

**RESPONSE TO COMMENTS - DATED JUNE 9, 2005
REGARDING THE REISSUANCE OF THE FOLLOWING NPDES PERMITS:**

CHELSEA SANDWICH, LLC	MA0003280
COASTAL OIL OF NEW ENGLAND, INC. - CHELSEA TERMINAL	MA0004375
GULF OIL LIMITED PARTNERSHIP	MA0001091
GLOBAL REVCO TERMINAL, LLC	MA0003298
GLOBAL PETROLEUM CORPORATION	MA0003425
GLOBAL SOUTH TERMINAL, LLC	MA0000825
IRVING OIL TERMINAL - REVERE	MA0001929

Introduction:

The U.S. Environmental Protection Agency (EPA) and the Massachusetts Department of Environmental Protection (MADEP) solicited public comments from March 14, 2005, through May 12, 2005, on the draft National Pollutant Discharge Elimination System (NPDES) permits to be issued to the seven (7) petroleum bulk stations and terminals identified above. In addition, a joint public information meeting and public hearing was held for interested members of the community in Chelsea, Massachusetts on April 27, 2005.

The Draft NPDES Permits are primarily for the discharge of storm water and occasionally water used for the hydrostatic testing of repaired tanks at these petroleum bulk stations and terminals. Two of the facilities (i.e., Chelsea Sandwich, LLC and Global Petroleum Corporation) also discharge treated ground water into their storm water conveyance systems through their respective NPDES permits. All of the facilities discharge to the Chelsea River. However, the Global REVCO Terminal, LLC also discharges to a tributary leading to Sales Creek.

During the public-notice (comment) period EPA-New England received comments from: Mimi Loss, a City of Chelsea Resident; Judith Dyer, a member of the Greenspace and Chelsea Conservation Commission; Luis Prado, the Director of the City of Chelsea Department of Health and Human Services/Board of Health Agent; Andrew DeSantis, the Assistant Director of Public Works in the City of Chelsea; Aaron Toffler, of the Urban Ecology Institute on behalf of the Chelsea Creek Restoration Partnership; and Ashwin Patel, the Manager of Environmental Compliance for the Global REVCO Terminal LLC and Chelsea Sandwich, LLC facilities. There were no comments provided or submitted during the public hearing.

In accordance with the provisions of 40 C.F.R. §124.17, this document presents EPA's responses to comments received on the Draft NPDES Permits and any appropriate changes made to the public-noticed Draft Permits as a result of the comments. The Final Permits are substantially identical to the Draft Permits that were available for public comment. Although EPA's decision-making process has benefitted from the various comments submitted, the information and arguments presented did not result in any substantial new changes to the permits. EPA did, however, improve certain requirements in the permits as a result of the comments raised. These improvements and changes are further explained in this document and are reflected in the Final Permits.

Summary of Changes Made to the Final Permits

1. The frequency of sampling and monitoring for Total Suspended Solids (TSS) has been changed from once per month to twice per month for all of the facilities.
2. Each permittee is required to provide a copy of the hydrostatic testing letter/reports, which are to be submitted to EPA and the MADEP, also to the Director of Public Works of the municipality in which the facility is located.
3. Each permittee is required to amend their Storm Water Pollution Prevention Plans (SWPPP) to include sweeping of paved areas at a frequency of no less than twice per year.
4. Each permittee is required to reevaluate their Best Management Practices for preventing and controlling the discharge of TSS from their facility and report the results of the evaluation to the EPA and the MADEP.
5. The Irving Oil Terminal - Revere (MA0001920), a facility which currently stores ethanol in their tank farm, is required to amend their SWPPP and identify what special provisions and conditions the facility will use for containing and treating ethanol, should it be spilled.
6. The remainder of the facilities are required to notify EPA and the MADEP in writing of their intention to store ethanol, if applicable, and amend their SWPPP to identify what special provisions and conditions the facility will use for containing and treating ethanol, should it be spilled.
7. A Reopener Clause section has been included into each permit which contains standard language as well as language which allows each permit to be modified in the event that the changes to the SWPPP are not effective and protective in controlling the discharge of ethanol into the receiving water.
8. Each permittee is required to provide a copy of their SWPPP to the municipality in which the facility is located upon written request by such municipality to the facility.

I. Comments from Mimi Loss

COMMENT NO. 1:

I would like to receive a copy of the comments concerning this permitting.

RESPONSE NO. 1:

EPA will post an electronic copy of the comments and the response to comments on EPA's website located at <http://www.epa.gov/region1/npdes/chelseacreekfuelterminals/index.html> once the document has been finalized. In addition, we will mail you a hard copy of the comments and the response to comments as soon as it is available.

COMMENT NO. 2:

If the Chelsea Creek is classified by Mass. as a Class SB Water body (I cant' figure out what Class SB is) to support swimming, fishing, boating, etc. how does that classification compare with the fact that it is a Designated Port Area.

RESPONSE NO. 2:

The Massachusetts Surface Water Quality Standards (314 CMR 4.00) which are located at <http://www.mass.gov/dep/bwp/iww/files/314cmr4.htm> state in Section 4.05 that surface waters of the Commonwealth shall be segmented and each segment assigned a classification which is identified by the most sensitive, and therefore governing, water uses to be achieved and protected. Chelsea River (locally referred to as Chelsea Creek) has been classified by the State of Massachusetts as a Class SB water body. As a result, the waters of the creek [See Section 4.05(4)(b) of the Massachusetts Surface Water Quality Standards] "are designated as a habitat for fish, other aquatic life and wildlife and for primary and secondary contact recreation." Accordingly, the permits for these seven facilities include limits and conditions designed to allow the discharges from these facilities to support the uses mentioned above.

Chelsea Creek has also been classified by the Commonwealth of Massachusetts as a Designated Port Area. This designation means that areas adjacent to the creek have been set aside for commercial and industrial uses which need access to the creek. The current commercial and industrial uses along the creek may not make it appropriate and/or safe to for people to participate in all of the Class SB activities identified in the paragraph above despite the fact that the limits and conditions in the NPDES permits are designed to support such use.

COMMENT NO. 3:

I read the chemicals, voc's and they all look pretty potent IF there should ever be a leakage or if they actually hit the Chelsea Creek is higher amounts that the permitting would allow. Also, who monitors if there is a spillage?

RESPONSE NO. 3:

The specific local, state, and federal agencies which would respond to and monitor a petroleum spill depends on a number of important factors including: the quantity of the material spilled, the location of the facility, and the location of the spill. For example, if a spill were to occur at one of the Chelsea Creek fuel terminals and this spill impacted or had the potential to impact Chelsea Creek, then the agencies responding would likely include the Coast Guard, the MADEP, and possibly the EPA. It is important to note that the responsible party for any oil or chemical discharge that meets federal reporting requirements **MUST** report such incidents to the **National Response Center** immediately. The National Response Center then contacts the appropriate local, state, and federal responding agencies. The public is also encouraged to contact the National Response Center (1-800-424-8802) in the event that they see evidence of any oil or chemical discharge to Chelsea Creek or other nearby water body.

II. Comment from Judith Dyer

COMMENT NO. 1:

Thanks for a very informative meeting last night in Chelsea. I felt everything was very well explained and believe the reason there were no comments when David Webster asked for them, was because it was a successful meeting!

RESPONSE NO. 1:

The EPA and the MADEP appreciate your feedback and participation in the NPDES permitting process for these facilities. We hope that our efforts to involve the community in the permitting process have given the public a better understanding of how the limits and conditions of these seven draft permits were derived.

III. Comment from Luis Prado

COMMENT NO. 1:

In reference to draft permit MA 0004375 - Coastal Oil of New England, I would like to inform you that this facility, a liquid asphalt bulk storage and batching plant, has been out of operation for more than three years and that according to the City of Chelsea Board of Health Regulation and Commonwealth Law on asphalt plants in urban centers, no such facility shall be established in Chelsea. It appears to me that re-opening this facility constitutes a violation of state law and of Chelsea Board of Health Regulations.

RESPONSE NO. 1:

The Coastal Oil of New England, Inc. facility (MA0004375) is currently inactive and no petroleum products have been stored onsite since March 2003. However, the facility continues to discharge storm water into Chelsea Creek. As a result, there is a reasonable potential for the

facility to continue to contribute pollutants to the creek. Accordingly, EPA believes it is important that this facility (although inactive) be reissued a permit which contains the most stringent limits and conditions while such a discharge continues to occur. However, the reissuance of the permit by EPA and the MADEP does not supercede any local or state regulations which govern the operation of this facility.

IV. Comments from Andrew DeSantis

The letter provided by Mr. DeSantis contained several longer narrative comments (Referred to as General Comments in this document) as well as a list of numbered comments (Referred to as Specific Comments in this document).

GENERAL COMMENT NO. 1:

While EPA has based effluent limitations on utilization of Best Professional Judgement in lieu of Technology-based National Effluent Guidelines for storm water discharges from petroleum bulk stations and terminals, it is readily apparent to this writer that technology based improvements for better treatment of storm water discharges are readily available and could provide additional treatment at minimal additional cost. The EPA's website <http://www.epa.gov/NE/assistance/ceitts/stormwater/techs.html> lists 27 technologies that may provide up to 96.7% TSS removal.

RESPONSE TO GENERAL COMMENT NO. 1:

There are no technology-based National Effluent Guidelines promulgated for storm water discharges from petroleum bulk stations and terminals. In the absence of such guidelines, EPA is authorized under the CWA to establish technology-based effluent limitations on a case-by-case basis using Best Professional Judgement (BPJ). However in general, EPA does not have the authority to specify the method of treatment to be used in NPDES permits. It is typically left to the permittee to define the treatment system, the series of steps/units comprising the treatment system, and the number of passes the discharge makes through the treatment system in order for the permittee to achieve the effluent limitations of the permit.

EPA reviewed the effluent guidelines of several other related industrial categories to determine the most appropriate effluent limits and conditions for the petroleum bulk stations and terminals. In the case of TSS, EPA selected the Steam Electric Power Point Source Category as the basis for establishing limits in these draft permits. EPA also reviewed the monitoring data submitted over the past seven years to confirm the effectiveness of the Best Management Practices and treatment systems used by the facilities. A majority of the facilities are able to achieve discharge levels well below the limits and conditions of their respective permits and are demonstrating an overall trend of reducing their pollutant loads to Chelsea Creek - a goal which EPA, the MADEP, and surrounding community share. As a result, EPA believes that the limits included in the draft permits are protective of human health and the environment and will ensure compliance with applicable provisions of the Clean Water Act (CWA).

Also, as part of our response to this comment EPA re-reviewed the TSS monitoring data

submitted by these seven facilities as well as the information contained in the website you identified. A number of the facilities exceeded their TSS limits (i.e., primarily their monthly average TSS limit) during a limited number of occasions. In light of these exceedances and the concerns expressed in your comment, EPA will not reduce the frequency of monitoring of this parameter from twice a month to once per month as proposed in the draft permits (See Response to your General Comment NO. 5).

EPA will also include additional language in the Storm Water Pollution Prevention Plan (SWPPP) section of the final permits which requires each facility to reevaluate its Best Management Practices (BMPs) for preventing and controlling the discharge of TSS. This requirement is in addition to the other SWPPP requirements already identified in the draft permits. This evaluation shall be submitted to EPA concurrent with the first annual certification by each facility of its SWPPP. Specifically, as part of this evaluation each facility will be required discuss and identify whether any changes, modifications and/or improvements are needed and can be implemented for the following items: 1) the effectiveness of the existing BMP's for reducing TSS loading; 2) the effectiveness of the current operation and maintenance performed on storm water conveyance and treatment systems for reducing TSS loading; 3) effectiveness of surface soil conditions in the tank farm areas for reducing TSS loading; 4) the effectiveness of the existing treatment technology (i.e., Oil/Water Separator) for reducing TSS loading; and 5) the effectiveness of additional treatment technologies (and cost) which could be implemented to further reduce TSS levels. EPA and the MADEP will review the results of this evaluation as well as other pertinent information (e.g., TSS monitoring results, technology improvements) to see if any change to the permit is warranted.

GENERAL COMMENT NO. 2:

Since the EPA has not promulgated technology based guidelines for storm water discharges from bulk petroleum facilities and the receiving waters in both communities discharge into tributaries to Boston Harbor, which is still subject to a federal cleanup order, the localities where such facilities are located in conjunction with the Massachusetts Water Resources Authority should be allowed to set such standards. Precedent for technology based guidelines for storm water has been set by the federal courts action in regard to storm water on Day Boulevard in South Boston.

RESPONSE TO GENERAL COMMENT NO. 2:

In the absence of technology-based National Effluent Guidelines promulgated for storm water discharges from petroleum bulk stations and terminals, EPA, is authorized under the CWA to establish technology-based effluent limitations on a case-by-case basis using BPJ. As the permitting authority, EPA considers all of the information available when developing limits and conditions in the draft permits using BPJ. This authority can be delegated down to the state level when a state becomes authorized to administer the NPDES program. The action taken by the Massachusetts Water Resources Authority (MWRA) in regard to treating storm water along Day Boulevard in South Boston was the result of previous violations to water quality-based standards and a federal court action. These are not the same conditions that apply to the bulk petroleum facilities where there is an absence of technology-based effluent guidelines.

GENERAL COMMENT NO. 3:

Incomplete or out-of-date plans need to be updated. Site plans on line are cumbersome to view. Site plans available at the Chelsea Public Library are reduced in size and poorly reproduced making them difficult to view. The lack of contour grades on facility plans makes it impossible to determine the direction of surface runoff flows. Other site features, particularly subsurface utilities are not shown.

RESPONSE TO GENERAL COMMENT NO. 3:

The Draft NPDES Permits require each facility to maintain, update, and implement their Storm Water Pollution Prevention Plans (SWPPPs). The permits also identify as part of the Certification process, that each SWPPP is to be updated at a minimum, on an annual basis, to account for any changes that occur at a facility which could impact the plan. The updates should include, among other items, revisions to the site map to reflect significant changes to the facility. The site map should include information concerning important site features which may influence or impact storm water conveyance, treatment, and discharge features. As such the map is not required to include other subsurface utility information which is not related to the drainage and discharge features. The SWPPPs are considered within the domain of public information and based on the comments provided by Aaron Toffler as well as yourself, EPA will include language in the final permits requiring each facility to provide a copy of its SWPPP to the Municipality where the facility is located, upon the submittal of a written request by the Municipality to the facility. The SWPPP should include a full size copy of the site map which should eliminate most of the reproduction and quality issues mentioned in your comment letter.

GENERAL COMMENT NO. 4:

All of the facilities are either totally within or partially within the 100-year floodplain. The draft permits do not address what the requirements or course of action to be taken when treatment structures are impacted by floodwaters. No data is presented on the adequacy of O/W separators for large storm events.

RESPONSE TO GENERAL COMMENT NO. 4:

Facility operators have indicated that the Oil/Water Separators are usually designed to handle the flow from at least a 25-year storm event. Many facilities also have additional storage capacity within their tank farms to accumulate the runoff from even larger storm events. However, facility's must balance their ability to store additional quantities of storm water for treatment with the potential to create conditions under which there could be a catastrophic failure or release of product from the tank farm (i.e., such as through the floating of a fuel storage tank). The NPDES regulations found at 40 CFR Section 122.41(n) describe the steps a facility must follow during a flood event which would result in a facility upset. An upset, is defined as an exceptional incident in which there is an unintentional and temporary noncompliance with technology based permit effluent limitations because of factors beyond the reasonable control of the permittee.

GENERAL COMMENT NO. 5:

This writer takes issue with the decrease in TSS monitoring frequency from semi-monthly to monthly and the utilizing of comparison to fuel storage at steam electric stations. Presumably there is more incoming truck traffic at most bulk fuel storage facilities especially during the heating season which coincides with municipal as well as on site snow and ice control operations involving the placement of abrasive particulate onto the roadways and transfer of such by the wheel of over the road fuel delivery vehicles to the sites.

RESPONSE TO GENERAL COMMENT NO. 5:

The frequency of monitoring pollutants is determined on a case-by-case basis. The general intent is to establish a frequency of monitoring that will detect most events of noncompliance without requiring needless or burdensome monitoring. In establishing a monitoring frequency, effluent data (e.g., Discharge Monitoring Reports) and compliance inspection reports are reviewed. In this way, estimates can be ascertained on the variability of the concentration of a parameter; effectiveness of the treatment technology; compliance record; and frequency of discharge. EPA has re-reviewed the TSS monitoring data submitted by these seven facilities. Although the facilities were in compliance with their TSS limits during most of the sampling events which occurred over the past seven years, there were a limited number of occasions when the facilities exceeded their TSS limits (i.e., primarily their monthly average TSS limit). In light of these exceedances and the concerns expressed in your General Comment NO. 1, EPA will not reduce the frequency of monitoring of this parameter from twice a month to once a month as proposed in the draft permits.

As mentioned in the Response to General Comment NO. 2 above, there are no technology-based National Effluent Guidelines promulgated for storm water discharges from petroleum bulk stations and terminals. In the absence of such guidelines, EPA is authorized under the CWA to establish technology-based effluent limitations on a case-by-case basis using BPJ. EPA reviewed the effluent guidelines of several other related industrial categories and selected the Steam Electric Power Point Source Category as the basis for establishing TSS limits in these draft permits. Although, there are some differences in the operations occurring at a steam electric generating facility versus a petroleum bulk station and terminal (as noted in your comment) the overall conditions presented at both types of facilities (i.e., storage of bulk quantities of fuel and paved areas with vehicle traffic) are similar enough to warrant the use of steam electric generating TSS limits in these draft permits.

GENERAL COMMENT NO. 6:

Whereas Oils and Greases have been identified by DEP as a problem with the Chelsea River and monitoring has been reduced from semi-monthly to monthly which therefore is less than the anticipated annual total of rainfall events, this reduction does not make sense.

RESPONSE TO GENERAL COMMENT NO. 6:

Similar to the response provided to General Comment NO. 5 above, EPA has reviewed the O&G effluent data and compliance reports submitted for the seven petroleum bulk stations and terminals over the last seven years. A majority of the facilities have consistently been able to meet their O&G permit conditions and as a result EPA has reduced the monitoring frequency for this parameter from semi-monthly to monthly. EPA believes that a monthly monitoring frequency for O&G will continue to provide sufficient information to assure that the environment and the water quality standards of the Chelsea Creek are protected.

SPECIFIC COMMENT NO. 1:

Permits should mandate reporting of any changes in treatment thru-put of storm water runoff.

RESPONSE TO SPECIFIC COMMENT NO. 1:

Treatment thru-put or the volume/flow rate of storm water runoff is among the items to be discussed in a facility's SWPPP. Accordingly, EPA would need to be notified of any changes in thru-put rates as part of the annual review and certification of the SWPPP by each facility as described in the draft permits. In addition, the facility must provide written notification and receive approval from EPA and the MADEP for any proposed changes which have the potential to cause the thru-put through the Oil/Water Separator to exceed the maximum design flow rate of the separator.

SPECIFIC COMMENT NO. 2:

Visual observation of water surface of open treatment devices should be mandated to occur prior to predicted rain fall events to insure that any floating product is removed prior to first flush discharge.

RESPONSE TO SPECIFIC COMMENT NO. 2:

The draft permits already include a number of inspection requirements. As part of the operation and maintenance requirements identified in the SWPPP, each facility inspects their treatment devices (i.e., Oil/Water Separators, catch basins) on a regular basis. Such devices are typically inspected on a weekly to monthly basis to prevent any floating product from being discharged into Chelsea Creek. In addition, facilities are required to inspect any accumulated water within the tank farm for the presence of petroleum products prior to it being sent to the Oil/Water Separator for treatment. These inspections reduce the likelihood of any floating product being discharged to Chelsea Creek and therefore no further changes to the permits are warranted at this time.

SPECIFIC COMMENT NO. 3:

Complete sweeping of paved areas of permitted facility should be mandated on a quarterly basis to reduce transportation of particulate matter to treatment devices.

RESPONSE TO SPECIFIC COMMENT NO. 3:

EPA agrees that the sweeping of paved areas could reduce one of the important sources of solids loading to the storm water treatment systems at these facilities. In reviewing the TSS data submitted, there were certain trends noted for when elevated TSS levels were detected at many of the facilities. Higher TSS levels were typically seen in the early spring when snow melt and spring rains washed sand and other particulate matter accumulated on paved areas over the winter into the storm water conveyance and treatment system. To help eliminate this influx of particulate matter, EPA will include language in the final permits requiring each facility to amend its existing SWPPP to include sweeping of paved areas at a frequency of no less than twice per year. At least one of the sweepings shall occur in the early spring (i.e., March to April time frame) to maximize the removal of solids which may have accumulated at each facility over the winter. EPA believes that the frequency and timing of sweeping of paved areas as proposed should be sufficient to reduce the transportation of particulate matter to treatment devices when it is most likely to occur at these facilities.

SPECIFIC COMMENT NO. 4:

Copies of Storm Water Pollution Plan should be submitted to Municipality where facility is located.

RESPONSE TO SPECIFIC COMMENT NO. 4:

EPA agrees. EPA will include language in the final permits requiring each facility to provide a copy of its SWPPP to the Municipality where the facility is located, upon the submittal of a written request by the Municipality to the facility.

SPECIFIC COMMENT NO. 5A:

All reporting should require the name of the facility as well as the permit number for the discharge. The lack thereof has caused some confusion for this reviewer as to where the monitoring results are for especially because of the review of permits for multiple facilities.

RESPONSE TO SPECIFIC COMMENT NO. 5A:

Facility's, as part of their submittal of Discharge Monitoring Reports (DMRs) are required to include such information as the name, address, and permit number of the facility on each DMR. In an effort to conserve paper, not all of this information was included on each page of the summary tables which were attached to the draft permits. EPA regrets any confusion that this may have caused you.

SPECIFIC COMMENT NO. 5B:

November 14 2003 Attachment B sampling is listed under Chelsea Sandwich (MA 0003280) but is labeled for Global Petroleum. This report shows Turbidity at 400 times the detection limit.

RESPONSE TO SPECIFIC COMMENT NO. 5B:

The cover sheet for the November 14, 2003, ground water sampling results presented in Attachment B to the Chelsea Sandwich, LLC Fact Sheet (MA0003280) identifies the "Site" location as being GLOBAL CHELSEA. Although the nomenclature used here is somewhat confusing, the information shown is for the ground water treatment system located at the Chelsea Sandwich, LLC facility (part of Global Companies, LLC). The turbidity value which you reference in your comment (i.e., a value of 82 NTUs) represents conditions in the ground water before treatment (i.e., the influent sample). After treatment (which represents the quality of the water discharged into Chelsea Creek), the turbidity was reduced to 0.23 NTUs which is only slightly above the reporting limit for the analytical method (i.e., 0.20 NTUs) and well below the 2004 drinking water standard for turbidity of 5 NTUs.

SPECIFIC COMMENT NO. 5C:

November 17 & 19 2003 Attachments B is listed under Chelsea Sandwich (MA 0003280) but is labeled for Global Chelsea.

RESPONSE TO SPECIFIC COMMENT NO. 5C:

See Response to Specific Comment NO. 5B.

SPECIFIC COMMENT NO. 5D:

December 11, 2003 Attachments B is listed under Chelsea Sandwich (MA 0003280) but is labeled for Chelsea Terminal

RESPONSE TO SPECIFIC COMMENT NO. 5D:

See Response to Specific Comment NO. 5B.

SPECIFIC COMMENT NO. 6:

Electronic reporting should be required so that results can be easily posted for public viewing.

RESPONSE TO SPECIFIC COMMENT NO. 6:

EPA Headquarters is working to change over to an electronic reporting system for the submittal of DMRs. However, this change is expected to take at least several more years to implement.

SPECIFIC COMMENT NO. 7:

Copies of MWRA truck wash permits should be attached.

RESPONSE TO SPECIFIC COMMENT NO. 7:

The Chelsea Sandwich, LLC terminal (MA0003280) is the only facility that we are aware of which has a truck washing operation. The truck wash at the Chelsea Sandwich facility discharges into the sanitary sewer. The permit for this discharge can be obtained from the MWRA by contacting Mr. Peter Yarossi at (617) 305-5671.

SPECIFIC COMMENT NO. 8:

Limits should be placed on product delivery by tanker truck. Aside from wind borne material, truck traffic is likely the primary mode of transport of dust and dirt on and off the site.

RESPONSE TO SPECIFIC COMMENT NO. 8:

Truck and vehicle traffic is certainly an important factor contributing to the transport and deposition of solids materials onto and off of these terminals. To help capture and trap these materials the facilities have drains and catch basins installed around many of the high traffic areas (e.g., truck loading racks). In addition, storm water and solids making their way from these structures are subjected to additional treatment in each facility's Oil/Water Separator. EPA believes that these facilities can control the discharge of solid materials through the proper operation and maintenance of their treatment systems and the implementation of good housekeeping techniques as part of each facility's SWPPP.

SPECIFIC COMMENT NO. 9:

Storm drainage systems should be pressure and dye tested yearly to insure integrity of such systems.

RESPONSE TO SPECIFIC COMMENT NO. 9:

Each facility must provide EPA and the MADEP with a certification every five years (as part of the NPDES permit application process) that all outfalls that should contain storm water discharges associated with industrial activity have been tested or evaluated for the presence of non-storm water discharges which are not covered by an NPDES permit. Tests for such non-storm water discharges may include smoke tests, fluorometric dye tests, analysis of accurate schematics, as well as other appropriate tests. Accordingly, EPA believes that a mechanism already exists for requiring such testing at these facilities and that the frequency of this certification (i.e., every five years) is sufficient to insure the integrity of the storm water drainage systems.

SPECIFIC COMMENT NO. 10:

Operation of open oil/water separators during cold weather is not addressed.

RESPONSE TO SPECIFIC COMMENT NO. 10:

Most of the facilities have taken steps to minimize any potential cold weather impacts to the operation of their Oil/Water Separators (i.e., separators are covered, constructed beneath the ground, or include some sort of heat tape). It should be noted that there are no seasonal variances allowed in these draft permits for the conditions and limits identified in them. As a result the facility is required to ensure that their treatment system (i.e., Oil/Water Separator) is operating properly all year round.

SPECIFIC COMMENT NO. 11:

How is it determined that the O&G discharge limit of 15mg/L will not produce a visible film on the receiving water?

RESPONSE TO SPECIFIC COMMENT NO. 11:

The detection of a sheen (i.e., iridescent rainbow effect) on water is a highly subjective test depending, on a number of factors including: the state of motion of the water, physical properties of the water (i.e., salinity, temperature), physical properties of the oil (i.e., viscosity, solubility), and how the oil and water are mixed. As a result there is no one specific oil & grease (O&G) concentration or threshold which would signify the presence or absence of a sheen. The O&G limit of 15 mg/L established in these draft permits is a technology-based number which reflects a criteria which is achievable at these facilities through the proper operation of a correctly-sized Oil/Water Separator and the implementation of best management practices. EPA believes, based on the past performance of numerous similar treatment systems here in New England, that, if the O&G concentrations from these facilities are maintained at their historical low levels (i.e., below the limit of 15 mg/L) there should be no noticeable sheens associated with the discharges from the facilities into Chelsea Creek.

SPECIFIC COMMENT NO. 12:

Monitoring results should be checked for the presence of residual chlorine.

RESPONSE TO SPECIFIC COMMENT NO. 12:

EPA does not believe that it is necessary to add monitoring for residual chlorine as an outfall permit condition, given that a majority of the water being discharged from these facilities (i.e., storm water and ground water) would not likely contain chlorine. However, EPA included language for the monitoring of residual chlorine in the hydrostatic testing section of the draft permits (when potable water is used for testing) since potable water may contain chlorine.

SPECIFIC COMMENT NO. 13:

Reporting should include any and all instances of water used for hydrostatic testing including the dates of occurrence, amount and source of water used. This information should be reported to the municipality in which the facility is located as well.

RESPONSE TO SPECIFIC COMMENT NO. 13:

Each facility is required to provide EPA and the MADEP with a hydrostatic letter/report which provides among other items, the information mentioned in your comment. EPA will include language in the final permits requiring each facility to also provide a copy of the hydrostatic letter/report to the Director of Public Works in the municipality where the facility is located.

SPECIFIC COMMENT NO. 14:

Attachment A for Chelsea Sandwich (MA 0003280) shows maximum daily flow rates for Outfall 001 to be 220 GPM for February to December 1998 which is unlikely to be true as an one hundred year storm occurred on Jun 8-10, 1998.

RESPONSE TO SPECIFIC COMMENT NO. 14:

Historically, the flow rate through the Oil/Water Separator at the Chelsea Sandwich, LLC, MA0003280 (Chelsea Sandwich) facility has been controlled through the manual operation of two pumps located within the separator. These pumps limit the maximum flow rate of water which can be discharged through the Oil/Water Separator at any one time (and hence reported on the Discharge Monitoring Report). This flow rate must be less than the maximum design flow rate of the Oil/Water Separator so as to not impair the treatment efficiency of the unit. As a result of this limitation, facilities typically temporarily store excess water within their tank farm when there is a very large storm event such as the one you describe. The stored water is then slowly released into the storm water conveyance system at a flow rate which is to not exceed the design capacity of the Oil/Water Separator.

SPECIFIC COMMENT NO. 15:

Unclear as to deposition of existing oil water separator at outfall no.2 just north of tank 117 at Gulf Oil Terminal (MA 0001091). Detail sheet 2 as referenced may clarify.

RESPONSE TO SPECIFIC COMMENT NO. 15:

During 1998 and 1999, Gulf Oil Limited Partnership (MA0001091) made a number of physical changes at the facility including the elimination of the discharges from existing Outfalls No.'s 001 and 002. The discharge pipes to both existing outfalls were sealed with concrete and a new Oil/Water Separator, a new lined two-stage retention basin, and a new outfall (i.e., Outfall 003 in the draft permit) were installed nearby the vicinity of former Outfall 001.

SPECIFIC COMMENT NO. 16:

Existing combined sewer overflow conduit CSO-CHE008 existing under truck area not shown traversing site. Existing 30 “ drain conduit near southerly property line not shown at Gulf Terminal (MA 0001091).

RESPONSE TO SPECIFIC COMMENT NO. 16:

As mentioned in the response to your General Comment NO. 3, each facility is required to provide a site map showing the topography (or indicating the outline of drainage areas served by the outfall if a topographic map is unavailable) of the facility including: drainage and discharge structures, paved areas and buildings, each past or present area used for outdoor storage or disposal of significant materials, existing structural controls to reduce pollutants in storm water runoff, and materials loading and access areas. The emphasis in the site map is to include information related to what the facility is being issued a permit for (i.e., the drainage, treatment, and discharge features at the facility). Therefore, the map may not include (and is not required to include) other subsurface utility information such as those mentioned in your comment.

SPECIFIC COMMENT NO. 17:

O/W separator not effective for alcohol products – Global/Irving (MA0003425 & MA 0001929) have received an Order of Conditions from the Revere Conservation Commission for berthing improvements related to their Ethanol Project.

RESPONSE TO SPECIFIC COMMENT NO. 17:

Currently, only one of the seven facilities, Irving Oil Terminal - Revere, MA0001929 (Irving Oil), stores ethanol in their tank farm, and the volume of ethanol stored is relatively small as compared to the overall quantity of other petroleum products stored at the facility. However, it is likely that more facilities will be storing ethanol in the future as other gasoline oxygenates such as methyl tertiary-butyl ether (MTBE) are phased out. Your statement concerning the effectiveness of an Oil/Water Separator for treating ethanol and/or other alcohol products is correct. The solubility of ethanol in water limits the effectiveness of an Oil/Water Separator for removing this compound. The solubility of this compound also makes it a challenge to analyze for. Therefore, EPA is proposing the following approach for dealing with ethanol. For all of those facilities which currently store ethanol (i.e., Irving Oil Terminal - Revere facility, MA0001929) and which may store ethanol in the future, EPA will require that these facilities amend their SWPPP to identify what special provisions and conditions the facility will use for containing and treating ethanol, should it be spilled. This amendment shall take into account the analytical challenges for monitoring of this compound and the limited effectiveness of an Oil/Water Separator in treating this compound. EPA will include language to this effect in the SWPPP section of each of the final permits. Additionally, EPA has included a Reopener Clause in the final permits, which will allow the permit to be modified to include further requirements for the control of ethanol, if appropriate.

SPECIFIC COMMENT NO. 18:

Notice of Intent documents submitted by Irving Oil (MA 0001929) and Global Revco (MA 0003298) for their berthing project indicate the option of temporary dewatering of dredged material at the Irving Oil Tank Farm. This activity will substantially alter drainage characteristics of the tank farm. The NPDES permit should address required actions under the permit should this occur.

RESPONSE TO SPECIFIC COMMENT NO. 18:

Any discharge from the dewatering operation which would need to go to a permitted outfall would be considered a permit modification since it would be outside the scope of the activities currently allowed in the Draft NPDES Permits for the Irving Oil Terminal - Revere (MA0001929) and the Global REVCO Terminal, LLC (MA0003298) facilities. As such, the facilities would need to comply with the regulations concerning permit modifications found in 40 CFR §122.62 and §124.5.

SPECIFIC COMMENT NO. 19:

Global Revco (MA 0003298) should have lower limits on TSS and downstream sampling as the discharge is into vegetated wetlands and a small tributary to Sales Creek containing wetland resources that have a higher likelihood of environmental degradation due to exceedance of permit limits.

RESPONSE TO SPECIFIC COMMENT NO. 19:

The Massachusetts Surface Water Quality Standards (314 CMR 4.00) which are located at <http://www.mass.gov/dep/bwp/iww/files/314cmr4.htm> state in Section 4.06(2) that unlisted water bodies, which include wetlands, shall assume the classification of the bordering water body. In this case the discharge from Outfall 005 at the Global REVCO Terminal, LLC (Global REVCO) flows into a wetland area which drains to Sales Creek. Sales Creek appears to ultimately drain into Belle Isle Marsh and from there into Winthrop Bay. Winthrop Bay is one of the estuarine segments identified as part of Boston Harbor which is classified as a Class SB water body. Therefore, the wetland area next to the Global REVCO Outfall 005 would also be classified as a Class SB water body. EPA believes that the TSS limits and conditions in the Global REVCO draft permit, which are technology-based limits established based on a BPJ determination, are sufficient to protect the environment and water quality standards of Sales Creek, a Class SB water body.

V. Comments from Aaron Toffler

COMMENT NO. 1:

As a general comment, it is our belief that the permits do not go far enough in requiring that the oil terminals adopt the best available technology in addressing the storm water runoff issue. For example, there has been no change in the level of Total Suspended Solids

that is allowed to discharge into the Creek from the permits as written in the late 1990's. As Andy DeSantis, the Assistant Director of Public Works indicates in his comment letter, "it is readily apparent (to this writer) that technology based improvements for better treatment of storm water discharges is readily available and could provide additional treatment at minimal additional cost." These methods for improving the quality of the effluent at the oil terminals should be required as part of the renewal of these permits. Additionally, in setting certain limits, the permits refer to the permittees' ability to achieve the limits set for various parameters based on monitoring data for several years. In other words, the monitoring data shows that a certain limit is easily achieved by the oil terminals, and therefore the limit remains the same. This is not the standard that should be used to evaluate the limits. Instead, EPA should be looking to encourage the oil companies to improve the quality of runoff going into the Creek by tightening the controls where possible.

RESPONSE NO. 1:

There are no technology-based National Effluent Guidelines promulgated for storm water discharges from petroleum bulk stations and terminals. In the absence of such guidelines, EPA is authorized under the CWA to establish technology-based effluent limitations on a case-by-case basis using Best Professional Judgement. In general, EPA does not have the authority to specify the method of treatment to be used in NPDES permits. It is typically left to the permittee to define the treatment system, the series of steps/units comprising the treatment system, and the number of passes the discharge makes through the treatment system in order for the permittee to achieve the effluent limitations of the permit.

As mentioned in the Response to Andrew DeSantis General Comment NO. 1 and General Comment NO. 5, EPA reviewed the effluent guidelines of several other related industrial categories to determine the most appropriate effluent limits and conditions for the petroleum bulk stations and terminals. In the case of TSS, EPA selected the Steam Electric Power Point Source Category as the basis for establishing limits in these draft permits. EPA also reviewed the monitoring data submitted over the past seven years to confirm the effectiveness of the Best Management Practices and treatment systems used by the facilities. Most facilities are able to achieve discharge levels well below the limits and conditions of the permit and are demonstrating an overall trend of reducing their pollutant loads to Chelsea Creek - a goal which EPA shares with the Chelsea Creek Restoration Partnership. Therefore, EPA believes that these draft permits will continue to improve the water quality of Chelsea Creek and that no further changes (other those discussed for TSS in EPA's Response to Andrew DeSantis General Comment NO. 1 and NO. 5) are warranted to the permits at this time.

COMMENT NO. 2:

Further, with respect to the limits set for a specific contaminant, benzene, there is a wide variation in the allowable limits. Some of the permits allow for 51 µg/L for benzene, while others limit the concentration to 5 µg/L. This difference is apparently due to the fact that some of the facilities have groundwater treatment systems that discharge treated groundwater through the storm water system, which allows a greater opportunity for

water to come into contact with product that contains benzene, and also allows that benzene to be removed from the treated groundwater prior to its discharge into the river. These groundwater treatment systems occur only at the terminals where there has been a reported spill of gasoline and where the Massachusetts Department of Environmental Protection has required that a groundwater treatment system be installed. It is fairly certain that there is free product floating on the groundwater at all of these terminals as a result of historic spills at the sites. Indeed, in a study conducted several years ago, the Urban Ecology Institute (then the Watershed Institute) and EPA reviewed the publicly available records for oil spills along the Creek, and estimated that there were one million gallons of free product in the groundwater as a result of spills at terminals on Chelsea Creek. We would therefore recommend that a treatment system be required at all of these terminals that would allow them to attain the 5 µg/L for benzene that is obviously achievable. It would seem to make sense to include this requirement in a NPDES permit. If, however, this is beyond the scope of such a permit, the Massachusetts Department of Environmental Protection should be encouraged to impose such a requirement on the oil terminals.

RESPONSE NO. 2:

EPA has established different limits and conditions in the draft permits for the discharge of treated storm water versus treated ground water to surface waters. These different limits reflect differences found in the pollutant exposure and discharge scenarios for these two sources of water. For storm water, the contact with pollutants is expected to be minimal and only over relatively short periods (i.e., after a storm event). Hence, when there is a storm event there is typically a large volume of storm water generated with very dilute (i.e., low) concentrations of pollutants. Treatment of this water occurs in an Oil/Water Separator, a device which is able to process a large quantity of water over a relatively short time. Once treated, the storm water is discharged into Chelsea Creek. Chelsea Creek is classified as a Class SB water body by the State of Massachusetts, and as such, it is designated as a habitat for fish, other aquatic life and wildlife, and for primary and secondary contact recreations. Since the creek is not considered a drinking water source, the most likely potential exposure scenario for individuals to pollutants found in the creek based on its current classification is through the consumption of fish. The benzene limit of 51 µg/L established in the draft permits for storm water discharges reflects the current recommended Federal Water Quality Criteria for human health. The human health criteria for benzene has been developed using a number of conservative assumptions including the consumption of fish by person on a daily basis over their entire lifetime. The benzene limit established in the draft permits for storm water is about ten times below the technology-based limit of 500 µg/L which was established in the previous permits issued in 1997.

The establishment of the different treatment limits for benzene (i.e., 5 µg/L) at the two facilities (Chelsea Sandwich, LLC - MA0003280 and Global Petroleum Corporation - MA0003425) which also discharge treated ground water into the storm water conveyance system is based upon different pollutant exposure and discharge scenarios. Ground water in contact with spilled petroleum product has the potential to be exposed to pollutants for an extended period of time. As a result, the pollutants found in the petroleum products can partition and dissolve into the ground water and potentially reach much higher levels than would be expected in the storm

water. In addition, the ground water discharge is a continuous discharge which typically involves a much smaller volume of water requiring treatment at any given instant. Accordingly, more stringent and extensive effluent limits are applied to the ground water treatment systems. In order to achieve these more stringent limits, additional treatment (i.e., beyond an Oil/Water Separator) consisting of activated carbon and/or air stripping is required. It should be noted that several other bulk petroleum storage facilities have ground water treatment systems in place. However, these systems are able to recover spilled product without the need to discharge treated ground water to surface waters.

In summary, the approach taken by EPA in the draft permits for establishing different benzene limits in storm water versus ground water reflects EPA's Best Professional Judgement for establishing appropriate effluent limitations. EPA believes that the effluent limitations in the draft permits will continue to protect the environment and water quality standards in the Chelsea River and therefore does not believe that further changes to the permits are warranted at this time.

COMMENT NO. 3:

Finally, a Storm water Pollution Prevention Plan (SWPPP) has been already developed by each facility to control activities/operations which could contribute pollutants to Chelsea Creek via storm water discharges. While the proposed permits require each facility to review its SWPPP on an annual basis, ensure that the plan is being followed, and modify the plan as necessary to reflect changes at a facility which might impact its storm water discharges, these plans have not been incorporated into the permits themselves, nor are there any specific requirements in the permits that deal with operation and maintenance of the technology on-site (specifically of the oil/water separators). We believe that this is an important addition to the permit requirements. The operation and maintenance of the oil/water separators are crucial to improving water quality in the Creek. To a great extent, the proper functioning of this technology is dependent upon rigorous and timely maintenance. It is crucial that EPA and the public be able to monitor the operation and maintenance plans at these facilities to ensure that their requirements are being met. We therefore recommend that EPA establish a minimum level of maintenance to ensure the proper functioning of the technology, and include such requirements in the NPDES permits to make them enforceable and reviewable by both the EPA and the concerned public. Working together in this way, we believe that we can achieve very positive results for the water quality in Chelsea Creek.

RESPONSE NO. 3:

EPA agrees that the development and implementation of the SWPPP by each facility is an important part of the process for assuring that each facility continues to meet the limits and conditions of its NPDES permit. Accordingly, language was included in the Fact Sheets (See SWPPP discussion) which accompanied the Draft NPDES Permits which emphasized the importance of developing and implementing the SWPPP as well as stating that the SWPPP is an enforceable part of the permit. As a result, the operation and maintenance activities identified in the SWPPP for the Oil/Water Separator also become an enforceable part of the permit. Based

upon the comments EPA received from yourself as well as Mr. Andrew DeSantis, the City of Chelsea Assistant Director of Public Works, EPA will include language in the final permits requiring each facility to provide a copy of its SWPPP to the Municipality where the facility is located, upon the submittal of a written request by the Municipality to the facility (See Response to Specific Comment No. 4, Andrew DeSantis).

VI. Comments from Ashwin Patel

COMMENT NO. 1:

Global Revco Terminal LLC out fall #005 discharges into freshwater wetlands which drain into Sales Creek. In view of this, Global Revco Terminal LLC recommend that the proposed discharge limits for pH be corrected to reflect those published in “Quality Criteria for Water” and adopted by EPA in July 1986. EPA adopted pH range of 6.5 to 9.0 Standard Units (SU) for freshwater aquatic life.

RESPONSE NO. 1:

The Massachusetts Surface Water Quality Standards (314 CMR 4.00) which are located at <http://www.mass.gov/dep/bwp/iww/files/314cmr4.htm> state in Section 4.06(2) that unlisted water bodies, which include wetlands, shall assume the classification of the bordering water body. In this case the discharge from Outfall 005 at the Global REVCO Terminal, LLC, MA0003298 (Global REVCO) flows into a wetland area which drains to Sales Creek. Sales Creek appears to ultimately drain into Belle Isle Marsh and from there into Winthrop Bay. Winthrop Bay is one of the estuarine segments identified as part of Boston Harbor which is classified as a Class SB water body. Therefore, the wetland area next to the Global REVCO Outfall 005 would also be classified as a Class SB water body. As a result the appropriate pH range as identified in the draft permit for this facility would be from 6.5 through 8.5 standard units.

COMMENT NO. 2:

Whereas Chelsea Sandwich LLC recognizes the Clean Water Act mandates a need for implementing requirements of NPDES, the restriction of pH range suggested in the Draft permit is of concern. The facility discharges both the rain water and treated ground water effluent which exhibit a wide range of pH values. The rain water in Massachusetts is recorded as low as 4.3 Standard Units (SU) and average pH of rain water ranges between 5.0 to 5.5 in the Northeastern United States. Thus, Chelsea Sandwich LLC request that the EPA proposed pH range be adjusted for the back ground pH that is typically encountered in this geographic area.

RESPONSE NO. 2:

There is a large amount of scientific data available documenting the effects of acid rain on the pH of rainfall. EPA agrees that pH changes which are the result of acid rain would not constitute a violation of the pH limits in these NPDES permits and as a result has included language in the

draft permits to address this issue. Specifically, Part I.A.4 of the Chelsea Sandwich, LLC permit (MA0003280) states that “The pH of the effluent shall not be less than 6.5 nor greater than 8.5 at any time unless these values are exceeded as a result of natural causes.” Similar language has been included in all of the other six draft permits. EPA would envision that in order for a facility to assert the claim that pH changes were the result of natural causes a facility would have to document such claim (i.e., provide corresponding pH information for the rain water along with the discharge water) over a sufficient length of time to document such trends. In addition, EPA would not likely consider pH changes which are the result of the use of certain ground water treatment technology (e.g., activated carbon) the result of natural causes.