, aerate at rate of less than 100 bubbles/min. Routine D.O. checks are recommended.
3. When receiving water is used for dilution, an additional control made up of standard laboratory dilution water (0% effluent) is required.

EPA NEW ENGLAND RECOMMENDED TOXICITY TEST CONDITIONS FOR THE INLAND SILVERSIDE, MENIDIA BERYLLINA 48 HOUR TEST¹

1. Test Type	Static, non-renewal
2. Salinity	25 ppt \pm 2 ppt by adding dry ocean salts
3. Temperature	20°C \pm 1°C or 25°C \pm 1°C
4. Light Quality	Ambient laboratory illumination
5. Photoperiod	16 hr light, 8 hr dark
6. Size of test vessel	250 mL (minimum)
7. Volume of test solution	200 mL/replicate (minimum)
8. Age of fish	9-14 days; 24 hr age range
9. No. fish per chamber	10 (not to exceed loading limits)
10. No. of replicate test vessels per treatment	4
11. total no. organisms per concentration	40
12. Feeding regime	Light feeding using concentrated <u>Artemia</u> nauplii while holding prior to initiating the test
13. Aeration ²	None
14. Dilution water	Natural seawater, or deionized water mixed with artificial sea salts.
15. Dilution factor	≥ 0.5
16. Number of dilutions ³	5 plus a control. An additional dilution at the permitted concentration (% effluent) is required if it is not included in the dilution series.
17. Effect measured	Mortality-no movement on gentle prodding.

18. Test acceptability	90% or greater survival of test organisms in control solution.
19. Sampling requirements	For on-site tests, samples must be used within 24 hours of the time they are removed from the sampling device. Off-site test samples must be used within 36 hours of collection.
20. Sample volume required	Minimum 1 liter for effluents and 2 liters for receiving waters.

Footnotes:

1. Adapted from EPA/600/4-90/027F.
2. If dissolved oxygen falls below 4.0 mg/L, aerate at rate of less than 100 bubbles/min. Routine D.O. checks recommended.
3. When receiving water is used for dilution, an additional control made up of standard laboratory dilution water (0% effluent) is required.

VI. CHEMICAL ANALYSIS

At the beginning of the static acute test, pH, salinity, and temperature must be measured at the beginning and end of each 24 hour period in each dilution and in the controls. The following chemical analyses shall be performed for each sampling event.

<u>Parameter</u>	<u>Effluent</u>	<u>Diluent</u>	<u>Minimum Quanti- fication Level (mg/L)</u>
pH	x	x	---
Salinity	x	x	PPT(o/oo)
Total Residual Oxidants ^{*1}	x	x	0.05
Total Solids and Suspended Solids	x	x	---
Ammonia	x	x	0.1
Total Organic Carbon	x	x	0.5
<u>Total Metals</u>			
Cd		x	0.001
Cr		x	0.005
Pb		x	0.005
Cu		x	0.0025
Zn		x	0.0025
Ni		x	0.004
Al		x	0.02

Superscript:

^{*1} Total Residual Oxidants

Either of the following methods from the 18th Edition of the APHA Standard Methods for the Examination of Water and Wastewater must be used for these analyses:

- Method 4500-Cl E Low Level Amperometric Titration (the preferred method);
- Method 4500-CL G DPD Photometric Method.

or use USEPA Manual of Methods Analysis of Water or Wastes, Method 330.5.

VII. TOXICITY TEST DATA ANALYSIS

LC50 Median Lethal Concentration

An estimate of the concentration of effluent or toxicant that is lethal to 50% of the test organisms during the time prescribed by the test method.

Methods of Estimation:

- Probit Method
- Spearman-Kärber
- Trimmed Spearman-Kärber
- Graphical

See flow chart in Figure 6 on page 77 of EPA 600/4-90/027F for appropriate method to use on a given data set.

No Observed Acute Effect Level (NOAEL)

See flow chart in Figure 13 on page 94 of EPA 600/4-90/027F.

VIII. TOXICITY TEST REPORTING

The following must be reported:

- Description of sample collection procedures, site description;
- Names of individuals collecting and transporting samples, times and dates of sample collection and analysis on chain-of-custody; and
- General description of tests: age of test organisms, origin, dates and results of standard toxicant tests; light and temperature regime; other information on test conditions if different than procedures recommended. Reference toxicity test data must be included.
- Raw data and bench sheets.
- All chemical/physical data generated. (Include minimum detection levels and minimum quantification levels.)
- Provide a description of dechlorination procedures (as applicable).
- Any other observations or test conditions affecting test outcome.
- Statistical tests used to calculate endpoints.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION I

1 CONGRESS STREET - SUITE 1100

BOSTON, MASSACHUSETTS 02114-2023

FACT SHEET

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

NPDES PERMIT NO: MA0000833

PUBLIC NOTICE DATE: May 31, 2007 – July 16, 2007

NAME AND ADDRESS OF APPLICANT:

**ExxonMobil Oil Corporation
3225 Gallow Road
Fairfax, VA 22937**

NAME AND ADDRESS OF FACILITY WHERE DISCHARGE OCCURS:

**ExxonMobil Everett Terminal
52 Beacham Street
Everett, MA 02149**

RECEIVING WATER: Island End River/Mystic River Watershed (MA71)

CLASSIFICATION: SB

TABLE OF CONTENTS

1.0	PROPOSED ACTION, TYPE OF FACILITY AND DISCHARGE LOCATION	4
2.0	DESCRIPTION OF DISCHARGE.....	4
2.1	Summary of Monitoring Data	4
3.0	RECEIVING WATER DESCRIPTION	5
3.1	Island End River Sediment Cleanup	5
4.0	PERMIT LIMITATIONS AND CONDITIONS	6
5.0	PERMIT BASIS AND EXPLANATION OF EFFLUENT LIMITATION DERIVATION	6
5.1	General Requirements	6
5.1.1	Technology-Based Requirements	7
5.1.2	Water Quality-Based Requirements	7
5.1.3	Anti-Backsliding.....	7
5.1.4	Anti-Degradation	8
6.0	Explanation of Effluent Limitations	8
6.1	Facility Information	8
6.1.1	Marine Facility	9
6.1.2	South Tank Farm	9
6.1.3	North Tank Farm	9
6.2	Contributions to Outfall 001 in Draft Permit	10
6.2.1	Storm Water from the North and South Tank Farms	11
6.2.2	Groundwater	11
6.2.3	Former Effluent Pond	12
6.2.4	Maintenance Activities	12
6.2.5	Steam Condensate.....	12
6.2.6	Truck Wash Water.....	12
6.2.7	Hydrostatic Test Water	12
6.2.8	Marine Dock Residual Product and Storm Water	12
6.2.9	Treatment Works	12
6.3	Proposed Permit Effluent Limitations and Monitoring Requirements	13
6.3.1	Flow	14
6.3.2	Total Suspended Solids (TSS).....	15
6.3.3	Oil and Grease	15
6.3.4	pH	16
6.3.5	Polycyclic Aromatic Hydrocarbons (PAHs)	16
6.3.6	Volatile Organic Compounds	18
6.3.7	Mercury	21
6.3.8	Whole Effluent Toxicity	21
6.4	Proposed Permit Conditions.....	21
6.4.1	Tank Bottom Wastewater	21
6.4.2	Maintenance Garage Floor Washings.....	22

6.4.3	Hydrostatic Test Water Discharges	22
6.4.4	Storm Water Pollution Prevention.....	22
7.0	ENDANGERED SPECIES ACT	23
8.0	ESSENTIAL FISH HABITAT	23
9.0	STATE CERTIFICATION REQUIREMENTS	24
10.0	PUBLIC COMMENT PERIOD, HEARING REQUESTS, AND PROCEDURES FOR FINAL DECISION	24
11.0	EPA & MASSDEP CONTACTS.....	25

References

Figure 1 – Site Locus Map

Figure 2 – North Terminal Site Plan

Figure 3 – South Terminal Site Plan

Figure 4 – Process Schematic

Attachment A - Summary of Discharge Monitoring Data

1.0 PROPOSED ACTION, TYPE OF FACILITY AND DISCHARGE LOCATION

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 storm water, groundwater, steam condensate, tank bottoms, and potable water (used for garage floor washing, hydrostatic testing, truck washing, fire testing, landscape watering, and safety showers) through outfall 001 (formerly known as outfall 001A) into the Island End River following treatment in an oil/water separator (OWS). The permit was issued to the Everett Terminal of Exxon Company on March 6, 2000 (the current permit) and expired on March 6, 2005. EPA received a permit renewal application dated September 14, 2004, from ExxonMobil. Since the permit renewal application was deemed both timely and complete by EPA, the permit has been administratively continued. The current permit also authorizes the direct discharge of the same discharges without treatment during heavy rain events through outfall 001B.

The ExxonMobil Everett Terminal, which is located in Everett, Massachusetts, is engaged in the receipt, storage, and distribution of petroleum products. The spectrum of fuels handled by this facility consists of gasoline, low sulfur diesel, jet fuel, heavy oil, and fuel additives. Petroleum products are received in bulk quantities at the terminal's marine vessel dock. Product is then transferred, via aboveground piping, to aboveground storage tanks located within the facility's tank farm areas. Final distribution of product is conducted at the facility's truck loading racks.

The ExxonMobil Everett Terminal operations also include the collection and discharge of storm water from Sprague Energy, an asphalt storage and distribution facility located on property formerly owned by ExxonMobil.

All of the water discharged is collected by the facility's storm water collection system which drains to a treatment works near the eastern edge of the North Tank Farm. Discharge to the Island End River is by means of a 6-foot diameter, 1500 foot long culvert that carries water from ExxonMobil to the river. The Everett Terminal has no river frontage. The downstream end of the culvert is regularly submerged due to the tidal influences of the river. The outfall location is shown on the site locus map, Figure 1.

2.0 DESCRIPTION OF DISCHARGE

The draft permit authorizes the discharge of storm water, groundwater, steam condensate, and potable water used for hydrostatic testing, truck washing, fire testing, landscape watering, and safety showers through outfall 001. All contributions to outfall 001 are collected in the facility's storm drains system and treated in an OWS prior to discharge. The discharges of tank bottoms and maintenance garage floor wash water (authorized in the current permit) are prohibited in the draft permit.

A more detailed description of each contribution to the facility discharge is provided in Section 6.0.

2.1 Summary of Monitoring Data

A quantitative description of the discharge in terms of significant effluent parameters based on discharge monitoring reports (DMRs) submitted for the ExxonMobil Everett Terminal during the time period of 2002 through 2006, is included in Attachment A. This data was collected and submitted in compliance with the Current Permit

Under Section 308(a) of the Clean Water Act (CWA), EPA requested additional sampling and analysis of non-storm water flows to Outfall 001 in a letter to ExxonMobil dated April 14, 2006. This included

sampling of dry weather flows (primarily groundwater infiltration) for priority pollutants, gasoline additives and iron. Dry weather flows were sampled on July 18th, 2006.

Historical groundwater data was also considered for this permit.

3.0 RECEIVING WATER DESCRIPTION

The receiving water, Island End River (Boston Harbor/Mystic River Watershed/Segment MA71-03), is a small tributary to the Mystic River. The entire river is less than one-half mile long, and about 500 feet across at its widest point. The Island End River flows into the Mystic River, approximately half a mile west of the Mystic River's end in Boston Harbor. The Island End River is designated as a Class SB water body by the Commonwealth of Massachusetts.

Under Section 303(d) of the CWA, states are required to develop information on the quality of their water resources and report this information to the EPA, the U. S. Congress, and the public. In Massachusetts, the responsibility for monitoring the waters within the State, identifying those waters that are impaired, and developing a plan to bring them into compliance with the Massachusetts Water Quality Standards (314 CMR 4.0), resides with the Massachusetts Department of Environmental Protection (MassDEP). The MassDEP evaluated and developed a comprehensive list of the assessed waters and the most recent list was published in the *Massachusetts Year 2004 Integrated List of Waters* (MassDEP, April 2005). The list identifies the lower reach of the Mystic River (including Island End River) as one of the waterways within Massachusetts that is impaired. The impairment, as identified by the MassDEP, is related to the presence of the following pollutants, which were not considered to be present due to natural causes: priority organics, metals and other inorganics, unionized ammonia, organic enrichment/low dissolved oxygen, pathogens, oil and grease, taste, odor, and color.

The MassDEP is required, under the CWA, to develop a Total Maximum Daily Load (TMDL) for a water body once it is identified as impaired. A TMDL is essentially a pollutant budget designed to restore the health of a water body. A TMDL typically identifies the source(s) of the pollutant from direct and indirect discharges, determines the maximum amount of pollutant (including a margin of safety) that can be discharged to a specific water body, while maintaining water quality standards for designated uses, and outlines a plan to meet the goal. A TMDL has not yet been developed for the Island End River. In the interim, EPA has developed the conditions for this permit to ensure that the discharges will not cause or contribute to a violation of the Massachusetts water quality standards (discussed further below). Should a TMDL be developed in the future, and if that TMDL establishes a waste load allocation that would require more stringent effluent limitations for this facility, then the permit may be re-opened.

Island End River was included in the investigation of sediment quality in the Mystic River drainage basins summarized in *Sediment Quality of Lakes, Rivers, and Estuaries in the Mystic River Basin, Eastern Massachusetts, 2001 – 03* (Breault, et al., 2005). Priority pollutant polycyclic aromatic hydrocarbons (PAHs), priority pollutant metals, pesticides and PCBs were measured in sediments from 5 locations in the Island End River. Elevated PAH concentrations measured for this study were identified in sediments from Island End River and attributed to residual waste discharges from a coal gasification and coal tar processing activities on the shores of the Island End River between the 1890's and the late 1950's.

3.1 Island End River Sediment Cleanup

In March of 2006, in-water construction work commenced on a major cleanup action to address coal tar contamination in sediments in the Island End River adjacent to the former coal tar processing facility site in Everett. The former coal tar processing facility site is located on the western bank of the Island End

River and is currently home to the Distrigas LNG terminal, the Prolerized scrap metal yard, the ExxonMobil oil terminal and docks, and numerous commercial warehousing and trucking operations. From the late 1800's until around 1960, the site was the home to a large coal gasification plant and coal tar processing facility. MassDEP identified three large corporations – currently Keyspan Energy (former Eastern Enterprises), Honeywell, Inc. (former Allied Chemical), and Beazer East (former Koppers Co.) – as Potentially Responsible Parties (PRPs) for the site, and eventually entered into an Administrative Consent Order with all three corporations in 1989 to compel them to clean up the site in accordance with the requirements of M.G.L. c. 21E and the Massachusetts Contingency Plan (MCP). (Roberson, 2006) The MassDEP Release Tracking Number (RTN) for the former coal tar processing facility site is 3-0309.

The remedial actions in the river, which have been planned, executed, and have nearly been completed over the course of the last five years or so, consist of three elements:

1. construction of a Confined Disposal Facility (CDF) extending outward from the west bank of the Island End River, enclosing an area of approximately 1.9 acres of the most heavily contaminated river-bottom sediments;
2. dredging of approximately 72,000 cubic yards of contaminated sediments from outside of the CDF, stabilization of the sediments by mixing them with Portland cement, and depositing most of the stabilized sediments within the CDF (with a smaller portion transported off-site for disposal at a licensed facility), and capping the CDF; and
3. implementation of a wetlands mitigation project to make up for the lost water sheet within the Island End River.

The cleanup work in the Island End River has been completed as a Remedial Abatement Measure under the MCP and will be evaluated for effectiveness by continued monitoring. The wetland mitigation plan is still in the discussion and design stage. (Roberson, 2006)

4.0 PERMIT LIMITATIONS AND CONDITIONS

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

5.0 PERMIT BASIS AND EXPLANATION OF EFFLUENT LIMITATION DERIVATION

5.1 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. This draft NPDES 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 CFR Parts 122, 124, 125, and 136. The general conditions (Part II) of the draft permit are based on 40 CFR ' 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 CFR ' 122.41(j), ' 122.44(i) and ' 122.48.

5.1.1 Technology-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.

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 Part 125 Subpart A) to meet best practicable control technology currently available (BPT), 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-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 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.

EPA has not promulgated technology-based National Effluent Guidelines for storm water or other non-sanitary discharges from petroleum bulk stations and terminals (Standard Industrial Code 5171). In the absence of 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).

5.1.2 Water Quality-Based Requirements

Water quality-based criteria are required in NPDES permits when EPA determines 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 standards consist of three (3) 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 Massachusetts Surface Water Quality Standards (WQS), found at 314 CMR 4.00, include these elements. The WQS 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. These standards also include requirements for the regulation and control of toxic constituents and require that EPA recommended water quality criteria, established pursuant to Section 304(a) of the CWA, be used unless a site-specific criterion is established. The Massachusetts WQS also generally prohibit toxic pollutants in toxic amounts [See Massachusetts 314 CMR 4.05(5)(e)]. EPA regulations pertaining to permit limits based upon water quality standards and state requirements include the provisions at 40 CFR ' 122.44(d). The effluent limits established in the draft permit assure that the surface water quality standards of the receiving water are protected, maintained, and/or attained.

5.1.3 Anti-Backsliding

Section 402(o) of the CWA provides, generally, that the effluent limitations of a renewed, reissued, or modified permit must be at least as stringent as the comparable effluent limitations in the previous permit.

Unless certain limited exceptions are met, backsliding from effluent limitations contained in previously issued permits is prohibited. EPA has also promulgated anti-backsliding regulations, which are found at 40 CFR 122.44(l). Unless statutory and regulatory backsliding requirements are met, the limits in the reissued permit must be at least as stringent as those in the previous permit. Since none of these

requirements apply to this facility, the effluent limits in the draft permit must be at least as stringent as those in the Current Permit.

5.1.4 Anti-Degradation

The Massachusetts Surface Water Quality Standards (314 CMR 4.00, February, 1996)¹ establish designated uses of the State's waters, criteria to protect those uses, and an anti-degradation provision to ensure that existing uses and high quality waters are protected and maintained. They also include requirements for the regulation and control of toxic constituents and specify that EPA's recommended water quality criteria, established pursuant to Section 304(a) of the CWA, shall be used unless a site-specific criterion is established.

Section 401(a)(1) of the CWA forbids the issuance of a federal license for a discharge to waters of the United States unless the state where the discharge originates, in this case Massachusetts, either certifies that the discharge will comply with, among other things, state water quality standards, or waives certification. EPA's regulations at 40 CFR § 122.44(d)(3), §124.53 and §124.55 describe the manner in which NPDES permits must conform to conditions contained in state certifications.

The Mystic River and Island End River are classified as Class SB water bodies by the State of Massachusetts and as such, are designated as habitat for fish, other aquatic life and wildlife and for primary (e.g., wading and swimming) and secondary (e.g., fishing and boating) contact recreation. Class SB waters may also be suitable for shellfish harvesting but there are no areas within the Island End or Mystic River currently approved by the State for such use.

This draft permit is being reissued with allowable effluent limits as stringent, or more stringent, than the Current Permit and accordingly will continue to protect the existing uses of the Island End River and Mystic River.

6.0 EXPLANATION OF EFFLUENT LIMITATIONS

6.1 Facility Information

The ExxonMobil Everett Terminal is a petroleum products distribution and bulk storage terminal. The facility, which comprises approximately 110 acres (including Sprague Energy), consists of a marine bulk product receiving and shipping facility, known as the Marine Facility, a light fuel (gasoline, diesel and jet fuel) storage area known as the North Tank Farm, and a heavy fuel oil and asphalt storage area known as the South Tank Farm. Figures 2 and 3 show the layouts of the North and South Tank Farms.

Sprague Energy is co-located in the South Tank Farm. ExxonMobil is responsible for storm water and any other discharges from Sprague Energy into ExxonMobil's storm water collection system. All discharges generated in the Marine Facility, the South Tank Farm, and the North Tank Farm flow to the terminal's storm drain system and collect at the treatment works located in the North Tank Farm. The treatment works includes flow distribution, oil/water separation and transfer pumping equipment, as described in section 6.2.9.

¹ The Massachusetts Surface Water Quality Standards ("Massachusetts WQS") referenced in this Fact Sheet are those adopted in 1996. Massachusetts recently adopted revisions to its Standards in January 2007 and has submitted them to EPA for approval. As the revisions are not yet approved, with the exception of certain copper criteria, the 1996 version is applicable to this permit.

6.1.1 Marine Facility

The Marine Facility is located at the confluence of the Island End River and the Mystic River. Petroleum product is delivered by ship or barge at the Marine Facility and transferred via aboveground piping to the storage tanks at the North and South Tank Farms. Marine vessels arrive at the three berths on the Mystic River. One of the berths (Berth #4), is currently idle. Berth #1 is a 440-foot long barge berth and Berth #3 is a tanker berth. Berths #1 and 3 are used to transfer product from marine vessels to the storage tanks in the North and South Tank Farms and to transfer product from the North and South Tank Farms to marine vessels.

At the Marine Facility, each berth is equipped with two containment areas for transfer piping and hoses. These containment areas are cleaned out by vac truck during or after rain events. The storm water is discharged at the head of the treatment works.

6.1.2 South Tank Farm

ExxonMobil

The South Tank Farm includes 18 bunkered concrete tanks. The bunkered tanks include four tanks in active service (Tanks 221-224); one tank in fire water service (Tank 207); and thirteen tanks (Tanks 201 – 206 and 208 – 214) that are out of service. The bunkered concrete tanks in active service are partially buried concrete tanks that are internally lined with steel floors and walls and are covered with flat concrete roofs. They are surrounded by mounded soil. These tanks are used to store #6 fuel oil which is sold, exclusively, to the nearby Mystic Power electric generating facility as backup fuel. The transfer piping to the power plant is owned and operated by Mystic Power,

The South Tank Farm includes two field-erected aboveground storage tanks (ASTs) in dikes. One tank (Tank 147) is used to store diesel fuel. The second tank (Tank 146) is currently idle.

A diesel powered emergency generator with an auxiliary diesel tank is located near Tank 210. Distillate transfers for Everett Terminal use are conducted from tank trucks to the emergency generator fuel tank. Transformers and electrical starters are also located throughout the South Tank Farm.

Sprague Energy

The asphalt storage and distribution area within the South Tank Farm is owned and operated by Sprague Energy. This area includes aboveground storage tanks (ASTs), and asphalt loading rack and other operational equipment. Although this area was formerly part of the Exxon facility and later sold to Sprague Energy, ExxonMobil maintains responsibility for Sprague storm water and any other discharges into ExxonMobil's storm water collection system.

6.1.3 North Tank Farm

The North Tank Farm is used to store light petroleum product, ethanol and fuel additives in aboveground storage tanks (ASTs), load product onto tanker trucks at a covered loading rack, store and maintain ExxonMobil's truck fleet, collect treat and discharge wastewater, and house administration offices. Product stored in the North Tank Farm consists of gasoline, distillates (heating oil, kerosene, and diesel) and additives. The North Tank Farm includes 26 product storage tanks and 7 additive tanks with a total nominal capacity of 1,785,000 barrels (75,000,000 gallons). Products stored in the North Tank Farm are

delivered to company owned and customer tank trucks via a 12-bay loading rack, with access to and from Beacham Street.

The North Tank Farm also includes a vapor recovery system (buried knockout tank and an aboveground vapor recovery unit) for emission controls on the loading rack. Transformers and electrical starters are located throughout the North Tank Farm. Satellite and central drum storage areas are located in areas of containment within the North Tank Farm. These areas store waste oils, lube oils, additives and distillates. Portable motor oil and a used oil container are located in the garage for vehicle maintenance. Used motor oil is collected in a storage tank on the north side of the garage. The North Tank Farm also includes two buried tanks; one tank for Everett Terminal heating oil and a second tank for product recovery.

Numerous transfer activities occur in the North Tank Farm. Additive transfers from tank trucks to the additive tanks occur adjacent to the additive tank dike area. Truck fueling occurs in the parking lot adjacent to the fuel dispensers. Vacuum trucks transfer oily water mixtures from tank water draw offs, to Tank 136, and transfer product from equipment drain downs back to storage tanks. Transfers of distillate used by the Everett Terminal are conducted from tank trucks to the buried heating oil tank.

6.2 Contributions to Outfall 001 in Draft Permit

All water collecting in storm drains and sumps around the Everett Terminal is collected at the facility's treatment works and then is discharged through Outfall 001. The various contributions, and the treatment works itself, are described in the following paragraphs. Table 1 summarizes the various contributions authorized in the draft permit and their flow volume, as estimated by ExxonMobil.

Table 1 – Discharges to Outfall 001 Authorized in Draft Permit

Contribution to Outfall 001	Average Flow (MGD)	Components
Storm Water	6.6	Rain water containing suspended solids, residual petroleum hydrocarbons from miscellaneous drips and spills of currently stored fuels
Groundwater infiltration	0.28	Groundwater containing residual contamination from current and historical releases of oil and hazardous materials
Former Effluent Pond	0.072	Groundwater containing residual contamination from historical releases of oil and hazardous materials, rainwater
Maintenance Activities	0.003	Potable water used for fire testing, landscape watering, and safety showers
Steam Condensate	0.0001	water
Truck Wash Water	0.0002	Potable water containing suspended solids, oil and grease
Hydrostatic Testing of Tanks and Piping	0.286 (intermittent)	Potable water
Marine Dock Drip Pans	0.004	Same as storm water

6.2.1 Storm Water from the North and South Tank Farms

Storm water is collected from unpaved diked areas around product storage tanks. Each diked area contains a below-grade sump with lift pump to transfer collected storm water to the gravity storm sewers that lead to the treatment works. The sump pumps are manually activated after an ExxonMobil operator has inspected the storm water. If there is no product sheen visible on the storm water, the sump pump is activated. If floating product is visible, it is removed prior to transfer. The sump pumps automatically shut down on low level but do not automatically restart. Due to the large volumes of storm water collecting at the treatment works, storm water typically remains in the diked areas for two to four days following a rain event.

Storm water falling in open paved areas, building roofs, and tank roofs on the North and South Tank Farms flows by gravity to the treatment works.

The loading racks in the North and South Tanks Farms are covered with a roof. However, there are no gutters on the roof, so rainwater falling on the roof falls onto the loading rack pads. Loading rack pad catch basins drain into the storm water collection system and to the treatment works on the South Tank Farm.

6.2.2 Groundwater

The flow of groundwater from Outfall 001 has been estimated by ExxonMobil at 280,000 gallons per day. This includes approximately 107,000 gallons per day (gpd) of groundwater during dry weather as estimated by the permittee based on 2005 flow records. No information is available, to date, indicating whether groundwater infiltration occurs via small leaks throughout the system or through larger, localized breaches in the storm drains.

The ExxonMobil facility has reported numerous releases of oil and hazardous materials (OHM) over many years and is currently a MassDEP listed remediation site (Release Tracking Number #3-0310) being remediated under the direction of a Licensed Site Professional (LSP). Although no permanent solution to site cleanup has been implemented, a Class C Response Action Outcome (RAO) was submitted to MassDEP on October 27, 2004. A January 2007 status report (#5) to ExxonMobil listed 8 areas of concern (AOCs) that remain on the site. Of these, three AOCs (#s 1, 4 and 8a) were described as containing light non-aqueous phase liquid (LNAPL). AOC #4 was described as “LNAPL at Miscellaneous Areas – North and South Tank Farm”. AOC #s 1 and 8a were identified as the loading rack area and the area around the Mass Pipeline (MPL), respectively, in the North Tank Farm. So far, LNAPL removal has been limited to passive removal of LNAPL from wells in these AOCs.

Contaminated groundwater infiltration into the collection system contributes a constant flow of oil to the treatment works. Oil is skimmed off of the oil/water separator at least daily. In this sense, the storm drains and treatment works are operating as a de facto groundwater collection and treatment system. The site assessment for the facility conducted under the Massachusetts Contingency Plan (MCP) and dated November 12, 1996 credits the storm water collection system with creating “low spots in the water table” which cause oil and hazardous materials (OHM) dissolved in groundwater to migrate to the central portion of the site towards the sumps thereby preventing off site migration through the soil column. This same Site Assessment reported that “OHM dissolved in groundwater is likely not migrating off this site while the facility pumping is maintained”. During a March 2006 site visit to ExxonMobil, LSP John A. Thomson reiterated that the hydraulic influence of the storm water collection sumps creates a groundwater gradient away from the property lines and towards the sumps. ExxonMobil has taken no action to date to mitigate the resulting infiltration of contaminated groundwater into the storm drains and ultimate discharge to Island End River. EPA finds, based on this information, that, although not initially

constructed for this use, the storm water collection and discharge system is being utilized as a critical component of the remedial action to prevent off-site migration.

Given the information available, including the results of recent dry weather flow sampling and observations of oil accumulation during both dry and wet weather, EPA believes the groundwater to be generally contaminated. Specific contaminants are discussed in section 6.3.

6.2.3 Former Effluent Pond

A small body of water known as the Effluent Pond, located between the treatment works and Outfall 001, was once used for storm water detention and is now a source of intermittent flows. Although the Effluent Pond currently serves no purpose, it does collect groundwater and rainwater. When the elevation of the Effluent Pond becomes close to overflowing, operators manually activate a drawdown pump. Water from the Effluent Pond is discharged to the head of the treatment works.

6.2.4 Maintenance Activities

Maintenance activities at ExxonMobil generate discharges of potable water that are discharged to the terminal storm drains. These include potable water used to wash floors, for landscape maintenance, and for safety showers.

6.2.5 Steam Condensate

ExxonMobil heats the facility's office and maintenance buildings and No. 6 fuel oil transfer piping with steam generated in an on-site boiler. The steam condensate resulting from this operation is discharged to outfall 001.

6.2.6 Truck Wash Water

The ExxonMobil Everett Terminal includes a paved truck wash area located outside of the maintenance garage. Water used to wash the truck drains to a storm water catch basin.

6.2.7 Hydrostatic Test Water

There has been one hydrostatic test water discharge reported at the facility since the issuance of the Current Permit. Discharge monitoring and reporting were conducted for this testing event in accordance with the procedures described in Part I.A.9 of the Current Permit. Potable water from the local municipal water supply was used as the source of water for this test. Results from the analysis of the hydrostatic test water shows conformance with the requirements and conditions identified in Part I.A.9 of the Current Permit.

6.2.8 Marine Dock Residual Product and Storm Water

The marine vessel dock has a steel drip pan located beneath each of the manifold areas to recover any potentially spilled product. Storm water as well as any residual product accumulating in the drip pan is pumped, as needed, into tank trucks and discharged into the head of the treatment works.

6.2.9 Treatment Works

The treatment works are used to treat all flows to outfall 001. The treatment system consists of a former oil-water separator, which is now used as a distribution chamber known as the separation flume, an oil water separator (OWS) (built in the late 1980's), a two-chamber wet well with a total of 5 submersible pumps, and a 1.45 million gallon above ground storage tank, known as Tank 140. Figure 4 shows a schematic of the current flows through the treatment works.

Flows from the terminal collect in the separation flume. A submerged pipe in the separation flume transfers flow by gravity into the OWS. The transfer rate may be controlled by a gate valve in the pipe between the separation flume and the OWS. The design flow for the OWS is 3,000 gallons per minute (gpm). However, ExxonMobil has acknowledged that flow through the OWS is frequently greater than 3,000 gpm. Flows which exceed the hydraulic transfer capacity of the separation flume and the OWS bypass the OWS and overflow from the separation flume to the first chamber of the wetwell.

The OWS is equipped with coalescing media and manually operated rotary skimmers to remove oil from the surface of the separator. The treatment works are checked at least twice per day and oily water is typically skimmed off twice per day. The skimmed oil is transferred to a below ground oil storage tank and allowed to separate further. Subnatant (water that has separated from the oil and sunk to the bottom) from the oil storage tank is pumped back to the separation flume to further concentrate the oil in the storage tank. The contents of the oil storage tank are periodically emptied and disposed of by a licensed oil disposal contractor. Effluent from the OWS flows into the first chamber of the wet well.

The wet well is divided into two chambers by a baffle to prevent oil captured in the first chamber from flowing into the second chamber. The two chambers are hydraulically connected at the bottom of the wet well. The first chamber contains two 750 gpm pumps and one 3,000 gpm pump. The system operates in lead/lag fashion with the two 750 gpm pumps leading the 3,000 gpm pump. The pumps in the first chamber transfer water treated in the OWS and bypass water to Tank 140.

The second wet well chamber contains two 10,000 gpm pumps. These are used during very heavy rainfall when the flow to the treatment works exceeds the 4,500 gpm capacity of the pumps in the first chamber of the wet well. By pass flows have been monitored by event sampling and reported as outfall 001B. Discharge monitoring data for outfall 001B is summarized in Attachment A. The bypass pumps are manually activated and shut down automatically on low level. Since bypasses have been prohibited in the draft permit, outfall 001B will no longer exist after new permit conditions take effect. (see Section 6.3.3.1)

Tank 140 is used as a secondary settling tank. Water from the first chamber of the wet well is transferred to Tank 140 and then overflows to discharge at Outfall 001. The sampling port on the discharge from Tank 140 has been used for discharge monitoring. The water level in Tank 140 remains constant at approximately 1.45 million gallons. There is no cover on Tank 140. Operators periodically climb to the top of the tank to inspect the surface and remove accumulated oil if necessary.

Flow from areas of the site that are not within the containment areas are collected, pumped to the treatment works and treated through the OWS during and immediately after each rain event. To minimize overflow and bypasses of the treatment works, storm water collected inside the containment areas is stored within those containment areas, for as long as 7 days, prior to being pumped to the collection system and the treatment works. In spite of this, bypasses of the treatment works and Tank 140 have occurred as frequently as 4 times a year since 2002.

6.3 Proposed Permit Effluent Limitations and Monitoring Requirements

The Draft Permit is conditioned to: (1) better regulate non-storm water discharges (e.g., wash water, hydrostatic test water and groundwater) alone or in combination with storm water runoff to Island End River, and (2) to better regulate ancillary operations that have the potential to contact storm water (e.g., materials storage, facility site-runoff, product blending, and product loading and unloading).

Storm water discharges from activities associated with petroleum bulk stations and terminals must satisfy practicable control technology currently available (BPT), best conventional technology (BCT) and best available technology (BAT) requirements and must comply with more stringent water quality based limits

if BCT and BAT requirements are not adequate. On September 25, 1992, EPA issued its General Permit for Storm Water Discharge Associated with Industrial Activity, and determined that the minimum BAT/BCT requirement for storm water discharges associated with industrial activity is a Storm Water Pollution Prevention Plan (SWPPP) [57 FR, 44438]. This general permit was reissued on October 30, 2000 (65 FR 64801) as NPDES Multi-Sector General Permits for Storm Water Discharges Associated With Industrial Activities and is known as the Multi-Sector General Permit (MSGP). Although petroleum bulk storage facilities are included as an industrial activity eligible for coverage by the MSGP, the Everett Terminal is not eligible for coverage under the MSGP partly because it already has an individual permit which contains numeric water-quality based limitations. In addition, the terminal's contaminated groundwater discharge is not among the "allowable non-storm water discharges" authorized under the MSGP (as defined in section 1.2.2.2 of the MSGP). However, EPA has included requirements in the draft permit to the extent possible and consistent with the intent of the MSGP. These requirements include, for example, the preparation and implementation of a Storm Water Pollution Prevention Plan (SWPPP) and the prohibition against discharging wash waters where detergents have been used.

Similarly, contaminated groundwater discharges must also satisfy technology and water quality based requirements and must comply with more stringent water quality standards if technology requirements are not adequate. EPA Region 1 has established technology based effluent limits using BPJ for contaminants in the groundwater based on a review of commonly available and utilized groundwater treatment technologies at remediation sites. EPA requested, under Section 308(a) of the Clean Water Act, dry weather sampling in an effort identify priority pollutants which may be infiltrating into the storm drains with contaminated groundwater due to current or past uses of the site.

The effluent limits and permit requirements included in the Draft Permit are discussed in greater detail below.

6.3.1 Flow

Although there are numerous contributions to outfall 001, storm water contributes the overwhelming flow volume during heavy rain events and is the controlling contributor to the consideration of effluent flow limits in the following paragraphs.

Typical treatment technology employed by petroleum bulk storage terminals for storm water runoff is an OWS. This device uses gravity to separate lower and higher density contaminants from water, resulting in an oil phase above the oil/water interface and a heavier particulate phase (settleable solids) on the bottom of the separator. Accordingly, the sizing of OWSs is based on the following design parameters: water-flow rate, relative density of the contaminants to be separated, desired percentage removal of oil, and the operating temperature range.

To ensure proper operation of installed OWSs such that the oil and/or particulate contaminants are not passed through to the river, it is important that the flow through the separator be maintained at or below the maximum design flow rate of the separator. ExxonMobil has identified that the maximum design flow rating for the OWS currently at the facility is 3,000 gpm. The draft permit requires the permittee to retrofit the OWS inlet to ensure that the design capacity of the OWS is not exceeded and that all discharges are treated through it.

EPA acknowledges that flow from storm events is difficult to control entirely, given the varying nature of storms. There will, inevitably, be occasions of unusual weather. Consistent with effluent limit guidelines for point source storm water discharges from other industries (e.g., 40 CFR Part 423 steam electric power generating and 40 CFR Part 436 Mineral Mining and Processing), no monitoring or effluent limits have been set for treatment system overflow, as long as the collection and treatment facilities are designed and

operated to accommodate the peak flow and total volume of storm water and groundwater which would result from a 10-year, 24-hour frequency storm event. The draft permit requires that the date and volume of the system overflow be documented and reported to EPA and MassDEP with the monthly discharge monitoring reports. In addition, no operational discharges, such as fire testing, hydrostatic testing or truck wash water, are permitted until the potential for overflow has ended.

The standard conditions in Part II (paragraph B.4) of the draft permit (attached to all Massachusetts NPDES permits) allow for emergency bypasses of the OWS.

6.3.1.1 Bypasses

The current permit prohibits bypasses of the OWS through outfall 001B “except during naturally occurring precipitation from severe weather incidents like a hurricane”. From 2002 through 2006 there were 12 bypass events including 4 events in 2006 (in May, June, July and November). There are effluent limits for these bypass discharges in the current permit. These effluent limits were exceeded (for total suspended solids) on four occasions in the last five years (see Attachment A).

EPA has eliminated outfall 001B bypass discharges and prohibited any bypasses of the OWS in the draft permit except as described in the General Conditions (Part II.B.4) of the draft permit. In lieu of a permitted bypass outfall, EPA has established design criteria for ExxonMobil’s collection and treatment system in the draft permit intended to prevent frequent discharges of untreated storm water and groundwater, as described above. The prohibition against treatment system bypasses is consistent with EPA Region 1 requirements at other petroleum bulk storage facilities in the Boston Harbor area.

6.3.2 Total Suspended Solids (TSS)

Total suspended solids (TSS) include all particles suspended in water which will not pass through a filter. Storm water, carrying silt, dirt and eroded soil is often a source of suspended solids. Polynuclear aromatic hydrocarbons are readily adsorbed onto particulate matter and the release of these compounds can be, to an extent, controlled by regulating the amount of suspended solids released into the environment.

The Draft Permit limit for TSS remains unchanged at 30 mg/l and 100 mg/l for the average monthly and maximum daily values, respectively. The monitoring frequency for this parameter will remain monthly. The TSS limits in the Draft Permit are based upon the limits established in the Current Permit in accordance with the anti-backsliding requirements found in 40 CFR ' 122.44(l).

The ExxonMobil Everett Terminal was able to consistently meet its TSS limits at outfall 001 over the last permit cycle. At outfall 001B, the daily maximum limit of 100 mg/l TSS was exceeded one time and the monthly average limit of 30 mg/l TSS was exceeded four times during the last five years.

6.3.3 Oil and Grease

The current permit includes an oil and grease limit of 15 mg/l for the maximum daily value. This is a typical effluent limit for storm water at petroleum bulk storage facilities and reflects the capabilities of the oil/water separator to remove product in the event of an equipment leak or spill of petroleum into the storm water collection system. It is expected that with the best management practices in place at the facility, there will not be any oil accumulation at the treatment works. However, at this facility, groundwater infiltration into the collection system contributes a constant flow of oil to the treatment works. Oil is skimmed off of the oil/water separator at least daily. In this sense, the treatment works is operating as a de facto groundwater treatment system, removing residual oil from the site subsurface.

In establishing the technology-based effluent limit for oil and grease based on best professional judgement (BPJ), EPA reviewed a number of sources, including the substantial monitoring data being submitted pursuant to approved site remediation projects, reviewed a number of other EPA and state issued general permits and related effluent guidelines developed by EPA. Site remediation projects in Massachusetts and New Hampshire have consistently required an effluent limit maximum value for total petroleum hydrocarbons of 5 mg/l (USEPA, 2005). Since there are not expected to be any oil and grease constituents in the discharge except for petroleum hydrocarbons, the draft permit includes a groundwater treatment technology-based limit for oil and grease of 5 mg/l.

Review of monitoring data for outfall 001 from 2002 to 2006 indicates that only one of the monthly oil and grease samples exceeded 5 mg/l or the detection limit, which ranged from 4.2 to 5.3 mg/l. The detected oil and grease result greater than 5 mg/l was 7.2 mg/l in September of 2004. It is expected that with improved flow controls (see Section 6.3.1), ExxonMobil will be able to meet the new oil and grease effluent limit. EPA also believes that this limit will ensure that discharges from the facility do not contribute to the further impairment of the Island End and Mystic Rivers.

As noted in Section 3.0 of this Fact Sheet, oil and grease is one of the pollutants identified by the State of Massachusetts as having contributed to the impairment of the Mystic River (including Island End River). The MassDEP uses a narrative description (e.g., waters shall be free from oil, grease and petrochemicals that produce a visible film on the surface of the water) rather than a numeric threshold to identify whether this pollutant is an issue for a water body. The draft permit accordingly imposes a “no visible sheen” requirement.

In the future, should ExxonMobil remove the contaminated groundwater from the discharge or isolate it in such a way that it could be treated and discharged via an upstream internal outfall, a less stringent effluent limit for oil and grease in storm water at Outfall 001 could be considered as this would constitute a substantial and material change to the circumstances on which the effluent limit is based, in accordance with the anti-backsliding requirements of 40 C.F.R. § 122.44 (l).

6.3.4 pH

Massachusetts State Surface Water Quality Standards require the pH of Class SB waters to be within the range of 6.5 to 8.5 standard units (S.U.). The pH permit range of 6.5 to 8.5, which is to be monitored on a monthly basis, has been established in accordance with the State Surface Water Quality Standards. The discharge shall not exceed this pH range unless due to natural causes. In addition, there shall be no change from background conditions that would impair any uses assigned to the receiving water class. A summary of the discharge monitoring data submitted by the facility during the time period of November 2003 to March 2006 is included as Attachment A to this Fact Sheet. The pH limits in the draft permit are also retained in accordance with anti-backsliding provisions.

ExxonMobil has demonstrated its ability to meet the pH conditions in the current permit and those conditions are continued in the draft permit.

6.3.5 Polycyclic Aromatic Hydrocarbons (PAHs)

PAHs are a group of chemicals that are formed during the incomplete burning of coal, oil, gas, wood, garbage, or other organic substances, such as tobacco and charbroiled meat. There are more than 100 different PAHs. PAHs generally occur as complex mixtures (for example, as part of combustion products such as soot), not as single compounds. A few PAHs are used in medicines and to make dyes, plastics, and pesticides. Others are contained in asphalt used in road construction. They can also be found in substances such as crude oil, coal, coal tar pitch, creosote, and roofing tar. They are found throughout the

environment in the air, water, and soil. They can occur in the air, either attached to dust particles or as solids in soil or sediment. (ATSDR, 1995)

PAHs can enter surface water through discharges from industrial plants and waste water treatment plants, and they can be released to soils at hazardous waste sites if they escape from storage containers. The movement of PAHs in the environment depends on properties such as how easily they dissolve in water, and how easily they evaporate into the air. PAHs in general do not easily dissolve in water. They are present in air as vapors or adhered to the surfaces of small solid particles. Some PAHs evaporate into the atmosphere from surface waters, but most stick to solid particles and settle to the bottoms of rivers or lakes. PAHs can also bio-accumulate in fish and shellfish. (ATSDR, 1995) As discussed in Section 3, Island End River sediments have been contaminated with coal tar residues (which are rich in PAHs) due to historic industrial activities and cleanup of these sediments is ongoing.

There are sixteen (16) PAH compounds identified as priority pollutants under the CWA (See 40 CFR Part 423 - Appendix A). Group I PAHs are seven well known carcinogens. They are: benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, chrysene, dibenzo(a,h)anthracene, and indeno(1,2,3-cd)pyrene. Group II PAHs are the nine priority pollutant PAHs not considered carcinogenic alone, but which can enhance or inhibit the response of the carcinogenic PAHs. They are: acenaphthene, acenaphthylene, anthracene, benzo(ghi)perylene, fluoranthene, fluorine, naphthalene, phenanthrene, and pyrene. Typically, exposure would be to a mixture of PAHs rather than to an individual PAH.

To prevent further PAH contamination of Island End River sediments, EPA established effluent limits for each priority pollutant PAH of 0.0311 µg/L and 0.0311 µg/L for the sum of all 16 PAHs based upon the EPA human health criterion for contaminated fish consumption in ExxonMobil's 1991 NPDES permit. At the time, the practical quantitative limit (PQL) for PAHs ranged from 5 to 10 µg/L; orders of magnitude greater than the effluent limit. Therefore, EPA set a compliance/non-compliance threshold based on the PQL of 10 µg/L for each of the 16 PAHs and 50 µg/L for the sum of any of the 16 PAH compounds detected. These effluent limits and compliance thresholds were continued in ExxonMobil's NPDES permit when it was reissued in 2000.

The EPA's National Recommended Water Quality Criteria (WQC) were revised and reissued in 2004. The sixteen priority pollutants are identified individually in the current criteria, rather than as a group, as was done earlier. WQC to protect human health for the consumption of aquatic organisms have been lowered to 0.018 µg/L for each seven of the Group I PAHs. WQC for the Group II PAHs have been raised or eliminated.

Since 1991, analytical methods used to measure PAHs in water have improved. PQLs for EPA approved methods (identified in 40 C.F.R Part 136) now range from 0.05 to 5 µg/L for the 16 priority pollutant PAHs. Discharge monitoring report (DMR) data submitted by ExxonMobil during the past five years (See Attachment A) shows that while PAHs from outfall 001 were consistently below the compliance/non-compliance limit of 10 µg/L, they were often above the effluent limit of 0.0311 µg/L. During the last three sampling events of 2006, all sixteen priority pollutant PAHs were detected in effluent samples from Outfall 001.

Due to the potential to add to PAH contamination in Island End River sediments and to comply with the anti-backsliding requirements of the Clean Water Act (see Section 5.1.3), EPA has continued the water quality based effluent limits for the Group II PAHs in the draft permit. The effluent limits for Group I PAHs have been reduced to the current WQC for those compounds. Due to the availability of more sensitive analytical methods, EPA has also reduced the compliance/non-compliance thresholds to PQLs that are reflective of current analytical standards for EPA approved methods. The compliance/non-compliance thresholds in the draft permit are as follows.

Benzo(a)anthracene	<0.05 µg/L
Benzo(a)pyrene	<2.0 µg/L
Benzo(b)fluoranthene	<0.1 µg/L
Benzo(k)fluoranthene	<2.0 µg/L
Chrysene	<5.0 µg/L
Dibenzo(a,h)anthracene	<0.1 µg/L
Indeno(1,2,3-cd)pyrene	<0.15 µg/L
Acenaphthene	<0.5 µg/L
Acenaphthylene	<0.2 µg/L
Anthracene	<2.0 µg/L
benzo(ghi)perylene	<0.1 µg/L
Fluoranthene	<0.5 µg/L
Fluorine	<0.1 µg/L
Naphthalene	<0.2 µg/L
Phenanthrene	<0.05 µg/L
Pyrene	<0.05 µg/L

EPA believes that PAH effluent limits proposed in the draft permit ExxonMobil Everett Terminal will ensure that the discharges from the facility do not contribute to the further impairment of the Island End and Mystic Rivers or violations of water quality standards.

6.3.6 Volatile Organic Compounds

6.3.6.1 Benzene, Toluene, Ethylbenzene, and Total Xylenes (BTEX)

Refined petroleum products contain numerous types of hydrocarbons. Individual hydrocarbon constituents partition to environmental media on the basis of their physical/chemical properties (e.g., solubility, vapor pressure). Rather than attempt to establish effluent limits for every compound found in a petroleum release, limits are typically established for the compounds that would be the most difficult to remove as well as demonstrate the greatest degree of toxicity. Generally, the higher the solubility of a volatile organic compound (VOC) in water, the more difficult it is to remove.

VOCs such as benzene, toluene, ethylbenzene, and the three xylene compounds (BTEX) are normally found at relatively high concentrations in gasoline and light distillate products (e.g., diesel fuel). BTEX concentrations typically decrease in the heavier grades of petroleum distillate products (e.g., fuel oils). Since many petroleum spills involve gasoline or diesel fuel, a traditional approach for such spills has been to place limits on the individual BTEX components and/or the sum of total BTEX compounds.

Of these four compounds, benzene has one of the highest solubilities, it is one of the most toxic constituents, and it is found at relatively high concentrations in gasoline and diesel fuel. The concentration of benzene in gasoline is approximately 20,000 parts per million (Potter and Simmons, 1998). Because of the reasons mentioned above, benzene can be considered one of the most important limiting pollutant parameters found in gasoline or diesel fuel. Building on this premise, benzene can be used as an indicator-parameter for regulatory as well as characterization purposes of water which comes in contact with gasoline and diesel fuel. The primary advantage of using an indicator-parameter is that it can streamline monitoring efforts while simultaneously maintaining an effective level of environmental protection.

In 1991, EPA established a water quality based effluent limit of 40 µg/L benzene for discharges from the terminal based upon EPA recommended human health criterion for contaminated fish consumption at that time. The 1991 Permit also required monitoring of toluene, ethyl benzene, and xylenes. These BTEX requirements were also included in the Current Permit (2000). Since 1991, the human health criterion for contaminated fish consumption has been raised to 51 µg/L for benzene. However, in this draft permit, the technology-based limit for benzene is more stringent (see below) and therefore becomes the controlling limit.

The Everett Terminal treatment works is operating as a de facto groundwater treatment system, removing residual contaminants from the site subsurface. Ground water in contact with spilled petroleum product for an extended period of time has the potential to be contaminated with compounds found in that product. Groundwater sampling data submitted by the permittee indicated elevated levels of benzene as high as 0.3 to 2 mg/L in some wells.

Consistent with individual permit effluent limits for contaminated groundwater discharges and combined (contaminated groundwater and storm water) discharges at similar facilities in Massachusetts, EPA has, based on BPJ, established technology-based effluent limits for benzene and total BTEX at 5µg/l and 100µg/l, respectively. The technology limits are based on treatability using liquid phase carbon adsorption, a proven technology capable of removing benzene and other petroleum hydrocarbons from water to non-detectable levels.

As noted in Section 3.0 of this Fact Sheet, priority organics have been identified by Massachusetts as having contributed to the impairment of the Mystic River (including Island End River). EPA believes that limits proposed in the draft permit for BTEX compounds will ensure that the discharges from the facility do not contribute to the further impairment of the Island End and Mystic Rivers and do not contribute to violations of water quality standards.

In the future, should ExxonMobil remove the contaminated groundwater from the discharge or isolate it in such a way that it could be treated and discharged via an upstream internal outfall, a less stringent effluent limit for BTEX in storm water at Outfall 001, such as the 40 µg/L water quality based limit in the current permit, could be considered as this would constitute a substantial and material change to the circumstances on which the effluent limit is based, in accordance with the anti-backsliding requirements of 40 C.F.R. § 122.44 (l).

6.3.6.2 Methyl-Tertiary-Butyl-Ether (MTBE)

A potential contaminant of concern found in gasoline is methyl tertiary-butyl ether (MTBE). MTBE is a synthetic compound used as a blending component in gasoline. Since 1979 it has been used at low levels in gasoline to enhance octane levels and in some gasoline since 1992 to fulfill the oxygenate requirements established by the 1990 Clean Air Act Amendments. Due to its small molecular size and solubility in water, MTBE moves rapidly into the ground water, faster than do other constituents of gasoline. Because of these physical properties, MTBE has been detected in ground water in a growing number of studies conducted throughout the country. In some instances, these contaminated waters are a source of drinking water. As a result of its toxicity and its ability to rapidly migrate away from contaminant sources areas, EPA has for some time limited MTBE in discharges from remediation projects.

Since the terminal no longer stores or dispenses MTBE on site, EPA anticipates that storm water alone will not contain MTBE. However, since the facility's treatment works operates as a de facto groundwater treatment system, removing residual contaminants from the site subsurface, the discharge of MTBE through outfall 001 continues. Historic groundwater samples from monitoring wells on the property indicate elevated levels of MTBE in the groundwater. The August 2006 dry weather flow sample, taken

prior to treatment in the treatment works, indicated 381 µg/L of MTBE.

Monitoring reports from gasoline remediation sites in New England demonstrate that using best available technology (e.g. air stripping and/or carbon adsorption) a MTBE limit of 70 µg/L can be consistently met by a properly designed and maintained treatment system (EPA 2005). Therefore, EPA has established a technology-based effluent limit for MTBE of 70 µg/l for Outfall 001 in this Draft Permit. The facility is required to monitor and report MTBE concentrations on a monthly basis beginning on the effective date of the permit.

In the future, should ExxonMobil remove the contaminated groundwater from the discharge or isolate it in such a way that it could be treated and discharged via an upstream internal outfall, a less stringent effluent limit for MTBE in storm water at Outfall 001 could be considered as this would constitute a substantial and material change to the circumstances on which the effluent limit is based, in accordance with the anti-backsliding requirements of 40 C.F.R. § 122.44 (l).

6.3.6.3 Ethanol

Ethanol is a fuel additive increasingly blended with gasoline to replace MTBE as the gasoline oxygenate. Ethanol has replaced MTBE as an additive in Massachusetts at most gasoline distribution facilities and has been stored at the ExxonMobil Everett Terminal since early 2006.

Ethanol is a clear, colorless liquid, miscible with water and many organic solvents. When released from water, it will volatilize or biodegrade and is not expected to adsorb to sediment or bioconcentrate in fish. The use of ethanol as a fuel additive could lead to exposures from water that has been contaminated with ethanol from leaking storage facilities or accidental spills. The draft permit includes a requirement for monthly monitoring of ethanol.

6.3.6.4 Cyanide

Compounds containing the cyanide group (CN) are used and readily formed in many industrial processes and can be found in a variety of effluents, such as those from steel, petroleum, plastics, synthetic fibers, metal plating, and chemical industries. Cyanide occurs in water in many forms, including: hydrocyanic acid (HCN), the cyanide ion (CN⁻), simple cyanides, metalocyanide complexes, and as organic compounds. AFree Cyanide@ is defined as the sum of the cyanide present as HCN and CN⁻. The relative concentrations of these forms depend mainly on pH and temperature. Currently, EPA approved analytical methods are available for Atotal@ cyanide and Aavailable@ cyanide in water. ATotal@ cyanide includes all the forms of cyanide. AAvailable@ cyanide includes free cyanide plus those cyanide forms that can readily disassociate to release free cyanide.

Both HCN and CN⁻ are toxic to aquatic life. However, the vast majority of free cyanide usually exists as the more toxic HCN. And, since CN⁻ readily converts to HCN at pH values that commonly exist in surface waters, EPA's cyanide criteria are stated in terms of free cyanide expressed as CN⁻. Free cyanide is a more reliable index of toxicity to aquatic life than total cyanide because total cyanides can include nitriles (organic cyanides) and relatively stable metalocyanide complexes.

Historically, cyanide has not been a monitored parameter at ExxonMobil. However, the August 2006 dry weather flow sample, taken prior to treatment in the Treatment System, indicated 81 µg/l of total cyanide. This level is above EPA's National Water Quality Criteria guidance recommendations for available cyanide in salt water of 1 µg/l. However, it is unknown as to how much of the total cyanide was free or available.

EPA finds that there is not enough monitoring data to make a determination that there is reasonable potential that the discharge from outfall 001 will cause or contribute to a violation of water quality standards for cyanide. EPA has included a requirement to monitor available cyanide levels in discharges from outfall 001 on a monthly basis and may modify the permit in the future if monitoring data indicates that such a reasonable potential exists.

6.3.7 Mercury

As far as EPA is aware, mercury has not been a monitored parameter at ExxonMobil. However, a relatively low concentration (0.31 µg/L) of mercury was detected in the dry weather flow sample collected at the facility in August 2006. The EPA chronic and acute water quality criteria for mercury in salt water are 0.94 µg/L and 1.8 µg/L, respectively. Since the Mystic River and Island End River are impaired for metals and due to mercury's potential to bio-accumulate in aquatic life, the draft permit includes a requirement to monitor mercury on a monthly basis.

EPA finds that there is not enough monitoring data to make a determination that there is reasonable potential that the discharge from outfall 001 will cause or contribute to a violation of water quality standards for mercury. EPA has included a requirement to monitor available mercury levels in discharges from outfall 001 on a monthly basis and may modify the permit in the future if monitoring data indicate that such a reasonable potential exists.

6.3.8 Whole Effluent Toxicity

Toxic pollutants in toxic amounts are prohibited by the Massachusetts Water Quality Standards which state, in part, that "all surface waters shall be free from pollutants in concentrations or combinations that are toxic to humans, aquatic life or wildlife". The NPDES regulations under 40 CFR § 122.44(d)(1)(v) require whole effluent toxicity (WET) limits in a permit when a discharge has a "reasonable potential" to cause or contribute to an excursion above the State's narrative criterion for toxicity.

The Current Permit for ExxonMobil includes an effluent limit for LC₅₀ as measured by the WET test using Mysid Shrimp as the test organism. The LC₅₀ is the concentration of effluent which causes mortality in 50% or fewer organisms. The effluent limit in the Current Permit requires that a sample comprised of 50% or more of effluent (the remainder being dilution water) cause mortality in 50% or fewer organisms. The results of semi-annual WET testing since 2000 have indicated that even without dilution, effluent samples caused mortality in 50% or fewer organisms (see Attachment A). The Draft Permit continues the WET limit and testing requirement on a semi-annual basis to meet the anti-backsliding requirements of the Clean Water Act.

6.4 Proposed Permit Conditions

6.4.1 Tank Bottom Wastewater

The bottom of many petroleum product storage tanks may contain a layer of water that has separated from the stored petroleum product due to the density difference between the product and water. As this water coalesces and then settles to the bottom of the tank, compounds including BTEX and PAHs found in the product above it are able to partition and dissolve into the water. The partitioning and dissolution allows the concentrations of some of the more soluble and denser petroleum components to reach toxic levels. Facility operators drain this layer of water to prevent transfer with the finished product as well as to free up valuable storage space.

Whereas storm water contacts only those hydrocarbons spilled on the ground and then only for short periods of time, tank bottom wastewater remains in intimate proximity with petroleum derivatives for

prolonged periods of time, allowing toxic pollutants to dissolve into the aqueous phase. ExxonMobil has not discharged any tank bottom wastewater through outfall 001 since the last permit was issued. Consistent with NPDES permits at other petroleum bulk storage facilities in the Boston Harbor area, the draft permit prohibits the discharge of tank bottom wastewater alone or in combination with storm water or other wastewater.

6.4.2 Maintenance Garage Floor Washings

Currently the floor drains in the maintenance garage discharge to the storm water collection system. While other non-storm water discharges at the Everett terminal are related to exterior uses of potable water or contain very low levels of contamination (such as steam condensate), the floor drains in the maintenance garage may contain spills and drips of petroleum products and other fluids used in vehicle maintenance and detergents used in floor washing. The draft permit prohibits the discharge of detergent laden floor washings to outfall 001 from inside the terminal's maintenance garage. EPA recommends that ExxonMobil apply to the Massachusetts Water Resources Authority (MWRA) for discharge of this process wastewater to the MWRA sewers. As an alternative, EPA would consider permitting the discharge of maintenance garage water in the future if it were collected, treated and discharged through an internal outfall prior to discharge into the storm water collection system.

6.4.3 Hydrostatic Test Water Discharges

Occasionally repairs are made at the facility to the tanks and the piping used for the storage and conveyance of petroleum products. To ensure safe working conditions during this maintenance work, storage tanks and/or pipe networks are rigorously cleaned (e.g., "Poly Brushed", "Squeegee Pigged") and certified as being "gas-free." After completing certain maintenance work, the vessels and/or pipe networks may require hydrostatic testing (e.g., to be filled with water and monitored for changes in water levels) before product replacement. ExxonMobil uses potable water as a source of test water and as a result there may be some residual chlorine present in the discharge. As a precaution, the hydrostatic test water shall be monitored and treated through the treatment works and monitored prior to being discharged to the Island End River. In addition, the flow of hydrostatic test water into the treatment works shall be controlled to prevent it from exceeding the maximum design flow rate of the separator.

6.4.4 Storm Water Pollution Prevention

This facility engages in activities which could result in the discharge of pollutants to waters of the United States either directly or indirectly through storm water runoff. These operations include at least one of the following in an area potentially exposed to precipitation or storm water: material storage, in-facility transfer, material processing, material handling, or loading and unloading. To control the activities/operations, which could contribute pollutants to waters of the United States, potentially violating the State's Water Quality Standards, the draft permit requires the facility to develop, implement, and maintain a Storm Water Pollution Prevention Plan (SWPPP) containing best management practices (BMPs) appropriate for this specific facility (See Sections 304(e) and 402(a)(1) of the CWA and 40 CFR §125.103(b)). Specifically, at this facility, gasoline and fuel oil storage tanks and loading dock are examples of material storage, processing and handling operations that shall continue to be included in the SWPPP.

The goal of the SWPPP is to reduce, or prevent, the discharge of pollutants through the storm water system. The SWPPP requirements in the draft permit are intended to provide a systematic approach by which the permittee shall at all times, properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of the permit. The SWPPP shall be prepared in accordance with good

engineering practices and identify potential sources of pollutants, which may reasonably be expected to affect the quality of storm water discharges associated with industrial activity from the facility. The SWPPP, upon implementation, becomes a supporting element to any numerical effluent limitations in the draft permit. Consequently, the SWPPP is as equally enforceable as the numerical limits.

This process involves the following four main steps:

- (1) Forming a team of qualified facility personnel who will be responsible for developing and updating the SWPPP and assisting the plant manager in its implementation;
- (2) Assessing the potential storm water pollution sources;
- (3) Selecting and implementing appropriate management practices and controls for these potential pollution sources; and
- (4) Reevaluating, periodically, the effectiveness of the SWPPP in preventing storm water contamination and in complying with the various terms and conditions of the Draft Permit.

ExxonMobil's current permit required the facility to develop a SWPPP (referred to as a Best Management Practices Plan in the current permit) with site-specific best management practices (BMPs). ExxonMobil has certified to EPA that a SWPPP (or BMP Plan) was developed and implemented for this facility in accordance with the requirements identified in the current permit. The draft permit continues to ensure that the SWPPP is kept current and adhered to, by requiring the permittee to maintain and update the SWPPP as changes occur at, or affect, the facility, including changes made as a result of new permit requirements.

7.0 ENDANGERED SPECIES ACT

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 (Alisted species@) and habitat of such species that has been designated as critical (a Acritical 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) administers Section 7 consultations for freshwater species. The National Marine Fisheries Service (NMFS) administers Section 7 consultations for marine species and anadromous fish.

EPA has reviewed the list of federal endangered or threatened species of fish, wildlife, or plants to see if any such listed species might potentially be impacted by the re-issuance of this NPDES permit. The review has focused primarily on marine species and anadromous fish since the discharge is to the Island End River (Mystic River Watershed) which ultimately flows into Boston Harbor. There are no listed marine species or critical habitat present in this area. Furthermore, 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 either in Island End/Mystic River or Boston Harbor. A copy of the draft permit has been provided to NMFS for review and comment as part of an informal Section 7 consultation.

8.0 ESSENTIAL FISH HABITAT

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 Services (NMFS) if EPA=s action or proposed actions that it funds, permits, or undertakes, may adversely impact any essential fish habitat (EFH). The Amendments define EFH as waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity, (16 U.S.C. § 1802 (10)). Adverse 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. Id.

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.

A review of the relevant essential fish habitat information provided by NMFS indicates that essential fish habitat has been designated for 15 managed species within the NMFS boundaries encompassing the outfall location. A copy of the managed species within the EFH is included in Attachment B to this Fact Sheet. EPA has concluded that the permitted discharge will not likely adversely impact the EFH and the managed species identified for this general location. This conclusion is based on the amount and frequency of the discharge, as well as effluent limitations and other permit requirements that are identified in this Fact Sheet. These factors are designed to be protective of all aquatic species, including those with EFH designations.

EPA has determined that a formal EFH consultation with NMFS is not required because the proposed discharge will not adversely impact the EFH. If adverse impacts are detected as a result of this permit action, NMFS will be notified and an EFH consultation will promptly be initiated.

9.0 STATE CERTIFICATION REQUIREMENTS

EPA may not issue a permit unless the MassDEP either certifies that the effluent limitations contained in this permit are stringent enough to assure that the discharge will not cause the receiving water to violate State Water Quality Standards or waives its right to such certification. EPA has requested that MassDEP certify the permit. Under Section 401 of the CWA, EPA is required to obtain certification from the state in which the discharge is located which determines that all water quality standards, in accordance with Section 301(b)(1)(C) of the CWA, will be satisfied. Regulations governing state certification are set forth in 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). EPA expects that the permit will be certified.

10.0 PUBLIC COMMENT PERIOD, HEARING REQUESTS, 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: Ms. Ellen Weitzler, NPDES Industrial Permit Branch, U.S. Environmental Protection Agency, One Congress Street, Suite 1100 (Mail Code: CIP), Boston, Massachusetts 02114-2023. A public hearing will be held after at least thirty (30) days public notice. In reaching a final decision on the draft permit, the Regional Administrator will respond to all significant comments and make these responses available to the public at EPA-New England's Boston office.

Following the close of the comment period, and after the public hearing, 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.

11.0 EPA & 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:

Ellen Weitzler, EPA New England - Region I
1 Congress Street, Suite 1100 (CIP)
Boston, MA 02114-2023
Telephone: (617) 918-1582 FAX: (617) 918-1505
email: weitzler.ellen@epa.gov

or

Paul Hogan, Massachusetts Department of Environmental Protection
Division of Watershed Management, Surface Water Discharge Permit Program
627 Main Street, 2nd Floor Worcester, Massachusetts 01608
Telephone: (508) 767-2796 FAX: (508) 791-4131
email: paul.hogan@state.ma.us

Date

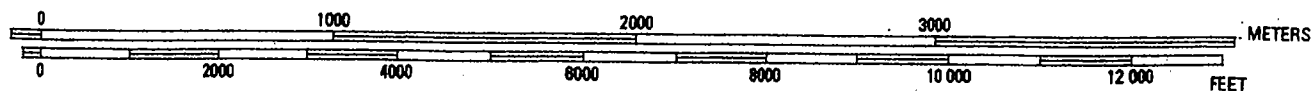
Stephen S. Perkins, Director
Office of Ecosystem Protection
U.S. Environmental Protection Agency

REFERENCES

- Agency for Toxic Substances and Disease Registry (ATSDR), 1995, *Toxicological Profile for Polycyclic Aromatic Hydrocarbons* (PB/95/264370), August 1995.
- Breault, Robert F., Durant, John L., and Robbat, Albert Jr., *Sediment Quality of Lakes, Rivers, and Estuaries in the Mystic River Basin, Eastern Massachusetts, 2001-2003*, U.S. Department of the Interior and U.S. Geological Survey, Scientific Investigations Report 2005-5191, 2005.
- ES&T. 2002. *MTBE Ambient Water Quality Criteria Development: A Public/Private Partnership*. Mancini, E.R., et al., Environmental Science & Technology, Vol. 36, No. 2. 2002.
- ExxonMobil, July 24, 2006, *Table 1 Groundwater Elevations and LNAPL thickness*, pages 1 – 10.
- Fluor Daniel GTI, Inc., November 12, 1996, *Massachusetts Contingency Plan, Phase II Report*, page ii.
- MassDEP. 2002. *Boston Harbor 1999 Water Quality Assessment Report*. Massachusetts Department of Environmental Protection, Division of Watershed Management, Worcester, MA. October 2002 (70-AC-1)
- MassDEP. 2006. *Massachusetts Year 2004 Integrated List of Waters, Part 2 - Final Listing of Individual Categories of Waters*. Commonwealth of Massachusetts Executive Office of Environmental Affairs, September, 2003 (CN:176.0)
- Potter, Thomas L. and Kathleen E. Simmons, 1998. *Composition of Petroleum Mixtures, Volume 2*. Total Petroleum Hydrocarbon Criteria Working Group Series, May 1998.
- Roberson, Stephen J., 2006, *MassDEP Internal Briefing Memorandum to Edward Kunce, Arleen O'Donnell, Philip Griffiths, Janine Commerford, and Edmund Coletta, regarding EVERETT – Former Coal Tar Processing Facility, Release Tracking No. 3-0309, Island End River Cleanup*, March 23, 2006
- USEPA. 1982. *Development Document for Effluent Limitations Guidelines and Standards and Pretreatment Standards for the Steam Electric Point Source Category*. United States Environmental Protection Agency, Office of Water and Waste Management, Washington, D.C. EPA-440/1-82/029, November 1982.
- USEPA. 2005. *Fact Sheet, Proposed Remediation General Permit Under the National Pollutant Discharge Elimination System (NPDES) for Discharges in Massachusetts and New Hampshire, 2005*.
- USEPA. 2004. *National Recommended Water Quality Criteria*. United States Environmental Protection Agency, Office of Water, Washington, D.C.(4304T).
- Weisman, Wade, 1998. *Analysis of Hydrocarbons in Environmental Media, Volume 1*. Total Petroleum Hydrocarbon Criteria Working Group Series, March 1998.



USGS MAP BOSTON NORTH, MASSACHUSETTS



AREA TOPOGRAPHIC MAP
EXXONMOBIL TERMINAL
EVERETT, MASSACHUSETTS

FIGURE

1

FIGURE

2

**SITE PLAN
EXXONMOBIL
EVERETT TERMINAL**

FIGURE

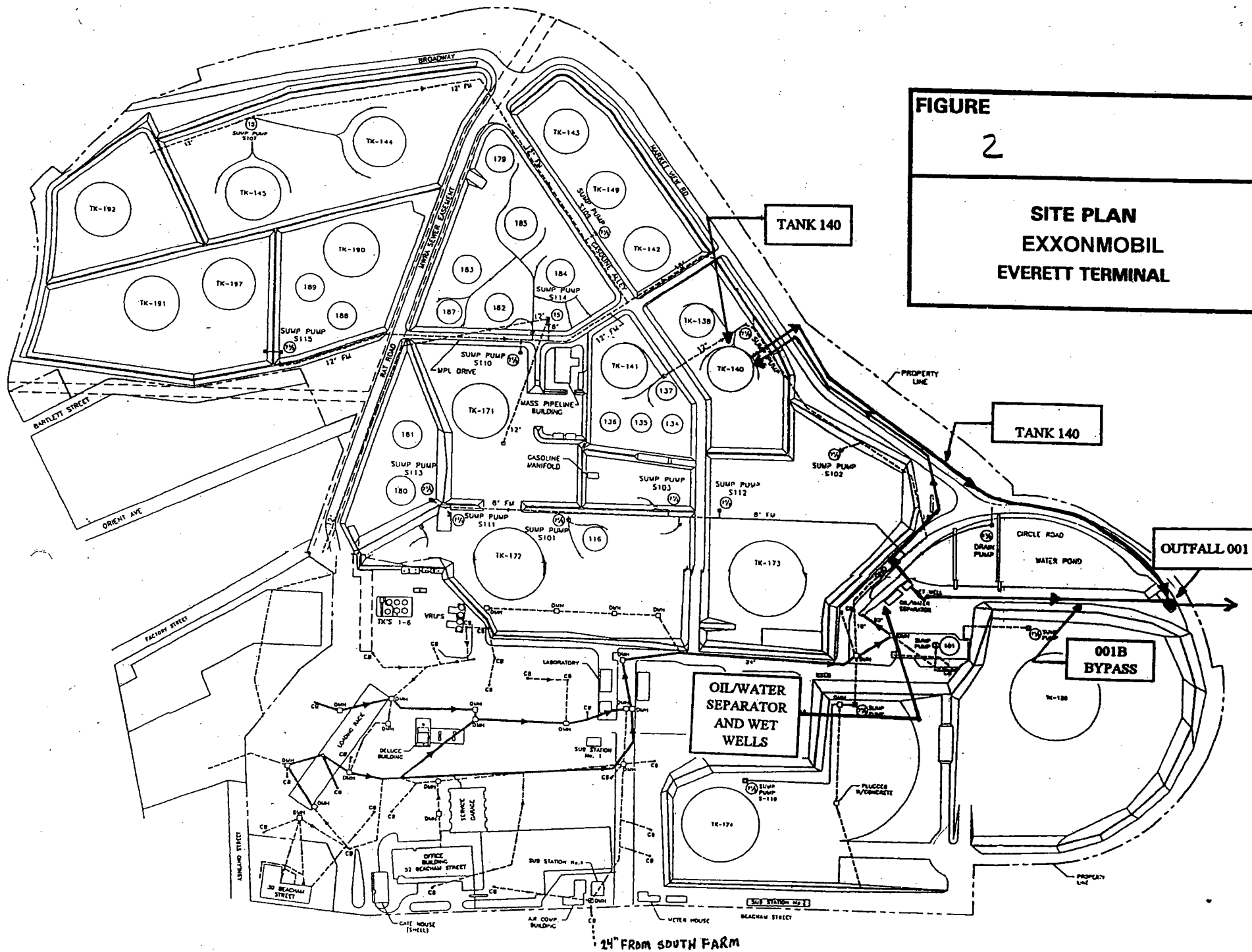
2

**SITE PLAN
EXXONMOBIL
EVERETT TERMINAL**

FIGURE

2

**SITE PLAN
EXXONMOBIL
EVERETT TERMINAL**



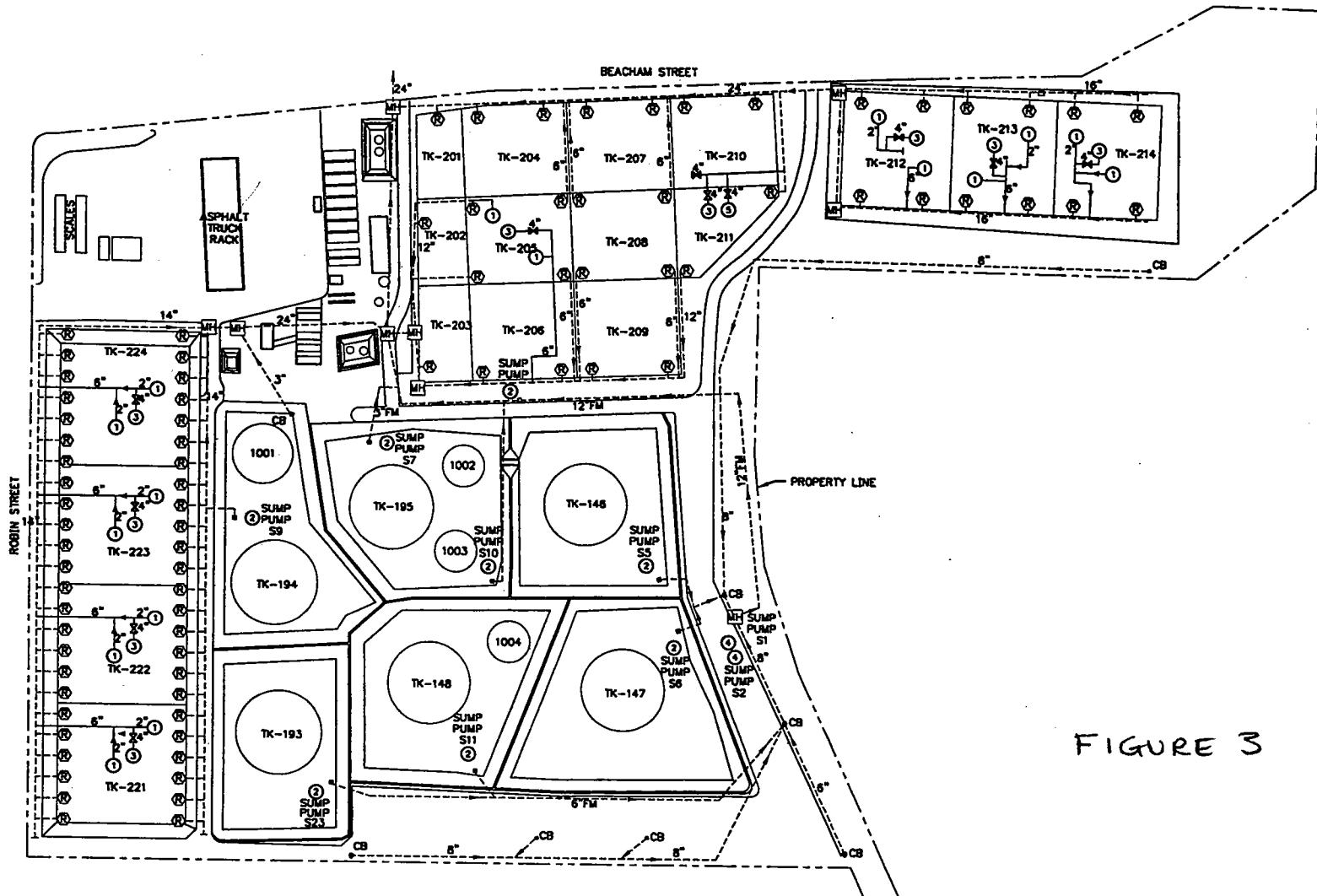


FIGURE 3

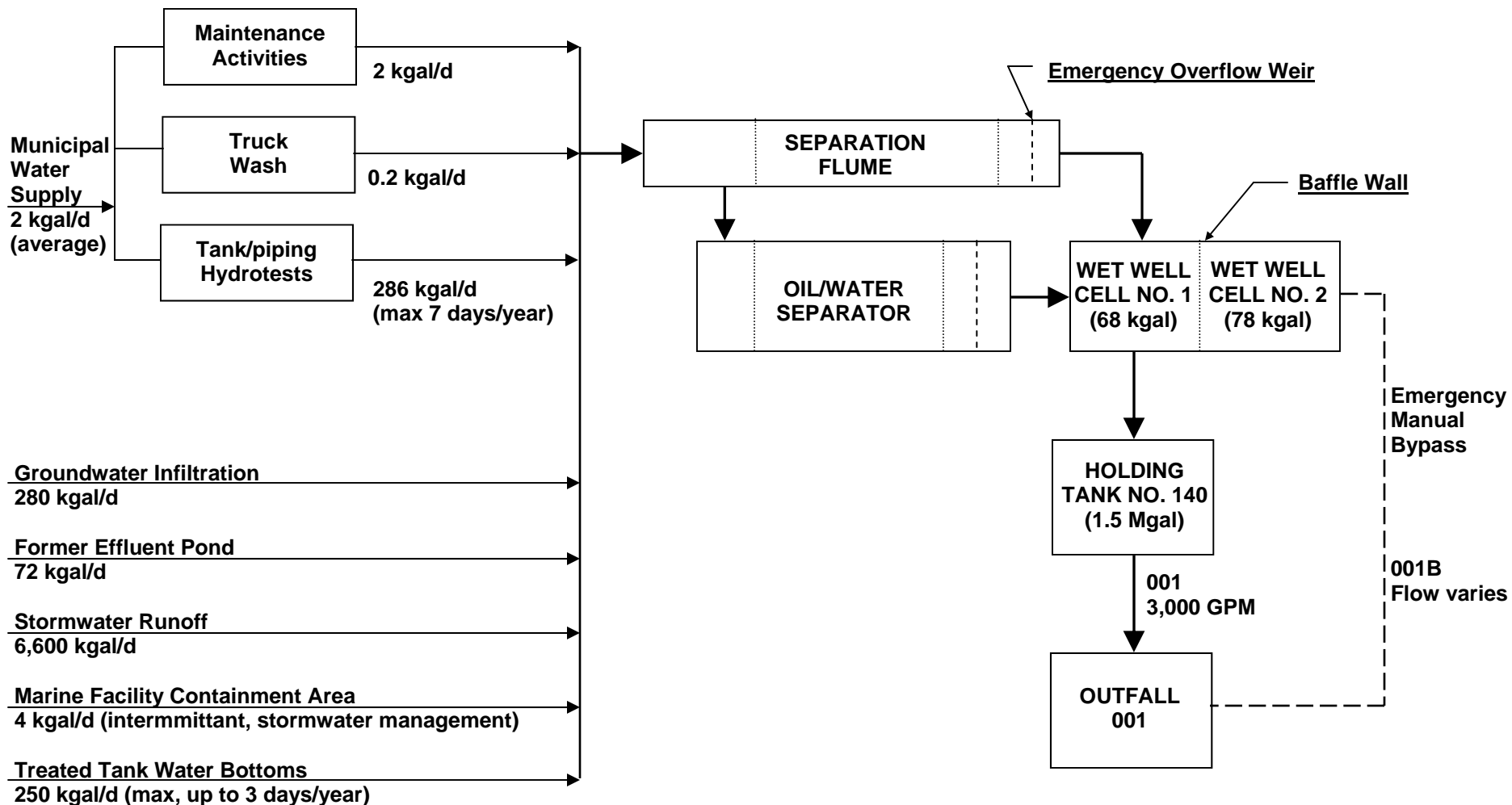
LEGEND

---	UNDERGROUND
---	ABOVE GROUND
①	INTANK SUMP
②	7.5 HP SUMP
③	BS&W PUMP
④	15 HP SUMP
⑤	MAIN PUMP
MH	DRAIN MANHOLE
CB	CATCH BASIN
FM	FORCED MAIN
⊗	6" SCUPPER

OPA DWG. NO. 1

REV.	PROJECT NO.	DATE	DESCRIPTION	FIRM	APD	EXXON COMPANY, U.S.A. A DIVISION OF
A		11/5/93	FOR RECORD	HC	GJC	Marketing Department Distribution

INCHES



Source: ExxonMobil NPDES permit application 2005

**CURRENT PROCESS FLOW DIAGRAM
EXXONMOBIL TERMINAL
EVERETT TERMINAL**

FIGURE 4

ExxonMobil Everett Terminal
DMR Summary 2000 to 2005 Outfall 001A

Monitoring Period End Date	Flow (max)	Flow (Ave)	pH (max)	pH (min)	TSS (max)	TSS (ave)	O&G (max)	Benzene	Toluene	Ethylbenzene	Xylene	Total BTEX
31-Dec-06	0.94	0.4	7.03	7.03	4	4	4.1	0.5	1	1	1	3.5
30-Nov-06	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
31-Oct-06	2.02	0.27	7.4	7.4	4	4	4.1	0.5	1	1	1	3.5
30-Sep-06	0.65	0.15	7.4	7.4	4	4	4.1	0.5	1	1	1	3.5
31-Aug-06	0.57	0.2	6.8	6.8	4	4	4.1	0	0	0	0	0
31-Jul-06	0.98	0.25	7.8	7.8	6	6	4.1	0	0	0	0	0
30-Jun-06	3.49	0.69	7.8	7.8	12	12	4.2	3.7	12	1.9	13.9	31.5
31-May-06	3.99	0.7	7.87	7.87	4	4	4.1	6.4	48	13.6	74.6	142.6
30-Apr-06	0.592	0.149	7.8	7.8	<4	<4	<4.1	4.2	18.4	4.1	23	49.7
31-Mar-06	1.229	0.161	7.77	7.77	14	14	<4.1	3	13.1	3.1	23.7	42.9
28-Feb-06	3.979	0.581	7.91	7.91	22	22	<4.1	10.8	35.2	4.5	29.3	79.8
31-Jan-06	2.853	0.882	8.06	8.06	9	9	<4.1	0.78	0	0	4.8	5.58
31-Dec-05	2.225	0.668	7.67	7.67	19	19	<4.1	1.3	6.3	2.9	16.9	27.4
30-Nov-05	2.404	0.583	7.84	7.84	<4	<4	<4.2	0	0	0	0	0
31-Oct-05	4.388	1.043	7.85	7.41	6	6	<5.1	1.2	0	0	0	1.2
30-Sep-05	0.733	0.203	7.87	7.87	<4	<4	<5.1	0	0	0	0	0
31-Aug-05	0.640	0.196	7.72	7.72	<4	<4	<5.1	0	0	0	0	0
31-Jul-05	1.538	0.351	7.5	7.5	14	14	<5.1	17.5	84.8	21.5	56.6	180.4
30-Jun-05	0.637	0.235	7.11	7.11	7	7	<5.1	0	0	0	0	0
31-May-05	2.350	0.598	7.8	7.8	<4	<4	<5.2	0.99	0	0	0	0.99
30-Apr-05	1.861	0.552	7.7	7.7	8	8	<5.1	0	0	0	0	0
31-Mar-05	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
28-Feb-05	2.474	0.760	7.83	7.83	<4	<4	<5.1	0	0	0	1.1	1.1
31-Jan-05	2.803	1.000	8.11	8.11	17	17	<5.1	2	4.1	0	8.4	14.5
31-Dec-04	2.926	0.972	8	8	11	11	<5.1	0	0	0	0	0
30-Nov-04	1.393	0.557	7.79	7.79	7	7	<5.3	0.85	9.5	1	9.7	21.05
31-Oct-04	1.461	0.416	7.92	7.92	<4	<4	<5.2	0	0	0	0	0
30-Sep-04	3.816	0.623	7.8	7.8	<4.0	<4.0	7.2	0	0	0	0	0
31-Aug-04	1.538	0.354	8	7.7	24	<14	<5.1	1	1.3	0	2.8	5.1
31-Jul-04	0.851	0.281	7.45	7.45	<4.0	<4.0	<5.2	0.77	0	0	2.2	2.97
30-Jun-04	1.233	0.853	7.85	7.85	7	7	<5.1	0	0	0	0	0
31-May-04	2.028	1.003	8.02	8.02	<4	<4	<5.1	0	0	0	0	0
30-Apr-04	4.119	1.337	8.01	7.95	17	9.3	<5.1	10.2	29.7	4.8	39.9	84.6
31-Mar-04	1.762	1.004	7.68	7.68	<4	<4	<5.1	0	0	0	2.5	2.5
29-Feb-04	1.622	0.925	7.84	7.84	8	8	<5.1	1.9	2.3	0	4.1	8.3
31-Jan-04	1.435	0.199	7.98	7.98	<4	<4	<5.1	0	0	0	0	0
31-Dec-03	4.403	1.678	7.79	7.66	23	15	<5.1	4.8	24.1	10.8	73	112.7
30-Nov-03	1.603	1.098	7.81	7.81	6	6	<5.1	0	0	0	0	0
31-Oct-03	3.391	1.249	7.73	7.43	<4.0	<4.0	<5.1	1.1	0	0	3.5	4.6
30-Sep-03	2.019	1.033	7.76	7.76	<4.0	<4.0	<5.1	0.71	2.4	0	1.3	4.41
31-Aug-03	2.964	1.108	7.68	7.68	<4.0	<4.0	<5.1	0	0	0	0	0
31-Jul-03	1.842	0.974	7.71	7.71	<4.0	<4.0	<5.1	0	0	0	0	0
30-Jun-03	3.677	1.310	7.78	7.78	18	18	<5.1	1.3	2	0	4	7.3
31-May-03	2.148	1.119	7.7	7.7	<4.0	<4.0	<5.1	0	0	0	0	0
30-Apr-03	2.111	1.247	7.72	7.72	<4.0	<4.0	<5.1	2.7	1	0	2.7	6.4
31-Mar-03	3.444	1.647	7.7	7.7	<4.0	<4.0	<5.1	1.5	2.1	0	11.8	15.4
28-Feb-03	2.679	0.431	7.69	7.69	6	6	<5.1	0	0	0	0	0
31-Jan-03	1.209	0.431	8.5	8.5	6	6	<5.1	2.7	10.7	1.2	11.8	26.4
31-Dec-02	3.892	1.388	7.7	7.7	16	16	<5.1	1.7	2.2	0	3.7	7.6
30-Nov-02	3.073	0.714	8.15	7.9	11	<7.0	<5.1	1.6	2.2	0	2.2	6
31-Oct-02	2.782	0.375	7.95	7.8	12	<8.0	<5.1	1.1	1.5	0	4.3	6.9
30-Sep-02	2.362	0.340	7.51	7.51	<4.0	<4.0	<5.1	0	0	0	0	0
31-Aug-02	0.302	0.137	7.54	7.54	6	6	<5.0	0	0	0	0	0
31-Jul-02	0.292	0.076	7.83	7.83	5	5	<5.0	0	0	0	0	0
30-Jun-02	2.078	0.355	8.03	8.03	7	7	<5.1	0	0	0	0	0
31-May-02	2.407	0.512	7.82	7.82	11	11	<5.2	0	0	0	0	0
30-Apr-02	2.643	0.330	8.26	8.26	10	10	<5.0	0	9.4	0	12.7	22.1
31-Mar-02	3.287	0.770	7.75	7.75	8	8	<5.1	2.4	1.1	0	3	6.5
28-Feb-02	3.402	0.933	7.79	7.79	9	9	<5.2	3	15.8	2.1	12.4	33.3
31-Jan-02	1.668	0.743	7.59	7.59	<4.0	<4.0	<5.2	0	0	0	0	0
Current Permit Limit	Report	Report	8.5	6.5	100	30	15	40	Report	40	Report	na
Units	MGD	MGD	s.u.	s.u.	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	µg/L	µg/L
Minimum	0.292	0.076	6.8	6.8	<4	<4	4.1	0	0	0	0	0
Maximum	4.403	1.678	8.5	8.5	24	22	7.2	17.5	84.8	21.5	74.6	180.4
Average ¹	2.193	0.675	7.77	7.74	10.32	9.39	4.50	1.60	5.90	1.28	7.98	16.76
Standard Deviation ¹	1.125	0.409	0.27	0.27	5.72	4.85	1.09	3.08	14.19	3.65	16.40	35.68
# of measurements	58	58	58	58	37	34	8	58	58	58	58	58
#exceedances	na	na	0	0	0	0	0	0	NA	0	na	0

ExxonMobil Everett Terminal
DMR Summary 2000 to 2005 Outfall 001A

Monitoring Period End Date	Total PAHs	Group I PAHs						
		Benzo(a)anthracene	benzo(a)pyrene	benzo(b)fluoranthene	benzo(k)fluoranthene	Chrysene	dibenzo(a,h)anthracene	Indeno(1,2,3-cd)pyrene
31-Dec-06	0	0.15	0.15	0.15	0.15	0.15	0.15	0.15
30-Nov-06	ND	ND	ND	ND	ND	ND	ND	ND
31-Oct-06	5	0.15	0.15	0.15	0.15	0.15	0.15	0.15
30-Sep-06	0	0.16	0.16	0.16	0.16	0.16	0.16	0.16
31-Aug-06	0	0	0	0	0	0	0	0
31-Jul-06	0	0	0	0	0	0	0	0
30-Jun-06	0.75	0	0	0	0.27	0	0	0
31-May-06	0	0	0	0	0	0	0	0
30-Apr-06	0.5	0	0	0	0	0	0	0
31-Mar-06	1.14	0	0	0.37	0	0	0	0
28-Feb-06	2.02	0	0	0	0	0.53	0	0
31-Jan-06	1.2	0	0	0	0	0	0	0
31-Dec-05	0	0	0	0	0	0	0	0
30-Nov-05	0	0	0	0	0	0	0	0
31-Oct-05	0.22	0	0	0	0	0	0	0
30-Sep-05	0	0	0	0	0	0	0	0
31-Aug-05	0	0	0	0	0	0	0	0
31-Jul-05	3.97	0.24	0.72	0.44	0.49	0.36	0.22	0
30-Jun-05	0	0	0	0	0	0	0	0
31-May-05	0	0	0	0	0	0	0	0
30-Apr-05	1.82	0	0	0	0	0.2	1.1	0
31-Mar-05	ND	ND	ND	ND	ND	ND	ND	ND
28-Feb-05	1.55	0	0	0	0	0.67	0	0
31-Jan-05	2.5	0	0	0	0	0	0	0
31-Dec-04	0	0	0	0	0	0	0	0
30-Nov-04	0	0	0	0	0	0	0	0
31-Oct-04	0	0	0	0	0	0	0	0
30-Sep-04	0	0	0	0	0	0	0	0
31-Aug-04	0.64	0	0.15	0	0.2	0	0	0
31-Jul-04	0	0	0	0	0	0	0	0
30-Jun-04	0	0	0	0	0	0	0	0
31-May-04	0	0	0	0	0	0	0	0
30-Apr-04	4.7	0	0	0	0	0	0	0
31-Mar-04	0	0	0	0	0	0	0	0
29-Feb-04	0	0	0	0	0	0	0	0
31-Jan-04	0	0	0	0	0	0	0	0
31-Dec-03	8.21	0	0	0.54	0	0.27	0	0
30-Nov-03	0	0	0	0	0	0	0	0
31-Oct-03	8.97	0.2	0.5	0.28	0	0	0.24	0
30-Sep-03	0	0	0	0	0	0	0	0
31-Aug-03	0	0	0	0	0	0	0	0
31-Jul-03	0	0	0	0	0	0	0	0
30-Jun-03	0	0	0	0	0	0	0	0
31-May-03	0	0	0	0	0	0	0	0
30-Apr-03	0	0	0	0	0	0	0	0
31-Mar-03	1.3	0	0	0	0	0	0	0
28-Feb-03	0.4	0	0.25	0.15	0	0	0	0
31-Jan-03	0.43	0	0	0	0	0	0	0
31-Dec-02	1.27	0	0	0.25	0.18	0.23	0	0
30-Nov-02	0.31	0	0	0	0	0	0	0
31-Oct-02	1.5	0	0	0	0	0.2	0	0
30-Sep-02	0	0	0	0	0	0	0	0
31-Aug-02	0	0	0	0	0	0	0	0
31-Jul-02	0	0	0	0	0	0	0	0
30-Jun-02	0	0	0	0	0	0	0	0
31-May-02	0	0	0	0	0	0	0	0
30-Apr-02	1.08	0	0.19	0.17	0.16	0.22	0	0
31-Mar-02	0	0	0	0	0	0	0	0
28-Feb-02	0	0	0	0	0	0	0	0
31-Jan-02	0	0	0	0	0	0	0	0
Current Permit Limit	50	10	10	10	10	10	10	10
Units	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
Minimum	0	0	0	0	0	0	0	0
Maximum	8.97	0.24	0.72	0.54	0.49	0.67	1.1	0.16
Average ¹	0.85	0.02	0.04	0.05	0.03	0.05	0.03	0.01
Standard Deviation ¹	1.85	0.05	0.12	0.12	0.09	0.13	0.15	0.03
# of measurements	58	58	58	58	58	58	58	58
#exceedances	0	0	0	0	0	0	0	0

ExxonMobil Everett Terminal
DMR Summary 2000 to 2005 Outfall 001A

Monitoring Period End Date	Group II PAHs								
	benzo(ghi)p								
	Acenaphthene	Acenaphthylene	Anthracene	erylene	fluoranthene	fluorene	naphthalene	Phenanthrene	Pyrene
31-Dec-06	1	0.2	1	0.15 ug/L	1		1	0.2	1
30-Nov-06	ND	ND	ND	ND	ND	ND	ND	ND	ND
31-Oct-06	1	0.2	1	0.15	1	1	1	0.2	1
30-Sep-06	1	0.21	1	0.16	1	1	1	0.21	1
31-Aug-06	0	0	0	0	0	0	0	0	0
31-Jul-06	0	0	0	0	0	0	0	0	0
30-Jun-06	0	0	0	0	0	0	0	0.48	0
31-May-06	0	0	0	0	0	0	0	0	0
30-Apr-06	0	0	0	0	0	0	0	0.5	0
31-Mar-06	0	0	0	0	0	0	0	0.77	0
28-Feb-06	0	0	0	0	0	0	0	0	1.1
31-Jan-06	0	0	0	0	0	0	0	1.2	0
31-Dec-05	0	0	0	0	0	0	0	0	0
30-Nov-05	0	0	0	0	0	0	0	0	0
31-Oct-05	0	0	0	0	0	0	0	0.22	0
30-Sep-05	0	0	0	0	0	0	0	0	0
31-Aug-05	0	0	0	0	0	0	0	0	0
31-Jul-05	0	0.65	0	0	0	0	0	0.85	0
30-Jun-05	0	0	0	0	0	0	0	0	0
31-May-05	0	0	0	0	0	0	0	0	0
30-Apr-05	0	0	0	0	0	0	0	0.52	0
31-Mar-05	ND	ND	ND	ND	ND	ND	ND	ND	ND
28-Feb-05	0	0	0	0	0	0	0	0.88	0
31-Jan-05	0	0	0	0	0	0	0	2.5	0
31-Dec-04	0	0	0	0	0	0	0	0	0
30-Nov-04	0	0	0	0	0	0	0	0	0
31-Oct-04	0	0	0	0	0	0	0	0	0
30-Sep-04	0	0	0	0	0	0	0	0	0
31-Aug-04	0	0	0	0	0	0	0	0.29	0
31-Jul-04	0	0	0	0	0	0	0	0	0
30-Jun-04	0	0	0	0	0	0	0	0	0
31-May-04	0	0	0	0	0	0	0	0	0
30-Apr-04	0	0	0	0	0	0	1.3	2.4	0
31-Mar-04	0	0	0	0	0	0	0	0	0
29-Feb-04	0	0	0	0	0	0	0	0	0
31-Jan-04	0	0	0	0	0	0	0	0	0
31-Dec-03	0	0	0	0	0	0	0	1.8	0
30-Nov-03	0	0	0	0	0	0	0	0	0
31-Oct-03	0	0.65	0	0	0	0	1.7	2.3	0
30-Sep-03	0	0	0	0	0	0	0	0	0
31-Aug-03	0	0	0	0	0	0	0	0	0
31-Jul-03	0	0	0	0	0	0	0	0	0
30-Jun-03	0	0	0	0	0	0	0	0	0
31-May-03	0	0	0	0	0	0	0	0	0
30-Apr-03	0	0	0	0	0	0	0	0	0
31-Mar-03	0	0	0.2	0	0	0	0	0	0
28-Feb-03	0	0	0	0	0	0	0	0	0
31-Jan-03	0	0	0	0	0	0	0	0.43	0
31-Dec-02	0	0	0	0	0	0	0	0	0
30-Nov-02	0	0	0	0	0	0	0	0.31	0
31-Oct-02	0	0	0	0	0	0	0	1.3	0
30-Sep-02	0	0	0	0	0	0	0	0	0
31-Aug-02	0	0	0	0	0	0	0	0	0
31-Jul-02	0	0	0	0	0	0	0	0	0
30-Jun-02	0	0	0	0	0	0	0	0	0
31-May-02	0	0	0	0	0	0	0	0	0
30-Apr-02	0	0	0	0	0	0	0	0.34	0
31-Mar-02	0	0	0	0	0	0	0	0	0
28-Feb-02	0	0	0	0	0	0	0	0	0
31-Jan-02	0	0	0	0	0	0	0	0	0
Current Permit Limit	10	10	10	10	10	10	10	10	10
Units	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
Minimum	0	0	0	0	0	0	0	0	0
Maximum	1	0.65	1	0.16	1	1	1.7	2.5	1.1
Average ¹	0.05	0.03	0.05	0.01	0.05	0.04	0.10	0.31	0.07
Standard Deviation ¹	0.22	0.13	0.22	0.03	0.22	0.19	0.35	0.62	0.26
# of measurements	58	58	58	57	58	57	58	58	58
#exceedances	0	0	0	0	0	0	0	0	0

ExxonMobil Everett Terminal
DMR Summary 2000 to 2005 Outfall 001B

Monitoring Period End Date	Flow (max)	duration of discharge	pH MAX	pH MIN	TSS MAX	TSS AVE	O&G MAXIMUM	Benzene	Toluene	Ethylbenzene	Xylene	Total BTEX
30-Nov-06	0.3	0.5	6.8	6.8	17	17	4.1	0.5	1	1	1	3.5
31-Jul-06	1.07	3.1	8.84	8	85	39	13.2	0	1.1	4.7	8.9	14.7
30-Jun-06	1.42	2.62	7.7	7.68	96	57.5	4.3	28	117	22.5	113	280.5
31-May-06	4.06	16.2	7.93	7.52	42	19.3	4.1	9.4	69.2	13.6	62.2	154.4
31-Oct-05	2.7	5.1	7.6	7.6	<4	<4	<4.1	4.1	0	0	3.8	7.9
31-Jul-05	0.6	1.0		7.1	15	15	<5.1	26.2	134	34.3	96	290.5
31-Aug-04	2.4	4.0	7.98	7.98	<4	<4	<5.1	0	0	0	0	0
31-Dec-03	0.6	1.0	7.68	7.68	33	33	<5.1	6.2	37.9	19.5	122	185.6
31-Oct-03	0.9	1.5	7.85	7.85	33	33	<5.1	3.2	7.7	0	21.4	32.3
31-Mar-03	0.1	1.8	7.84	7.84	116	116	<5.1	2.5	4.6	2.1	14	23.2
30-Nov-02	0.2	0.3	7.8	7.8	23	23	<5.1	2.1	3.4	0	3.5	9
31-Oct-02	1.1	1.9	7.84	7.84	46	46	<5.1	2	9.6	5.2	27.1	43.9
Current Permit Limit	Report	Report	8.5	6.5	100	30	15	40	Report	Report	Report	NA
Units	MGD	hrs	s.u.	s.u.	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	µg/L	µg/L
Minimum	0.117	0.25	6.8	6.8	<4	<4	<4.1	0	0	0	0	0
Maximum	4.06	16.2	8.84	8	116	116	13.2	28	134	34.3	122	291
Average ¹	1.29	3.24	7.81	7.64	38.92	30.68	1.98	7.02	32.13	8.58	39.41	87
Standard Deviation ¹	1.20	4.33	0.40	0.36	37.73	31.25	3.95	9.76	48.31	11.36	46.32	110
# of measurements	12	12	11	12	13	13	13	13	13	13	13	13
#exceedances	NA	NA	0	0	1	4	0	0	NA	NA	NA	NA

Notes:

1. Average and Standard deviation calculated assuming zero value for measurements below the detection limit for any parameter.

NA = Not Applicable

ExxonMobil Everett Terminal
DMR Summary 2000 to 2005 Outfall 001B

Monitoring Period End Date	Total PAHs	Group I PAHs						
		Benzo(a)anthracene	benzo(a)pyrene	benzo(b)fluoranthene	benzo(k)fluoranthene	Chrysene	dibenzo(a,h)anthracene	Indeno(1,2,3-cd)pyrene
30-Nov-06	0.31	0.15	0.15	0.15	0.15	0.31	0.15	0.15
31-Jul-06	1.1	0	0.57	0	0.18	0	0	0
30-Jun-06	11.09	0	0	7.7	0	0	0	0
31-May-06	22.96	0.68	0.42	0.26	1.2	2.7	0	0
31-Oct-05	0.81	0	0	0	0	0	0	0
31-Jul-05	13.29	0.52	2	1.5	0.43	0.84	0.5	0
31-Aug-04	0	0	0	0	0	0	0	0
31-Dec-03	18.9	0	0.27	0.58	0.45	0	0	0
31-Oct-03	0.46	0	0	0	0	0	0	0
31-Mar-03	11.9	0.22	0.32	0.55	0.49	0.64	0	0.37
30-Nov-02	2.21	0	0	0.18	0.16	0.24	0	0.24
31-Oct-02	28.17	0.16	0.4	0.94	0.83	1.1	0	0.84
Current Permit Limit	50	10	10	10	10	10	10	10
Units	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
Minimum	0	0	0	0	0	0	0	0
Maximum	28	0.68	2	7.7	1.2	2.7	0.5	0.84
Average ¹	9	0.14	0.34	0.99	0.32	0.49	0.05	0.13
Standard Deviation ¹	10	0.23	0.56	2.16	0.38	0.79	0.15	0.25
# of measurements	13	13	13	13	13	13	13	13
#exceedances	0	0	0	0	0	0	0	0

Notes:

1. Average and Standard deviation calculated for measurements below the detection limit.

NA = Not Applicable

ExxonMobil Everett Terminal
DMR Summary 2000 to 2005 Outfall 001B

Monitoring Period End Date	Group II PAHs								
	Acenaphthene	Acenaphthylene	Anthracene	benzo(ghi)perylene	fluoranthene	fluorene	naphthalene	Phenanthrene	Pyrene
30-Nov-06	1	0.2	1	0.15	1	1	1	0.2	1
31-Jul-06	0	0	0	0	0	0	4.7	1.1	0
30-Jun-06	1.2	0	0	0	1.9	1.2	0	7.7	0
31-May-06	0	0	0	0	1.1	0	1.2	3.6	13
31-Oct-05	0	0	0	0	0	0	0	0.81	0
31-Jul-05	0	1.4	0	0	0	0	0	3.2	1.7
31-Aug-04	0	0	0	0	0	0	0	0	0
31-Dec-03	0	0	0	0	0	0	6.2	2.2	0
31-Oct-03	0	0	0	0	0	0	0	0.46	0
31-Mar-03	0	0	0	0.41	0	0	1.1	3.2	1.6
30-Nov-02	0	0	0	0.19	0	0	0	1.2	0
31-Oct-02	1.3	0	1.1	0	0	1.6	1.6	9.1	2.7
Current Permit Limit	10	10	10	10	10	10	10	10	10
Units	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
Minimum	0	0	0	0	0	0	0	0	0
Maximum	1.3	1.4	1.1	0.41	1.9	1.6	6.2	9.1	13
Average ¹	0.29	0.13	0.18	0.06	0.33	0.32	1.32	2.73	1.67
Standard Deviation ¹	0.53	0.40	0.41	0.13	0.64	0.59	2.04	2.93	3.69
# of measurements	13	13	13	13	13	13	13	13	13
#exceedances	0	0	0	0	0	0	0	0	0

Notes:

1. Average and Standard deviation calculated for samples below the detection limit

NA = Not Applicable

MASSACHUSETTS DEPARTMENT OF
ENVIRONMENTAL PROTECTION
COMMONWEALTH OF MASSACHUSETTS
1 WINTER STREET
BOSTON, MASSACHUSETTS 02108

UNITED STATES ENVIRONMENTAL
PROTECTION AGENCY
OFFICE OF ECOSYSTEM PROTECTION
REGION I
BOSTON, MASSACHUSETTS 02114

JOINT PUBLIC MEETING, PUBLIC HEARING, AND PUBLIC NOTICE OF A DRAFT
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT TO
DISCHARGE INTO THE WATERS OF THE UNITED STATES UNDER SECTION 301 AND
402 OF THE CLEAN WATER ACT (THE "ACT"), AS AMENDED, AND REQUEST FOR
STATE CERTIFICATION UNDER SECTION 401 OF THE ACT.

DATE OF NOTICE: May 31, 2007 – July 16, 2007

PERMIT NUMBER: MA0000833

PUBLIC NOTICE NUMBER: MA-021-07

NAME AND MAILING ADDRESS OF APPLICANT:

Mr. Arthur Powers
Terminal Supervisor
ExxonMobil Pipeline Company
52 Beacham Street
Everett, MA 02149

NAME AND ADDRESS OF THE FACILITY WHERE DISCHARGE OCCURS:

ExxonMobil Everett Terminal
52 Beacham Street
Everett, MA 02149

RECEIVING WATER: Island End River/Mystic River

RECEIVING WATER CLASSIFICATION: Class SB

PREPARATION OF THE DRAFT PERMIT:

The U.S. Environmental Protection Agency, (EPA) and the Massachusetts Department of Environmental Protection (MassDEP) have cooperated in the development of a permit for the above identified facility. The effluent limits and permit conditions imposed have been drafted to assure that State Water Quality Standards and provisions of the Clean Water Act will be met. EPA has formally requested that the State certify this draft permit pursuant to Section 401 of the Clean Water Act and expects that the draft permit will be certified.

INFORMATION ABOUT THE DRAFT PERMIT:

A fact sheet or a statement of basis (describing the type of facility; type and quantities of wastes; a brief summary of the basis for the draft permit conditions; and significant factual, legal and policy questions considered in preparing this draft permit) and the draft permit may be obtained at no cost at http://www.epa.gov/region1/npdes/draft_permits_listing_ma.html or by writing or calling EPA's contact person named below:

Ellen Weitzler
US EPA
1 Congress Street, Suite 1100 (CIP)
Boston, MA 02114-2023
Telephone: (617) 918-1582

The administrative record containing all documents relating to this draft permit is on file and may be inspected at the EPA Boston office mentioned above between 9:00 a.m. and 5:00 p.m., Monday through Friday, except holidays.

PUBLIC MEETING:

The Regional Administrator has determined, pursuant to 40 CFR §124.12, that a significant degree of public interest exists in this proposed permit and that a public meeting should be held in Everett, Massachusetts to consider this permit. Accordingly, a public meeting will be held on the following date and time:

DATE: July 11, 2007
TIME: 6:00 – 7:00 pm
LOCATION: Parlin Memorial Library
410 Broadway
Everett, MA 02149

The following is a summary of the procedures that will be followed at the public meeting:

- The Presiding Chairperson will have the authority to open and conclude the meeting and to maintain order.
- EPA will make a short presentation describing the NPDES permit process and the draft permit conditions, and then accept questions from the audience.
- Formal oral comments concerning the draft permit will not be accepted at the public meeting. Formal oral comments will be accepted at the subsequent public hearing.

PUBLIC HEARING:

The Regional Administrator has determined, pursuant to 40 CFR §124.12, that a significant degree of public interest exists in this proposed permit and that a public hearing should be held in Everett, Massachusetts to consider this permit. Accordingly, a public hearing will be held on the same date and following the close of the public meeting:

DATE: July 11, 2007
TIME: 7:00 – 8:00 pm
LOCATION: Parlin Memorial Library
410 Broadway
Everett, MA 02149

The following is a summary of the procedures that will be followed at the public hearing:

- The Presiding Chairperson will have the authority to open and conclude the hearing and to maintain order.
- Any person appearing at such a hearing may submit oral or written statements and data concerning the draft permit.

PUBLIC COMMENT AND REQUEST FOR PUBLIC HEARING:

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 July 16, 2007, to the U.S. EPA, 1 Congress Street, Suite 1100, Boston, Massachusetts 02114-2023. Any person, prior to such date, may submit a request in writing to EPA and the State Agency for a public hearing to consider this draft permit. Such requests shall state the nature of the issues proposed to be raised in the hearing. A public hearing may be held after at least thirty days public notice whenever the Regional Administrator finds that response to this notice indicates significant public interest. In reaching a final decision on this draft permit the Regional Administrator will respond to all significant comments and make the responses available to the public at EPA's Boston office.

FINAL PERMIT DECISION:

Following the close of the comment period, and after a public hearing, if such hearing is held, the Regional Administrator will issue a final permit decision and forward a copy of the final decision to the applicant and each person who has submitted written comments or requested notice.

Glenn Haas, Director
DIVISION OF WATERSHED
MANAGEMENT
MASSACHUSETTS DEPARTMENT OF
ENVIRONMENTAL PROTECTION

Stephen S. Perkins, Director
OFFICE OF ECOSYSTEM PROTECTION
ENVIRONMENTAL PROTECTION
AGENCY