

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.<sup>39</sup>**

**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**

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<sup>39</sup> 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).<sup>40</sup> 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.”<sup>41</sup> 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.<sup>42</sup> 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.<sup>43</sup>

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.

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<sup>40</sup> Fact Sheet, 21.

<sup>41</sup> 314 CMR 4.05(e)

<sup>42</sup> Id.

<sup>43</sup> 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."<sup>44</sup> 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.<sup>45</sup> 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.<sup>46</sup> 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.**

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<sup>44</sup> U.S. EPA, Technical Support for Water Quality-based Toxics Control, EPA/505/2-90-001, 16 March 1991.

<sup>45</sup> Fact Sheet, 18.

<sup>46</sup> 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 exceedances, a BTEX exceedances 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.<sup>47</sup> Seven PAHs comprise Group I and each has a maximum daily discharge limit of 0.018 µg/L.<sup>48</sup> 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.<sup>49</sup> In the current permit, PAHs are regulated as one group.<sup>50</sup>**

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<sup>47</sup> Part I.A.1.

<sup>48</sup> Id.

<sup>49</sup> Id.

<sup>50</sup> Part I.A.1.

Group I PAHs are “well known carcinogens” and Group II “can enhance or inhibit the response of the carcinogenic PAHs.”<sup>51</sup> 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.<sup>52</sup>

[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.”<sup>53</sup> 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

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<sup>51</sup>Fact Sheet, 15-17.

<sup>52</sup>Fact Sheet, 17.

<sup>53</sup>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.<sup>54</sup> 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.<sup>55</sup> 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**

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<sup>54</sup> 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.

<sup>55</sup> Fact Sheet, 19.

**maintained treatment system.”<sup>56</sup> That is the totality of EPA’s explanation for choosing 70 µ/l 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 advisory<sup>57</sup> 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.<sup>58</sup> 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.”<sup>59</sup> 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.”<sup>60</sup> 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.”<sup>61</sup>**

**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**

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<sup>56</sup> Fact Sheet, 20.

<sup>57</sup> 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

<sup>58</sup> U.S. EPA, Technologies for Treating MtBE and Other Fuel Oxygenates, EPA 542-R-04-009, May 2004.

<sup>59</sup> Part I.A.3c.

<sup>60</sup> Part I.A.3

<sup>61</sup> 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.<sup>62</sup> 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.

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<sup>62</sup> 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**



MYSTIC RIVER WATERSHED ASSOCIATION  
20 ACADEMY STREET, SUITE 203  
ARLINGTON, MA 02476

July 11, 2007

My name is Minka vanBeuzekom and I'm here this evening representing the Mystic River Watershed Association and people who are currently using or want to use the Mystic River and its tributaries for recreation, fishing or just aesthetic enjoyment.

The Mystic River Watershed Association is an organization whose mission is to protect and improve the quality of the watershed. We have over 600 members who help with advocacy of the River and its tributaries. We have an extensive water quality monitoring program throughout the watershed and we work with local municipalities to improve their handling of storm and sewer waters.

We congratulate EPA and DEP in jointly upholding the spirit of the Federal Clean Water Act and the Massachusetts Clean Waters Act to ensure the potential of the Island End River and the Mystic River by drafting this stringent discharge permit to ExxonMobil Oil Corporation. As has been discussed, both bodies of water are designated to be used as habitat for fish and other aquatic life and for wading, swimming and boating. As you may already know, the Island End River is home to the Admiral's Hill Yacht Club and Department of Conservation Recreation shoreline property which is heavily used by residents but predominantly kids of Admiral's Hill and other parts of Chelsea.

I'd like to submit a print of a Google Earth map of the area of Island End River including ExxonMobil outfall 001 mentioned in the permit, the Admiral's Hill Yacht Club and the Department of Conservation Recreation Park into the public record. Despite the high degree of impairment of this water body, people want to exercise their right to enjoy the shoreline and rivers. I took five pictures today of users of the Park – the old, the young, runners, swimmers and boaters. I'd like to submit them into the public record as well.

Over the last seven years, the Mystic River Watershed Association's Monitoring Network has taken water samples in Island End River under its DEP-approved Quality Assurance Project Plan. Typically, these samples are analyzed for bacterial but the smell of gasoline and petroleum products as well as oily sheens coming from the outfall pipes at the mouth of the Island End River led the Monitoring Network in 2007 to expand analysis to include

hydrocarbons. On March 2<sup>nd</sup> and April 16<sup>th</sup>, water samples were collected from ExxonMobil Outfall 001 and sent to Alpha Analytical in Westborough Massachusetts. The samples were analyzed using gas chromatography. I'd like to submit these two reports into the public record.

The results of these tests indicate the presence of gasoline, heavy waste/lube oil and #6 fuel oil in March and #2 diesel fuel and an unspecified heavy oil in April of this year. According to the NPDES permit fact sheet, gasoline, #6 fuel oil, #2 diesel fuel and heavy oils are all products on site at the ExxonMobil Everett terminal.

The Mystic River Watershed Association believes this stringent permit is needed to ensure that all sources of petroleum products entering the watershed from the ExxonMobil site are identified, that a comprehensive plan is developed to abate and prevent the discharge of petroleum products to the ground and surface waters and that a rapid and rigorous timeline for achieving this plan is adhered to.

We applaud the Department of Environmental Protection for starting to implement its strong and progressive Environmental Justice policy in the lower Mystic River. First, for overseeing the dredging and containment of contaminated soil in the Island End River and now by issuing this stringent permit. We also congratulate the Massachusetts Department of Environmental Protection and the US Environmental Protection Agency for working together with strength and conviction to set a strong precedent for other polluters of any river that is meant for all to enjoy.



Submitted by  
Minka vanBeuzekom, MPH - On behalf of 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**

ExxonMobil Everett Terminal  
DMR Summary 2000 to 2005 Outfall 001A

Monitoring Period End Date	Flow (max) Mgal/d	Flow (Ave) Mgal/d	pH (max) SU	pH (min) SU	TSS (max) mg/L	TSS (ave) mg/L	O&G (max) mg/L	Benzene ug/L	Toluene ug/L	Ethylbenzene ug/L	Xylene ug/L	Total BTEX
30-Jun-08	1.50	0.40	7.00	7.00	<5	<5	5.3	<1	<1	<1	<2	0
31-May-07	1.20	0.30	6.80	6.80	13	13	4.9	<1	<1	<1	<2	0
30-Apr-08	1.50	0.30	7.20	7.20	12	12	6.1	<1	<1	<1	<2	0
31-Mar-08	2.70	0.60	6.80	6.80	6.7	6.7	<4	<1	<1	<1	<2	0
29-Feb-08	2.60	1.00	7.60	7.60	17	16	<4.4	<1	<1	<1	<2	0
31-Jan-08	1.80	0.50	6.90	6.90	22	22	<4.4	<1	<1	<1	<2	0
31-Dec-07	2.40	0.50	7.10	7.10	<5	<5	<4	<1	<1	<1	<2	0
30-Nov-07	1.10	0.30	7.50	6.20	6.3	5.3	<4.4	<1	<1	<1	<2	0
31-Oct-07	0.70	0.20	7.00	7.00	<5	<5	<4	<1	<1	<1	<2	0
30-Sep-07	1.19	0.11	6.60	6.60	<5	<5	<4	<1	<1	<1	2	2
31-Aug-07	0.31	0.09	6.90	6.90	<5	<5	<4	<1	<1	<1	2	2
31-Jul-07	1.09	0.15	7.14	7.14	<5	<5	<4	<1	<1	<1	2	2
30-Jun-07	2.14	0.23	7.09	7.09	<5	<5	<4	<1	5.9	<1	3.6	9.5
31-May-07	2.57	0.57	6.82	6.82	<5	<5	<4	<1	<1	<1	2	2
30-Apr-07	3.48	1.09	7.02	7.02	<4	<4	<4.1	4.9	9.1	<1	8.3	22.3
31-Mar-07	2.59	0.88	7.78	7.78	19	19	<4.4	3.9	5.1	<5.3	13.3	22.3
28-Feb-07	2.13	0.42	7.00	7.00	5	5	<4.1	6	25.4	4.5	38.3	74.2
31-Jan-07	1.52	0.64	7.25	7.25	<4	<4	<4.1	1.9	1.7	1.2	5.8	10.6
31-Dec-06	0.94	0.40	7.03	7.03	<4	<4	<4.1	<0.5	<1	<1	<1	0
30-Nov-06	2.80	0.59	6.90	6.90	11	11	<4.2	0.55	<1	<1	<1	0.55
31-Oct-06	2.02	0.27	7.40	7.40	<4	4	<4.1	<0.5	<1	<1	<1	0
30-Sep-06	0.65	0.15	7.40	7.40	<4	<4	<4.1	<0.5	<1	<1	<1	0
31-Aug-06	0.57	0.20	6.80	6.80	<4	<4	<4.1	0	0	0	0	0
31-Jul-06	0.98	0.25	7.80	7.80	6	6	<4.1	0	0	0	0	0
30-Jun-06	3.49	0.69	7.80	7.80	12	12	<4.2	3.7	12	1.9	13.9	31.5
31-May-06	3.99	0.70	7.87	7.87	<4	<4	<4.1	6.4	48	13.6	74.6	142.6
30-Apr-06	0.59	0.15	7.80	7.80	<4	<4	<4.1	4.2	18.4	4.1	23	49.7
31-Mar-06	1.23	0.16	7.77	7.77	14	14	<4.1	3	13.1	3.1	23.7	42.9
28-Feb-06	3.98	0.58	7.91	7.91	22	22	<4.1	10.8	35.2	4.5	29.3	79.8
31-Jan-06	2.85	0.88	8.06	8.06	9	9	<4.1	0.78	0	0	4.8	5.58
31-Dec-05	2.23	0.67	7.67	7.67	19	19	<4.1	1.3	6.3	2.9	16.9	27.4
30-Nov-05	2.40	0.58	7.84	7.84	<4	<4	<4.2	0	0	0	0	0
31-Oct-05	4.39	1.04	7.85	7.41	6	6	<5.1	1.2	0	0	0	1.2
30-Sep-05	0.73	0.20	7.87	7.87	<4	<4	<5.1	0	0	0	0	0
31-Aug-05	0.64	0.20	7.72	7.72	<4	<4	<5.1	0	0	0	0	0
31-Jul-05	1.54	0.35	7.50	7.50	14	14	<5.1	17.5	84.8	21.5	56.6	180.4
30-Jun-05	0.64	0.24	7.11	7.11	7	7	<5.1	0	0	0	0	0
31-May-05	2.35	0.60	7.80	7.80	<4	<4	<5.2	0.99	0	0	0	0.99
30-Apr-05	1.86	0.55	7.70	7.70	8	8	<5.1	0	0	0	0	0
31-Mar-05	3.92	0.94	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
28-Feb-05	2.47	0.76	7.83	7.83	<4	<4	<5.1	0	0	0	1.1	1.1
31-Jan-05	2.80	1.00	8.11	8.11	17	17	<5.1	2	4.1	0	8.4	14.5
31-Dec-04	2.93	0.97	8.00	8.00	11	11	<5.1	0	0	0	0	0
30-Nov-04	1.39	0.56	7.79	7.79	7	7	<5.3	0.85	9.5	1	9.7	21.05
31-Oct-04	1.46	0.42	7.92	7.92	<4	<4	<5.2	0	0	0	0	0
30-Sep-04	3.82	0.62	7.80	7.80	<4.0	<4.0	7.2	0	0	0	0	0
31-Aug-04	1.54	0.35	8.00	7.70	24	<14	<5.1	1	1.3	0	2.8	5.1
31-Jul-04	0.85	0.28	7.45	7.45	<4.0	<4.0	<5.2	0.77	0	0	2.2	2.97
30-Jun-04	1.23	0.85	7.85	7.85	7	7	<5.1	0	0	0	0	0
31-May-04	2.03	1.00	8.02	8.02	<4	<4	<5.1	0	0	0	0	0
30-Apr-04	4.12	1.34	8.01	7.95	17	9.3	<5.1	10.2	29.7	4.8	39.9	84.6
31-Mar-04	1.76	1.00	7.68	7.68	<4	<4	<5.1	0	0	0	2.5	2.5
29-Feb-04	1.62	0.92	7.84	7.84	8	8	<5.1	1.9	2.3	0	4.1	8.3
31-Jan-04	1.44	0.20	7.98	7.98	<4	<4	<5.1	0	0	0	0	0
31-Dec-03	4.40	1.68	7.79	7.66	23	15	<5.1	4.8	24.1	10.8	73	112.7
30-Nov-03	1.60	1.10	7.81	7.81	6	6	<5.1	0	0	0	0	0
31-Oct-03	3.39	1.25	7.73	7.43	<4.0	<4.0	<5.1	1.1	0	0	3.5	4.6
30-Sep-03	2.02	1.03	7.76	7.76	<4.0	<4.0	<5.1	0.71	2.4	0	1.3	4.41
31-Aug-03	2.96	1.11	7.68	7.68	<4.0	<4.0	<5.1	0	0	0	0	0
31-Jul-03	1.84	0.97	7.71	7.71	<4.0	<4.0	<5.1	0	0	0	0	0
30-Jun-03	3.68	1.31	7.78	7.78	18	18	<5.1	1.3	2	0	4	7.3
31-May-03	2.15	1.12	7.70	7.70	<4.0	<4.0	<5.1	0	0	0	0	0
30-Apr-03	2.11	1.25	7.72	7.72	<4.0	<4.0	<5.1	2.7	1	0	2.7	6.4
31-Mar-03	3.44	1.65	7.70	7.70	<4.0	<4.0	<5.1	1.5	2.1	0	11.8	15.4
28-Feb-03	2.68	0.43	7.69	7.69	6	6	<5.1	0	0	0	0	0
31-Jan-03	1.21	0.43	8.50	8.50	6	6	<5.1	2.7	10.7	1.2	11.8	26.4
31-Dec-02	3.89	1.39	7.70	7.70	16	16	<5.1	1.7	2.2	0	3.7	7.6
30-Nov-02	3.07	0.71	8.15	7.90	11	<7.0	<5.1	1.6	2.2	0	2.2	6
31-Oct-02	2.78	0.37	7.95	7.80	12	<8.0	<5.1	1.1	1.5	0	4.3	6.9
30-Sep-02	2.36	0.34	7.51	7.51	<4.0	<4.0	<5.1	0	0	0	0	0
31-Aug-02	0.30	0.14	7.54	7.54	6	6	<5.0	0	0	0	0	0
31-Jul-02	0.29	0.08	7.83	7.83	5	5	<5.0	0	0	0	0	0
30-Jun-02	2.08	0.36	8.03	8.03	7	7	<5.1	0	0	0	0	0
31-May-02	2.41	0.51	7.82	7.82	11	11	<5.2	0	0	0	0	0
30-Apr-02	2.64	0.33	8.26	8.26	10	10	<5.0	0	9.4	0	12.7	22.1
31-Mar-02	3.29	0.77	7.75	7.75	8	8	<5.1	2.4	1.1	0	3	6.5
28-Feb-02	3.40	0.93	7.79	7.79	9	9	<5.2	3	15.8	2.1	12.4	33.3
31-Jan-02	1.67	0.74	7.59	7.59	<4.0	<4.0	<5.2	0	0	0	0	0
Current Permit Limit	Report	Report	8.50	6.50	100	30	15	40	Report	40	Report	na
Minimum	0.29	0.08	7.11	7.11	<4	<4	7.2	0	0	0	0	0
Maximum	4.40	1.68	8.50	8.50	24	19	7.2	17.5	84.8	21.5	73	180.4
Average <sup>1</sup>	2.13	0.63	7.60	7.56	6.24	5.44	BDL	1.43	5.08	1.02	7.07	14.60

1. Average and Standard deviation calculated assuming zero value for measurements below the detection limit for any parameter.  
na = not applicable      BDL = below detection limit      0 = below detection limit

ExxonMobil Everett Terminal  
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Monitoring Period End Date	Total PAHs ug/L	Benzo(a)anthracene ug/L	benzo(a)pyrene ug/L	benzo(b)fluoranthene ug/L	benzo(k)fluoranthene ug/L	Chrysene ug/L	dibenzo(a,h)anthracene ug/L	Indeno(1,2,3-cd)pyrene ug/L
30-Jun-08	<7	<5	<5	<5	<5	<5	<5	<7
31-May-07	<7	<5	<5	<5	<5	<5	<5	<7
30-Apr-08	<6.8	<4.8	<4.8	<4.8	<4.8	<4.8	<4.8	<6.8
31-Mar-08	<7	<5	<5	<5	<5	<5	<5	<7
29-Feb-08	<6.7	<4.8	<4.8	<4.8	<4.8	<4.8	<4.8	<6.7
31-Jan-08	<6.7	<4.8	<4.8	<4.8	<4.8	<4.8	<4.8	<6.7
31-Dec-07	<7	<5	<5	<5	<5	<5	<5	<7
30-Nov-07	<7	<5	<5	<5	<5	<5	<5	<7
31-Oct-07	0	<4.8	<4.8	<4.8	<4.8	<4.8	<4.8	<6.8
30-Sep-07	0	<4.9	<4.9	<4.9	<4.9	<4.9	<4.9	<4.9
31-Aug-07	0	<4.8	<4.8	<4.8	<4.8	<4.8	<4.8	<6.8
31-Jul-07	<6.9	<4.9	<4.9	<4.9	<4.9	<4.9	<4.9	<6.9
30-Jun-07	<6.8	<4.8	<4.8	<4.8	<4.8	<4.8	<4.8	<6.8
31-May-07	<7	<5	<5	<5	<5	<5	<5	<7
30-Apr-07	0.37	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15
31-Mar-07	0	<5.3	<5.3	<5.3	<5.3	<5.3	<5.3	<5.3
28-Feb-07	0	<5.3	<5.3	<5.3	<5.3	<5.3	<5.3	<5.3
31-Jan-07	0.42	<0.15	<0.15	<0.15	<0.15	0.42	<0.15	<0.15
31-Dec-06	0	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15
30-Nov-06	0.2	<0.15	0.2	<0.15	<0.15	<0.15	<0.15	<0.15
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
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
Average <sup>1</sup>	0.60	0.01	0.03	0.03	0.02	0.04	0.02	0.00

ExxonMobil Everett Terminal  
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Monitoring Period End Date	Acenaphthene ug/L	Acenaphthylene ug/L	Anthracene ug/L	benzo(ghi)perylene ug/L	fluoranthene ug/L	fluorene ug/L	naphthalene ug/L	Phenanthrene ug/L	Pyrene ug/L
30-Jun-08	<5	<5	<5	<5	<5	<5	<5	<5	<5
31-May-07	<5	<5	<5	<5	<5	<5	<5	<5	<5
30-Apr-08	<4.8	<4.8	<4.8	<4.8	<4.8	<4.8	<4.8	<4.8	<4.8
31-Mar-08	<5	<5	<5	<5	<5	<5	<5	<5	<5
29-Feb-08	<4.8	<4.8	<4.8	<4.8	<4.8	<4.8	<4.8	<4.8	<4.8
31-Jan-08	<4.8	<4.8	<4.8	<4.8	<4.8	<4.8	<4.8	<4.8	<4.8
31-Dec-07	<5	<5	<5	<5	<5	<5	<5	<5	<5
30-Nov-07	<5	<5	<5	<5	<5	<5	<5	<5	<5
31-Oct-07	<4.8	<4.8	<4.8	<4.8	<4.8	<4.8	<4.8	<4.8	<4.8
30-Sep-07	<4.9	<4.9	<4.9	<4.9	<4.9	<4.9	<4.9	<4.9	<4.9
31-Aug-07	<4.8	<4.8	<4.8	<4.8	<4.8	<4.8	<4.8	<4.8	<4.8
31-Jul-07	<4.9	<4.9	<4.9	<4.9	<4.9	<4.9	<4.9	<4.9	<4.9
30-Jun-07	<4.8	<4.8	<4.8	<4.8	<4.8	<4.8	<4.8	<4.8	<4.8
31-May-07	<5	<5	<5	<5	<5	<5	<5	<5	<5
30-Apr-07	<1	<0.2	<1	<0.15	<1	<1	<1	0.37	<1
31-Mar-07	<5.3	<5.3	<5.3	<5.3	<5.3	<5.3	<5.3	<5.3	<5.3
28-Feb-07	<5.3	<5.3	<5.3	<5.3	<5.3	<5.3	<5.3	<5.3	<5.3
31-Jan-07	<1	<0.2	<1	<0.15	<1	<1	<1	<0.2	<1
31-Dec-06	<1	<0.2	<1	<0.15	<1	<1	<1	<0.2	<1
30-Nov-06	<1	<0.2	<1	<0.15	<1	<1	<1	<0.2	<1
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	0.6	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	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
Minimum	0	0	0	0	0	0	0	0	0
Maximum	0	0.65	0	0	0	0	1.7	2.5	0
Average <sup>1</sup>	0.00	0.02	0.00	0.00	0.00	0.00	0.04	0.23	0.01

ExxonMobil Everett Terminal  
DMR Summary 2000 to 2005 Outfall 001B

Monitoring Period End Date	Flow (max)	duration of discharge (hrs/mo)	pH MAX	pH MIN	TSS			O&G MAXIMUM	Benzene	Toluene	Ethylbenzene	Xylene	Total BTEX
					TSS MAX	TSS AVE	MAXIMUM						
30-Jun-08	0.1		7	7	85	85	5.2	2.3	1.1	<1	4.6	8.0	
31-May-08	0.1		7.1	7.1	120	120	8.4	3.8	9	3.1	36	51.9	
31-Mar-08	0.4	0.7	6.2	6.2	40	40	<4.4	<1	1.6	<1	<2	1.6	
29-Feb-08		1.3	7.1	5.9	44	41	<4	1	2	<1	3.7	3.7	
30-Jun-07	0.21	0.33	6.5	6.5	65	65	13	1.6	10	4.4	43	59	
30-Apr-07	0.63	1.05	7.09	7.09	23	23	<4.1	2.5	3.2	<5	6.8	12.5	
31-Mar-07	0.4	0.66	6.32	6.32	46	46	<4.2	<0.5	<1	<1	1	1	
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	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	120	120	13.2	28	134	34.3	122	291	
Average <sup>1</sup>	0.96	0.15	7.40	7.25	48.89	43.09	2.75	5.02	21.71	5.81	29.89	62	

Notes:  
1. Average and Standard deviation calculated assuming zero value for measurements below the detection limit for any parameter.  
NA = Not Applicable

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Monitoring Period End Date	Total PAHs µg/L	Group I PAHs									
		Benzo(a)racene	anthracene	benzo(a)pyrene	benzo(b)fluoranthene	benzo(k)fluoranthene	Chrysene	dibenz(a,h)anthracene	Indeno(1,2,3-cd)pyrene		
30-Jun-08	<10	<7.2	<7.2	<7.2	<7.2	<7.2	<7.2	<7.2	<7.2	<10	
31-May-08	<6.8	<4.8	<4.8	<4.8	<4.8	<4.8	<4.8	<4.8	<4.8	<4.8	
31-Mar-08	<7	<5	<5	<5	<5	<5	<5	<5	<5	<7	
29-Feb-08	<7	<5	<5	<5	<5	<5	<5	<5	<5	<7	
30-Jun-07	<7	<5	<5	<5	<5	<5	<5	<5	<5	<5	
30-Apr-07	0	<5	<5	<5	<5	<5	<5	<5	<5	<5	
31-Mar-07	0	<5.1	<5.1	<5.1	<5.1	<5.1	<5.1	<5.1	<5.1	<5.1	
30-Nov-06	0.31	0.15	0.15	0.15	0.15	0.31	0.15	0.15	0.15	0.15	
31-Jul-06	1.1	0	0.57	0	0.18	0	0	0	0	0	
30-Jun-06	11.09	0	0	7.7	0	0	0	0	0	0	
31-May-06	22.96	0.68	0.42	0.26	1.2	2.7	0	0	0	0	
31-Oct-05	0.81	0	0	0	0	0	0	0	0	0	
31-Jul-05	13.29	0.52	2	1.5	0.43	0.84	0.5	0	0	0	
31-Aug-04	0	0	0	0	0	0	0	0	0	0	
31-Dec-03	18.9	0	0.27	0.58	0.45	0	0	0	0	0	
31-Oct-03	0.46	0	0	0	0	0	0	0	0	0	
31-Mar-03	11.9	0.22	0.32	0.55	0.49	0.64	0	0	0.37	0	
30-Nov-02	2.21	0	0	0.18	0.16	0.24	0	0	0.24	0	
31-Oct-02	28.17	0.16	0.4	0.94	0.83	1.1	0	0	0.84	0	
Current Permit Limit	50	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	µg/L	
Minimum	0	0	0	0	0	0	0	0	0	0	
Maximum	28	0.68	2	7.7	1.2	2.7	0.5	0.84	0.84	0.84	
Average <sup>1</sup>	6	0.09	0.22	0.62	0.20	0.31	0.03	0.08	0.08	0.08	

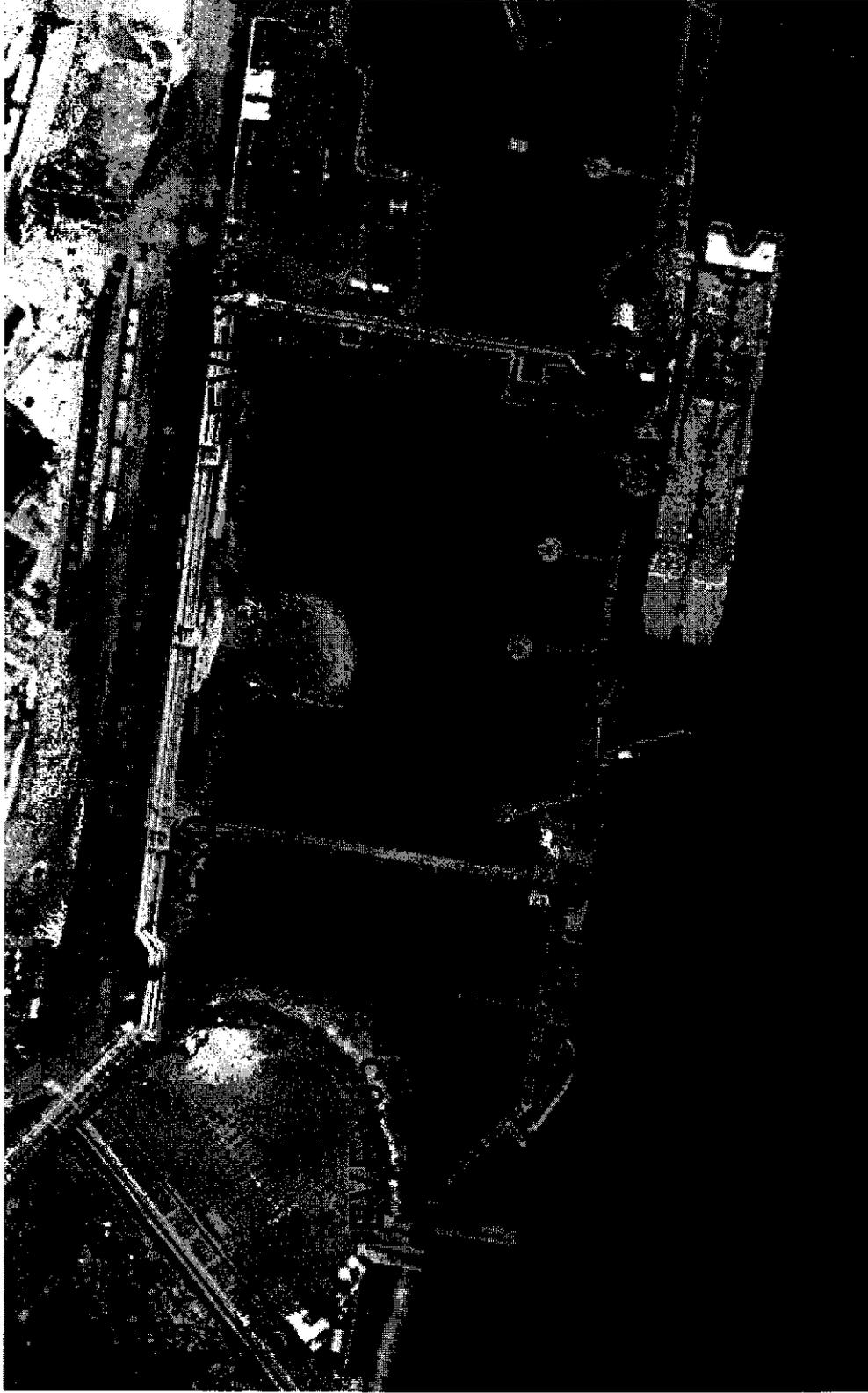
ExxonMobil Everett Terminal  
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Group II PAHs

Monitoring Period End Date	Acenaphthene	Acenaphthylene	Anthracene	benzo(ghi)pyrene	fluoranthene	fluorene	naphthalene	Phenanthrene	Pyrene
30-Jun-08	<7.2	<7.2	<7.2	<7.2	<7.2	<7.2	<7.2	<7.2	<7.2
31-May-08	<4.8	<4.8	<4.8	<4.8	<4.8	<4.8	<4.8	<4.8	<4.8
31-Mar-08	<5	<5	<5	<5	<5	<5	<5	<5	<5
29-Feb-08	<5	<5	<5	<5	<5	<5	<5	<5	<5
30-Jun-07	<5	<5	<5	<5	<5	<5	<5	<5	<5
30-Apr-07	<5	<5	<5	<5	<5	<5	<5	<5	<5
31-Mar-07	<5.1	<5.1	<5.1	<5.1	<5.1	<5.1	<5.1	<5.1	<5.1
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 <sup>1</sup>	0.18	0.08	0.11	0.04	0.21	0.20	0.83	1.72	1.05

**ATTACHMENT C**

**Figure 1**  
**(see Response 78)**



**Figure 1 – Location of Mystic River Outfalls Described in Comment 78**