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

FACT SHEET

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

NPDES PERMIT NUMBER: MA0031551

PUBLIC NOTICE START AND END DATES:

NAME AND MAILING ADDRESS OF APPLICANT:

Clean Harbors of Braintree, Inc.
1 Hill Avenue
Braintree, MA 02185

NAME AND ADDRESS OF FACILITY WHERE DISCHARGE OCCURS:

Clean Harbors of Braintree, Inc.
1 Hill Avenue
Braintree, MA 02185

RECEIVING WATER(S): Weymouth Fore River (USGS Hydrologic Code 0109001) (MA74-14)

RECEIVING WATER CLASSIFICATION(S): Class SB, Shell-fishing (Restricted)

SIC CODE: 4953 - Hazardous Waste Treatment and Disposal

NAICS Code(s): 562211

CURRENT PERMIT EXPIRES: March 13, 2007

APPLICATION RECEIVED: July 3, 2006

SUPPLEMENTS TO APPLICATION: March 10, 2010, May 25, 2010, May 27, 2010, July 21, 2010, August 31, 2010, October 12, 2010, November 9, 2010

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1.0 Proposed Action, Type of Facility, and Discharge Location

Clean Harbors of Braintree, Inc. (referred to hereinafter either as Clean Harbors, CHBI, the Applicant, the Permittee, or the Company), has applied to the Region I office of the United States Environmental Protection Agency (EPA) for a National Pollutant Discharge Elimination System (NPDES) permit under the Federal Clean Water Act, 33 U.S.C. §§ 1251 *et seq.* (CWA). The company has also applied to the Massachusetts Department of Environmental Protection (MassDEP) for a state discharge permit under the Massachusetts Clean Waters Act. The Applicant's existing permit, issued jointly by EPA and MassDEP, became effective on March 13, 2002 and expired March 13, 2007. EPA received a permit renewal application from Clean Harbors on July 3, 2006. Since the permit renewal application was deemed timely and complete by EPA, the expired permit has been administratively continued.

CHBI operates a treatment, storage, and disposal facility (TSDF) for hazardous wastes. The majority of wastes that are handled at this facility are regulated under the Federal Resource Conservation and Recovery Act (RCRA), Subtitle C and the Massachusetts General Law chapter 21C, Massachusetts Hazardous Waste Management Act. The Company's 2006 NPDES Permit Application states that "[a]ctivities include transfer and consolidation of bulk and contaminated waste, and bulk solid PCB/lead waste streams." The 2010 supplemental permit application information indicates that "[t]he facility functions primarily as a hazardous waste storage and consolidation center. Some hazardous waste treatment (i.e., stabilization) and PCB storage are also performed on-site."

CHBI is currently covered by two NPDES water discharge permits: 1) Remediation General Permit (RGP) MAG910116 for the discharge of treated groundwater, and 2) individual NPDES Permit MA0031551 for the discharge of treated stormwater. This Fact Sheet pertains to the Company's individual NPDES Draft Permit.

Onsite stormwater and off-site groundwater seepage that collects in the stormwater system[1] are treated and discharged to the Weymouth Fore River via a 96 inch concrete conduit known as the Hayward Creek Culvert. The Hayward Creek Culvert runs along the north border of Clean Harbor's property. A USGS Site Locus figure, provided as Attachment A of this Fact Sheet, shows the location of the Clean Harbors facility relative to Weymouth Fore River. An aerial photo of the facility, including the general site layout, site drainage routes and sampling location, are included as Attachment B of this Fact Sheet.

CHBI requested authority to discharge stormwater that collects in several secondary containment areas through their stormwater treatment system.[2] EPA has determined that the request to

[1] Separate from the groundwater discharge that is authorized by the RGP, there is also groundwater that seeps into the CHBI stormwater system. Supplemental information from the company, dated July 13, 2010, indicates that "[d]uring truly dry weather the groundwater seeps cease, but flow will continue for several days after a significant rain event. It is essentially continuous during the fall, winter and spring months."

[2] April 6, 2009 email from David Medina, CHBI to Sharon DeMeo, EPA.

discharge this stormwater through the existing stormwater treatment system is reasonable as long as best management practices are developed and followed for spill control in these areas that are protective of the Weymouth Fore River.

The Draft NPDES Permit issued today by EPA and MassDEP proposes to reauthorize Clean Harbor's discharge of stormwater to the Weymouth Fore River, as well as stormwater from secondary containment areas and groundwater seepage, subject to the conditions and limits specified in the permit. These conditions and limits are designed to limit the facility's effect on the river and are based on the requirements of applicable law and the specific measures being taken by Clean Harbors.

2.0 Description of Discharge

Discharge monitoring reports (DMRs) submitted for Outfall 001 during the time period from January 2007 through April 2010 were reviewed and considered in the development of the Draft NPDES Permit. Whole Effluent Toxicity (WET) testing data from January 2001 to June 2009 were also reviewed. A summary of the DMR data and WET testing data are provided in Attachment D to this Fact Sheet.

3.0 Receiving Water Description

Clean Harbors of Braintree discharges to the Weymouth Fore River via the 96" Hayward Creek Culvert. The Weymouth Fore River (Reach MA74-14) is a 2.3 square mile tidal estuary that is a part of the Weymouth and Weir River Basin, which is located in the southeast region of the Boston Harbor Watershed.

The river in the vicinity of the facility is a tidal estuarine waterbody that is subject to semidiurnal tidal flows with a mean tidal range of 9.49 feet. This general area is a designated port area which is heavily used by recreational boat traffic during the summer. Operations in the area include petroleum offloading/storage, wastewater treatment, manufacturing, power generation and MBTA ferry service. Due to the large amount of industrial activity in the area, the Weymouth Fore River has been significantly modified from its natural state. Large portions of the shoreline are covered by a bulkhead of granite block, steel sheet pile, or stone riprap. In the Weymouth Fore River there is also a dredged shipping channel with a depth of approximately 33 feet at mean lower low water (MLLW) to allow the passage of deep draft vessels.

The Weymouth Fore River is classified as a Class SB water body by the Massachusetts Surface Water Quality Standards (MA WQS). *See* 314 C.M.R. 4.06(5). Class SB waters have the following designated uses:

> These waters are designated as a habitat for fish, other aquatic life, and wildlife, including for their reproduction, migration, growth and other critical functions, and for primary and secondary contact recreation. In certain waters, habitat for fish, other aquatic life and wildlife may include, but is not

> limited to, seagrass. Where designated in the tables to 314 CMR 4.00 for shellfishing, these waters shall be suitable for shellfish harvesting with depuration (Restricted and Conditionally Restricted Shellfish Areas). These waters shall have consistently good aesthetic value.

314 C.M.R. 4.05(4)(b). The Weymouth Fore River (Reach MA74-14) section of the *Weymouth and Weir River Basin 2004 Water Quality Assessment* report[3] provides a summary of relevant water quality data and information and assesses the status of the state's designated uses for the Weymouth Fore River and its watershed. Weymouth Fore River's designated uses include Aquatic Life, Fish Consumption and Shellfish. Aquatic Life has not been assessed. However, historical observations and recent sampling shows that this segment of the Basin supports one of the largest smelt runs in Massachusetts. Fish Consumption as a designated use is impaired for unknown causes of PCB in fish tissue and other contaminants in fish and shellfish. Therefore, Massachusetts Department of Public Health has issued a fish and shellfish consumption advisory for this area. In addition, the Shellfish designated use is considered impaired for unknown causes of fecal coliform, although unspecified urban stormwater is suspected to be a contributing factor. Due to this impairment, there are shellfish harvesting restrictions imposed on areas within the Weymouth Fore River.

Section 303(d) of the Federal Clean Water Act (CWA) requires states to identify those water-bodies that are not expected to meet surface water quality standards after the implementation of technology-based controls and, as such, require the development of total maximum daily loads (TMDL). A TMDL is essentially a pollution budget designed to restore the health of a water body.

A TMDL study determines the maximum amount of a pollutant that a water body can receive and still meet water quality standards, and the allocations of that pollutant (including a margin of safety) that should be granted to each of the pollutant's sources. Weymouth Fore River is on the *Massachusetts Year 2008 Integrated List of Waters*, CWA 303(d) list as a Category 5 Water requiring TMDL development for pathogens.

A TMDL has not yet been developed for the Weymouth Fore River. In the interim, EPA is developing the conditions for this permit based on a combination of water quality standards and and technology-based limits as described in Section 5.0 of this Fact Sheet. If a TMDL, developed in the future, identifies a waste load allocation for the facility, the permit may be re-opened.

Based on the nature of the stormwater discharges from the Clean Harbors of Braintree facility, they are not expected to contribute to the existing impairments due to pathogens.

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[3] This report is coauthored by the following Massachusetts regulatory authorities: Executive Office of Environmental Affairs, Department of Environmental Protection, Bureau of Resource Protection, and Division of Watershed Management. http://www.mass.gov/dep/water/resources/74wqar04.pdf

4.0 Limitations and Conditions

Proposed effluent discharge limits, monitoring requirements, and implementation schedules may be found in Part I (Effluent Limitations and Monitoring Requirements) of the Draft Permit.

5.0 Permit Basis: Statutory and Regulatory Authority

General Requirements

The Clean Water Act (CWA) prohibits the discharge of pollutants to waters of the United States without a National Pollutant Discharge Elimination System (NPDES) permit unless such a discharge is otherwise authorized by the CWA. *See* 33 U.S.C. §§ 1311(a) and 1342(a). The NPDES permit is the mechanism used to implement technology and water quality-based effluent limitations and other requirements including monitoring and reporting. This Draft NPDES Permit was developed in accordance with various statutory and regulatory requirements established pursuant to the CWA and applicable State regulations. The regulations governing the EPA NPDES permit program are generally found at 40 C.F.R. Parts 122, 124, 125, and 136. In this permit EPA considered (a) technology-based requirements, (b) water quality-based requirements, and (c) all limitations and requirements in the current/existing permit, when developing the permit limits.

Technology Based Requirements

When developing permit limits, EPA considers technology-based treatment and water quality-based requirements. Subpart A of 40 C.F.R. 125 establishes criteria and standards for the imposition of technology-based treatment requirements in permits under Section 301(b) of the CWA, including the application of EPA promulgated effluent limitations and case-by-case determinations of effluent limitations under Section 402(a)(1) of the CWA.

Technology-based effluent discharge limits reflect the minimum level of control that must be imposed under Sections 301and 402 of the CWA to meet treatment requirements based on applicable technology standards, including best practicable control technology currently available (BPT), best conventional control technology (BCT) for conventional pollutants, and best available technology economically achievable (BAT) for toxic and non-conventional pollutants. *See* 33 U.S.C. §§ 1311(b)(1) and (2)(A) – (F). Subpart A of 40 C.F.R. Part 125 establishes criteria and standards for developing technology-based permit requirements under Section 301(b) of the CWA, including the application of EPA-promulgated ELGs and case-by-case, BPJ determinations of effluent limits. *See* 40 C.F.R. § 125.3. In general, all of the above-mentioned technology-based effluent limitations are required to have been complied with by March 31, 1989 (see 40 C.F.R. §125.3(a)(2)). Compliance schedules and deadlines not in accordance with the statutory provisions of the CWA cannot be authorized by a NPDES permit.

In the absence of EPA-promulgated technology-based national effluent guidelines (ELGs), the permit writer is authorized under Section 402(a)(1)(B) of the CWA to establish effluent

limitations on a site-specific, case-by-case basis using best professional judgment (BPJ). *See also* 40 C.F.R. § 125.3. There are no technology-based effluent guidelines for this type of facility. However, Sector K of the Multi-Sector General Permit for Stormwater Discharges Associated with Industrial Activities[4] (MSGP) includes specific requirements that apply to stormwater discharges associated with industrial activity from facilities that treat, store, or dispose of hazardous wastes. Although Clean Harbors is not eligible for coverage under the MSGP, EPA concludes that it is reasonable to look to the MSGP for guidance on determining appropriate monitoring requirements and limits for the facility.[5] Therefore, based on BPJ, EPA has added monitoring, inspection and reporting requirements to the Draft Permit that are consistent with the MSGP.

Water Quality-Based Requirements

Water quality-based limits are required in NPDES permits when effluent limits more stringent than technology-based limits are necessary to maintain or achieve state or federal water quality standards. *See* 33 U.S.C. §§ 1311(b)(1)(C), 1341(a) and (d), 1370. State water quality standards classify each water body in the state and specify the "designated uses" and numeric and narrative water quality criteria that water bodies in each classification must achieve. For example, under the MA WQS, a water body given the "SB" classification is supposed to, among other things, provide a good quality fish habitat (a designated use), maintain natural seasonal and daily variations in dissolved oxygen (a narrative criterion), and not experience an increase in ambient water temperatures of more than 1.5ºF in the summer and 4.0ºF in the winter as a result of a discharge (a numeric criterion). State water quality standards also contain certain "antidegradation" requirements designed to limit the degree and circumstances under which a level of water quality, once attained, will be permitted to be degraded. *See* 314 CMR 4.04. *See also* 40 C.F.R. Section 131.12. The effluent limits in the Draft Permit should ensure that provisions in 314 CMR 4.04 are met.

NPDES permits limit any pollutant discharge that causes, or has the "reasonable potential" to cause or contribute to, an excursion above any narrative or numeric water-quality criteria or a failure to maintain a designated use. *See* 40 C.F.R. § 122.44(d)(1). An excursion would occur if the projected or actual in-stream concentration exceeds the applicable criterion. In determining "reasonable potential," EPA considers: (1) existing controls on point and non-point sources of pollution; (2) pollutant concentrations and variability in the effluent and receiving water as determined from the permit application, a permittee's monthly Discharge Monitoring Reports (DMRs), and State and Federal Water Quality Reports; (3) the sensitivity of the test species to toxicity testing (when considering whole effluent toxicity); (4) the known water quality impacts of processes on wastewater; and, where appropriate, (5) the dilution of the effluent that would be

[4] The most recent MSGP is dated September 29, 2008. See Federal Register, Vol. 73, No. 189, p. 56572-56578, as modified effective May 27, 2009.

[5] CHBI is not eligible for coverage because the current MSGP limits coverage for stormwater discharges associated with industrial activity that are currently covered under an individual NPDES permit and because that permit established site-specific numeric water quality-based limitations developed for the stormwater component of the discharge.

provided by the receiving water. Narrative criteria from the MA WQS often provide a basis for limiting toxicity in discharges where: (1) a specific pollutant can be identified as causing or contributing to the toxicity but the state has no numeric standard; or (2) toxicity cannot be traced to a specific pollutant.

When using chemical-specific numeric criteria to develop permit limits, both the acute and chronic aquatic-life criteria, expressed in terms of maximum allowable in-stream pollutant concentrations, are used. Generally, acute aquatic-life criteria are considered applicable to daily time periods (maximum daily limit) and chronic aquatic-life criteria are considered applicable to monthly time periods (average monthly limit). Chemical-specific limits are allowed under 40 C.F.R. § 122.44(d)(1) and are implemented under 40 C.F.R. § 122.45(d). In the Draft Permit for CHBI, the Region has established, pursuant to 40 C.F.R. § 122.45(d)(1), maximum daily discharge limits for specific chemical pollutants to satisfy the MA WQS. In most cases, daily maximum limits and acute criteria are used for the CHBI Draft Permit because the stormwater discharge is intermittent.

Under CWA § 401(a)(1), 33 U.S.C. § 1341(a)(1), EPA may not issue an NPDES permit unless it first obtains a certification from the state confirming that all water quality standards will be satisfied or the state waives its certification rights. If the state issues a certification specifying more stringent conditions as being necessary to comply with state water quality standards, then the permit must conform to those conditions. *See* 33 U.S.C. § 1341(d); 40 C.F.R. §§ 124.53 and 124.55.

Anti-backsliding

The CWA's anti-backsliding requirements prohibit a NPDES permit from being renewed, reissued or modified with less stringent limitations or conditions than those contained in the previous permit unless an exception to the anti-backsliding requirements applies. *See* CWA §§ 402(o) and 303(d)(4) and 40 C.F.R. §122.44(l)(1) and (2). None of these exceptions apply to this facility. Therefore, anti-backsliding is not triggered in this Draft Permit.

Anti-degradation

Federal regulations found at 40 C.F.R. Section 131.12 require states to develop and adopt a statewide antidegradation policy which maintains and protects existing instream water uses and the level of water quality necessary to protect the existing uses, and maintains the quality of waters which exceed levels necessary to support propagation of fish, shellfish, and wildlife and to support recreation in and on the water. The Massachusetts Antidegradation Regulations are found at 314 CMR 4.04. The State is asked to certify that the anti-degradation provisions in State law are met. EPA anticipates that the MassDEP shall make a determination that there will be no significant adverse impacts to the receiving waters and no loss of existing uses as a result of the discharge authorized by this Permit. This Draft Permit is being reissued with allowable effluent limits as stringent as or more stringent than the current permit and accordingly will continue to protect the existing uses of the Weymouth Fore River.

Essential Fish Habitat /Endangered Species Act

The permit must also satisfy the requirements of the essential fish habitat (EFH) provisions of the 1996 Amendments (PL 104-297) to the Magnuson-Stevens Fishery Conservation and Management Act (16 U.S.C. § 1801, *et seq.* (1998), and the Endangered Species Act (ESA). These requirements are discussed further in Sections 7.0 and 8.0, respectively.

6.0 Explanation of the Permit's Effluent Limitation(s)

6.1 Facility Information

The Clean Harbors facility is located in Braintree, Massachusetts, adjacent to the Weymouth Fore River. CHBI operates a treatment, storage, and disposal facility (TSDF) for hazardous wastes, although the facility functions primarily as a hazardous waste storage and consolidation center.

Currently, all stormwater that collects on the property, as well as the off-site groundwater seepage[6] drain to the lowest area of the site in the northeast corner. Stormwater from the secondary containment areas is collected in below-grade sumps equipped with lift pumps to transfer collected stormwater to the above grade paved areas of the property. This secondary containment stormwater, along with the rest of the facility's stormwater and groundwater seepage, flow by gravity to a 3000 gallon concrete sump in the northeast corner of the property. All water collected in the 3000 gallon sump goes through the stormwater treatment system prior to discharge. A schematic drawing of the flow of water at the facility is presented in Attachment C of this Fact Sheet.

Stormwater Treatment System

In response to an Administrative Consent Order issued by MassDEP in 2001, Clean Harbors upgraded its stormwater treatment system. The Order was issued to address total suspended solids and lead violations. The upgraded system, which has a maximum design capacity of 350 gpm, consists of the following process train:
3 - 250 gpm axial flow submersible turbine pumps (one used as backup);
2 - multi-media sand filters with a layer of anthracite to remove solids (run in parallel);
4 - bag filters to remove fine particles (run in parallel);
2 - granular activated carbon beds (run in parallel) to remove organics;
4 - bag filters to remove carbon particles (run in parallel); and
3- cation exchange beds to remove metals (2 are run in parallel and the third is a polishing vessel for both units). The sampling location is directly after the cation-exchange beds.

[6] As previously explained, there is groundwater that seeps into CHBI's stormwater system. Supplemental information from the company, dated July 13, 2010, indicates that "[d]uring truly dry weather the groundwater seeps cease, but flow will continue for several days after a significant rain event. It is essentially continuous during the fall, winter and spring months."

See Attachment F of this Fact Sheet for a copy of the Stormwater Treatment System Description provided by Clean Harbors. The sand filters are periodically backwashed to a backwash hold tank. Solids that settle as sludge in the backwash tank are transported off-site for disposal while the supernate is transferred back to the concrete collection sump prior to the treatment system. The ion exchange columns are not regenerated on site. The media is replaced when the adsorption capacity diminishes. Therefore, the Draft Permit (Part I.A.6) prohibits the discharge of cation exchange backwash and regeneration wastewater.

Laboratory Waste

The discharge of laboratory waste is not allowed under this Draft Permit (see Part I.A.6). Laboratory waste consists of the facility streams being tested and reagents used to perform the tests that are typical for maintaining operations at a TSDF facility. In the past, CHBI held an MWRA permit for the discharge of laboratory wastewater to the sanitary sewer.[7] According to the July 13, 2010 memo from Clean Harbors, all laboratory waste water is collected, "tested quarterly and shipped off site for disposal as industrial waste water."

Permitted Outfall Location 001

Outfall location 001 is the discharge pipe of the stormwater treatment system prior to discharge to Weymouth Fore River via the Hayward Creek Culvert. The discharge covered by this Draft Permit consists of on-site stormwater run-off[8], stormwater from secondary containment areas, and off-site groundwater seepage that collects in the stormwater system. *See* Attachment C - Process Flow Diagram. Sampling of this combined effluent after treatment at Outfall 001 is required prior to it entering the Weymouth Fore River via the Hayward Creek Culvert. Based on data from between January 2007 and April 2010, the discharge flow at this location is expected to average approximately 26,000 gpd and maximum flow is expected to be 250,000 gpd depending on the severity and length of each storm event. The discharge from this location is considered intermittent because there is generally only a discharge from this location during rain/storm events.

6.2 Derivation of Effluent Limits at Outfall Location 001

Flow

Flow is limited to ensure that the treatment system operates as designed. The stormwater treatment system has a maximum design capacity of 350 gpm.[9] To ensure proper and complete treatment of the stormwater, the Draft Permit requires that the maximum instantaneous discharge

[7] According to the August 31, 2010 letter, CHBI does not know when they stopped sending laboratory wastewater to the MWRA sanitary sewer. An inspection report in the MWRA file indicates that this practice had ended prior to August 2003 (date of inspection).
[8] The site consists of an 11.32 acre area including 4.5 acres of impervious surfaces.
[9] Although the cation exchange beds have a design capacity of 500 gpm, the carbon beds are limited to 350 gpm.

rate not exceed 350 gallons per minute. Whenever there is a discharge, continuous flow measuring is required (i.e., flow measuring is not just required for those events for which samples are collected). Total monthly flow values are also required to be reported.

pH

Massachusetts Surface Water Quality Standards (WQSs) require the pH of Class SB waters to be within the range of 6.5 to 8.5 standard units (s.u.) and not more than 0.2 standard units outside of the natural background range. In accordance with the MA WQSs, the Draft Permit limits pH to within the range of 6.5 to 8.5 for Outfall 001. The discharge shall not exceed this pH range unless due to natural causes (rainfall) and shall not be more than 0.2 s.u. outside of the natural background range. In addition, there shall be no change from background conditions that would impair any uses assigned to the receiving water class. *See* 314 CMR 4.05(4)(b)3. The monitoring frequency will remain monthly as identified in the existing permit. A summary of the discharge monitoring data submitted by the facility during the time period of January 2007 to April 2010 is included as Attachment D to this Fact Sheet. Multiple violations of the lower pH limit were noted, which were attributed to the acidity of the rain water, according to the Permittee. The Draft Permit therefore includes contemporaneous pH testing of rainfall samples.

Total Suspended Solids

The existing permit limits total suspended solids concentration to 20 mg/L, average monthly and 30 mg/L, maximum daily at Outfall 001. These technology-based limits were first established in the 1989 permit, based on best professional judgment (BPJ), to eliminate the potential carryover of petroleum fractions to the receiving water by adsorption to particulate matter and discharge with the suspended solids. Heavy metals and polynuclear aromatic hydrocarbons are readily adsorbed onto particulate matter and the release of these compounds into the environment can be reduced by regulating the amount of suspended solids discharged. These limits are continued in the Draft Permit in accordance with anti-backsliding regulations (40 C.F.R. §122.44(l)). The monitoring frequency will remain monthly as identified in the existing permit. There have been no exceedences of the TSS limits for samples collected between January 2007 and April 2010. *See* DMR results in Appendix D of this Fact Sheet.

Oil and Grease

The existing permit's maximum daily effluent limit for oil and grease is 5 mg/L. This limit was established based on the MA WQS narrative water quality criteria for oil and grease, which states: "These waters shall be free from oil, grease and petrochemicals that produce a visible film on the surface of the water, impart an oily taste to the water or an oily or other undesirable taste to the edible portions of aquatic life, coat the banks or bottom of the water course, or are deleterious or become toxic to aquatic life." *See* 314 CMR 4.05(4)(b)7. This water quality-based limit is continued in the Draft Permit in accordance with anti-backsliding regulations (40 C.F.R. §122.44(l)). The monitoring frequency will remain monthly as identified in the existing permit.

There have been no exceedences of the oil and grease limit for samples collected between January 2007 and April 2010. *See* DMR results in Appendix D of this Fact Sheet.

Lead

The existing permit's maximum daily limit for lead is 8.1 ug/L. This is based on the chronic saltwater quality criteria found in EPA's National Recommended Water Quality Criteria (WQC).[10] This limit is continued in the Draft Permit in accordance with anti-backsliding regulations (40 C.F.R. §122.44(l)). The monitoring frequency will remain quarterly as identified in the existing permit. There has been one exceedence of the lead limit for samples collected between January 2007 and April 2010. *See* DMR results in Appendix D of this Fact Sheet.

Polynuclear Aromatic Hydrocarbons (PAHs)

PAHs are a class of organic compunds with molecular structures consisting of polycyclic aromatic rings which are present in oils and petrochemicals. These pollutants will readily absorb onto suspended particulate matter and biota and their transport will be determined largely by the hydrogeologic condition of the aquatic system. The ultimate fate of those PAHs which accumulate in the aquatic sediment is believed to be biodegradation and bio-transformation by benthic organisms. Several PAHs are well-known animal carcinogens, while others are not carcinogenic alone but can enhance the response of the carcinogenic PAHs.

The existing permit contains an effluent limit of 10 ug/L for total PAHs. This limit was established in the 1989 permit, based on "the practical analytical detection limit for these compounds" with consideration for human health concerns, water quality, and technology requirements. This technology-based limit is continued in the Draft Permit in accordance with anti-backsliding regulations. *See* 40 C.F.R. §122.44(l). This technology-based limit is more stringent than using a water quality-based limit.[11] The monitoring frequency will remain semiannual as identified in the existing permit.

There are sixteen (16) PAH compounds identified as priority pollutants under the CWA (See Appendix A to 40 C.F.R. Part 423). Group I PAHs are seven well known animal carcinogens. They are: Benzo(a)anthracene, Benzo(a)pyrene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Chrysene, Dibenzo(a,h)anthracene, and Indeno(1,2,3-cd)pyrene. Group II PAHs are the nine priority pollutant PAHs not considered carcinogenic alone, but which can enhance or inhibit the response of the carcinogenic PAHs. They are Acenaphthene, Acenaphthylene, Anthracene, Benzo (g,h,i) perylene, Fluoranthene, Fluorene, Naphthalene, Phenanthrene, and Pyrene. Typically, exposure would be to a mixture of PAHs rather than to an individual PAH.

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[10] See http://www.epa.gov/waterscience/criteria/wqctable/

[11] The 2010 Remediation General Permit (RGP) for Massachusetts and New Hampshire specifies technology-based effluent limits of 10 ug/L total for Group I PAH's; 100 ug/L total for Group II PAH's, and 20 ug/L for Naphthalene, which together are below water quality standards. See page 32 at http://www.epa.gov/region1/npdes/remediation/RGP2010_FactSheet_AttachmentA.pdf

Attachment D of this Fact Sheet provides data collected between April 2004 and April 2010 (13 sampling events). The 16 PAH compounds listed above and 2-Methlynaphthalene were not detected above their respective reporting levels. As documented in the laboratory reports, the reporting level was generally10 ug/L.

The Draft Permit proposes that the quantitative methodology used for the PAH analysis must be capable of achieving a detection limit of less than 5 ug/L for each individual PAH compound based on the Minimum Level (ML) of EPA approved test Method 610 and Method 625. Minimum Level (ML) is the lowest level at which the analytical system gives a recognizable signal and acceptable calibration point for the analyte (i.e., the ML represents the lowest concentration at which an analyte can be measured with a known level of confidence).

Benzene, Ethylbenzene, Toluene, and Xylene (BTEX)

Refined petroleum products contain numerous types of hydrocarbons. Individual components partition to environmental media on the basis of their physical/chemical properties (e.g., solubility, vapor pressure). In the case of discharges that contain petroleum, limits are typically established for the compounds that would be the most difficult to remove, as well as those that demonstrate the greatest degree of toxicity, rather than attempting to establish effluent limits for every compound that can be found in petroleum products.

Generally, the higher the solubility of a volatile organic compound (VOC) in water, the more difficult it is to remove. VOCs such as benzene, toluene, ethylbenzene, and xylenes (together referred to as BTEX) are normally found at relatively high concentrations in gasoline and light distillates (e.g., diesel fuel) and then at decreasing concentrations in the heavier grades of petroleum distillate products (e.g., fuel oils).

The existing permit contains technology-based effluent limits of 5 ug/L for benzene and 100 ug/L for total BTEX, which is the sum of benzene, ethylbenzene, toluene, and ortho, para, and meta xylene compounds. The benzene limit was originally established based on concerns regarding possible contamination from oil, grease, and gasoline and their respective byproducts that might be associated with accidental spills. The BTEX limit was based on limits that had been established in an EPA NPDES Exclusion Letter for groundwater remediation issued to the Permittee on January 5, 1996. This and other similar exclusion letters issued to New Hampshire and Massachusetts facilities have been replaced by the Remediation General Permit (RGP).[12] These limits are continued in the Draft Permit in accordance with anti-backsliding regulations (40 C.F.R. §122.44(l)). The monitoring frequency will remain semiannual as identified in the existing permit.

[12] See http://www.epa.gov/region1/npdes/rgp.html. See pages 44-48 of the RGP Fact Sheet found at http://www.epa.gov/region1/npdes/remediation/factsheet-pp-1-90.pdf for the background information and explanation supporting EPA-New England's BTEX limitations. Also see page 14 of http://www.epa.gov/region1/npdes/remediation/RGP2010_FactSheet_AttachmentA.pdf

Attachment D of this Fact Sheet provides data collected between April 2004 and April 2010 (13 sampling events). The BETX compounds listed above were not detected above their respective reporting levels. As documented in the laboratory reports, the reporting level was generally 1.0 µg/L.

The Draft Permit requires that the analytical methods used to measure BTEX shall be capable of achieving a detection limit of less than 0.5 µg/L for each BTEX compound based on the ML of EPA approved test Method 602. As stated above, the Minimum Level (ML) is the lowest level at which the analytical system gives a recognizable signal and acceptable calibration point for the analyte (i.e., the ML represents the lowest concentration at which an analyte can be measured with a known level of confidence).

Polychlorinated biphenyls (PCBs)

PCBs belong to a class of chemically stable multi-use industrial chemicals that have been distributed widely in the ecosystem. The physical and chemical properties and the chemical formulations of PCBs vary considerably depending on the amount and position of chlorine substitution. Such properties as stability, volatility, and water solubility are particularly important in regard to the rate of occurrence in the environment. PCBs are known carcinogens.

A maximum daily limit of 1 ug/L in the existing permit was based on the practical detection limit for PCBs at that time, with consideration for water quality and technology requirements. The Draft Permit proposes a more stringent effluent limit of 0.03 ug/L for total PCBs based on the current saltwater chronic criterion for surface waters. *See* EPA's National Recommended Water Quality Criteria dated November 2002. Although the effluent limit is 0.03 ug/L, EPA is setting a compliance limit at 0.5 ug/L based on the minimum level (ML) associated with federally approved test method (Method 608). Once again, the Minimum Level (ML) is the lowest level at which the analytical system gives a recognizable signal and acceptable calibration point for the analyte (i.e., the ML represents the lowest concentration at which an analyte can be measured with a known level of confidence). The monitoring frequency will remain semiannual as identified in the existing permit.

Attachment D provides self-monitoring data collected between April 2004 and April 2010 (13 sampling events). PCB compounds were not detected above their respective reporting levels. As documented in the laboratory reports, the reporting level was generally 0.5 ug/L for each compound.

Whole Effluent Toxicity

EPA's Technical Support Document for Water Quality-Based Toxics Control (EPA/505/2-90-001, March 1991) recommends using an "integrated strategy" containing both pollutant (chemical) specific approaches and whole effluent (biological) toxicity approaches to limit toxic pollutants in effluent discharges from entering the nation's waterways. Both approaches are needed to protect aquatic life and

human health adequately. Pollutant specific approaches, such as those in the "Gold Book,"[13] and State regulations address individual chemicals, whereas whole effluent toxicity (WET) testing assesses the effects of interactions between pollutants, thus rendering an "overall" toxicity assessment of the effluent that can reveal any cumulative or synergistic effects of pollutants in the wastewater in question. In addition, WET analysis can reveal the presence of any unknown toxic pollutants so that they can be identified and addressed.

Section 101(a)(3) of the CWA specifically makes it national policy to prohibit the discharge of toxic pollutants in toxic amounts, and such discharges are also prohibited by the Massachusetts Water Quality Standards which state, in part, that, "all surface waters shall be free from pollutants in concentrations or combinations that are toxic to humans, aquatic life or wildlife." The NPDES regulations, *see* 40 C.F.R. § 122.44(d)(1)(v), require whole effluent toxicity (WET) limits in a permit when the permitting agency determines that a discharge has a "reasonable potential" to cause or contribute to an excursion above the State's narrative criterion for toxicity.

EPA has evaluated specific chemicals that may be present in the stormwater discharge from the Clean Harbors facility and set chemical-specific limits to prevent toxic impacts from those chemicals. The EPA and MassDEP believe that the complexity of this effluent is such that toxicity testing should be continued to evaluate and address any water quality impacts. This approach is consistent with that recommended in March 1991, "Technical Support Document for Water Quality-based Toxics Control" (EPA/505/2-90-001, page 60). Imposing these WET testing requirements is a proactive method of carrying out EPA's mandate to prevent the discharge of toxic substances into the Nation's waterway because the WET test results will provide an estimate of the overall toxicity of the discharge.

Seeing that the stormwater discharge from outfall location 001 is intermittent and short term, acute WET testing is appropriate rather than chronic WET testing and acute WET testing is continued in the Draft Permit. The existing permit requires WET testing using only Mysid Shrimp (Mysidopsis bahia). Because species sensitivity is unknown for this discharge, the Draft Permit requires the Permittee to report the results of acute WET tests using both Mysid Shrimp and Inland Silverside (Menidia beryllina).

Attachment D shows the historical WET test results for Clean Harbors from January 2001 through June 2009. There were no exceedences of the permit limit of LC50≥100% during this time period. Results for the Mysid Shrimp (Mysidopsis bahia), are ≥100% for all samples collected. By letter dated March 30, 2004, EPA granted CHBI's request to reduce WET testing frequency to once per year. Based on the monitoring results, EPA determined that annual sampling in August remains appropriate for the Draft Permit.

The "LC50" is defined as the concentration of toxicant, or in this case, as percentage of effluent, that would be lethal to 50 % of the test organisms during a 48-hour testing period. Therefore, an LC50 of 100 % means that a sample of 100 % effluent should not cause greater than a 50 %

[13] Quality Criteria for Water 1986, EPA 440/5-86-001, May, 1987.

mortality rate of the test organisms. The "No Observed Acute Effect Level" (NOAEL) refers to the concentration of effluent at which no observed effects occur. The Draft Permit's WET testing requirements direct the Permittee to determine and report LC50 and NOAEL concentrations.

As required by the Marine Acute Toxicity Test Procedure and Protocol, the Draft Permit also requires reporting of selected parameters determined from the chemical analysis of the WET tests 100 % effluent sample. The following specific parameters are to be reported on the appropriate Discharge Monitoring Report (DMR) for entry into EPA's ICIS data base: salinity, total residual oxidants, total solids, ammonia, total organic carbon, aluminum, cadmium, copper, chromium, lead, nickel and zinc. Reporting these constituents are required with the submission of each toxicity testing report. *See* Draft Permit, Attachment A, page 6.

Other Monitoring and Reporting Requirements

Clean Harbors is not eligible for coverage under the Multi-Sector General Permit for Stormwater Discharges Associated with Industrial Activities[14] (MSGP) because the 2008 MSGP limits coverage for stormwater discharges associated with industrial activity that are currently covered under an individual NPDES permit and because that permit established site-specific numeric water quality-based limitations developed for the stormwater component of the discharge. However, EPA concludes that is reasonable to look to the MSGP, specifically to Sector K, for guidance on determining appropriate monitoring requirements for the facility. Sector K includes specific requirements that apply to stormwater discharges associated with industrial activity from facilities that treat, store, or dispose of hazardous wastes.[15] Clean Harbors is a hazardous waste treatment, transfer and storage facility. Therefore, based on best professional judgment (BPJ), EPA has added monitoring, inspection and reporting requirements to the Draft Permit that are consistent with the MSGP. Specifically, EPA has determined the following technology-based requirements on a BPJ basis: (1) add annual monitoring and benchmark requirements for chemical oxygen demand (COD), arsenic, cyanide, magnesium, mercury, selenium and silver; (2) add benchmark requirements for ammonia, cadmium, and lead[16]; and (3) require the Permittee to submit, annually update, and implement its Stormwater Pollution Prevention Plan (SWPPP) for its stormwater discharges.

Benchmark values are not effluent limitations, but rather an indication of the effectiveness of the facility's Stormwater Pollution Prevention Plan. The benchmark values for ammonia, magnesium, and COD are based on the requirement of the most recent MSGP, Sector K. The

[14] The most recent MSGP is dated September 29, 2008. See Federal Register, Vol. 73, No. 189, p. 56572-56578, as modified effective May 27, 2009.

[15] Sector K requirements are found on pages 87-89 of the 2008 MSGP or page 41-43 at http://www.epa.gov/npdes/pubs/msgp2008_part8.pdf.

[16] These parameters are currently required pursuant to the Whole Effluent Toxicity (WET) testing requirement of the Draft Permit.

benchmark values for arsenic, cadmium, cyanide, lead, mercury, selenium and silver are based on the saltwater acute WQC. The monitoring and benchmark requirements will be used to trigger the Permittee to review its selection, design, installation and implementation of best management practices (BMPs) and to assess the need for additional numeric effluent limitations in future permitting actions (See Part I.B.6 of the Draft Permit). The following benchmark values have been added to the Draft Permit:

Parameter	**Benchmark Concentration**
Ammonia	2.14 mg/L
Total Magnesium	0.064 mg/L
Chemical Oxygen Demand (COD)	120 mg/L
Total Arsenic	0.069 mg/L
Total Cadmium	0.040 mg/L
Total Cyanide	0.001 mg/L
Total Lead	0.210 mg/L
Total Mercury	0.0018 mg/L
Total Selenium	0.0290mg/L
Total Silver	0.0019 mg/L

Stormwater Pollution Prevention Plan

This facility engages in activities which could result in the discharge of pollutants to waters of the United States either directly or indirectly through stormwater runoff. These operations include at least one of the following in an area potentially exposed to precipitation or stormwater: material storage, in-facility transfer, material processing, material handling, or loading and unloading. To control the activities/operations that could contribute pollutants to waters of the United States, potentially violating the MA WQS, the Draft Permit requires the facility to update, implement, and maintain a Stormwater Pollution Prevention Plan (SWPPP) containing BMPs appropriate for this particular facility (*See* Sections 304(e) and 402(a)(1) of the CWA and 40 C.F.R. §122.44(k)). Specifically, at this facility, hazardous waste transfer and storage areas are examples of material storage, processing and handling operations that shall be included in the SWPPP.

The goal of the SWPPP is to reduce, or prevent, the discharge of pollutants through the stormwater collection system. The SWPPP requirements in the Draft Permit are intended to provide a systematic approach by which the Permittee shall at all times, properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the Permittee to achieve compliance with the conditions of the permit. The SWPPP approach involves the following four main steps:

(1) Forming a team of qualified facility personnel who will be responsible for developing and updating the SWPPP and assisting the plant manager in its implementation;
(2) Assessing the potential stormwater pollution sources;

(3) Selecting and implementing appropriate management practices and controls for these potential pollution sources; and
(4) Reevaluating, periodically, the effectiveness of the SWPPP in preventing stormwater contamination and in complying with the various terms and conditions of the Draft Permit.

The Draft Permit requires the Permittee to update and submit the SWPPP no later than 90 days after the Permit's effective date and continue to implement the plan throughout the duration of the permit. The SWPPP shall be prepared in accordance with good engineering practices and identify potential sources of pollutants which may reasonably be expected to affect the quality of stormwater discharges associated with industrial activity from the facility. The SWPPP, upon implementation, becomes a supporting element to any numerical effluent limitations in the Draft Permit. Consequently, the SWPPP is as equally enforceable as the numerical effluent limits.

7.0 Essential Fish Habitat (EFH)

Under the 1996 Amendments (PL 104-267) to the Magnuson-Stevens Fishery Conservation and Management Act (16 U.S.C. § 1801, *et seq.*), EPA is required to consult with the National Marine Fisheries Service (NMFS) if EPA's action or proposed actions that it funds, permits, or undertakes, "may adversely impact any essential fish habitat," 16 U.S.C. § 1855(b). The Amendments broadly define "essential fish habitat" (EFH) as: "waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity," 16 U.S.C. § 1802(10). "Adverse impact" means any impact which reduces the quality and/or quantity of EFH, 50 C.F.R. §600.910(a). "Adverse effects" may include direct (e.g., contamination or physical disruption), indirect (e.g., loss of prey, reduction in species' fecundity), and site-specific or habitat-wide impacts, including individual, cumulative, or synergistic consequences of actions. *Id*.

EFH is designated only for fish species for which federal Fisheries Management Plans exist. 16 U.S.C. § 1855(b)(1)(A). EFH designations for New England were approved by the U.S. Department of Commerce on March 3, 1999. The Boston Harbor Watershed, which includes the Weymouth Fore River, is designated essential fish habitat for 24 species of finfish and mollusks. *See* Attachment E to this Fact Sheet.

Based on the amount and frequency of discharge, as well as effluent limitations and other permit requirements identified in this Fact Sheet that are designed to be protective of all aquatic species, including those with designated EFH, EPA has determined that that the Draft Permit ensures that the proposed discharge will not adversely impact EFH and that no consultation with NMFS is required. If adverse impacts to EFH do occur as a result of this permit action, or if new information becomes available that changes the basis for this determination, then NMFS will be notified and consultation will be promptly initiated. During the public comment period, EPA has provided a copy of the Draft Permit and Fact Sheet to NMFS.

8.0 Endangered Species Act (ESA)

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

EPA has reviewed the federal endangered or threatened species of fish, wildlife, and plants to see if any such listed species might potentially be impacted by the re-issuance of this NPDES permit. Upon review of the current endangered and threatened species in the area (North Atlantic Right Whale, Humpback Whale, Fin Whale, Green Sea Turtle, Kemp's (Atlantic) Ridley Sea Turtle, Leatherback Sea Turtle, Loggerhead Sea Turtle), EPA has determined that based on the normal distribution of these species, it is highly unlikely that they would be present in the vicinity of this discharge. Furthermore, effluent limitations and other permit conditions which are in place in this Draft Permit should preclude any adverse effects should there be any incidental contact with any listed species in the Weymouth Fore River.

While not an endangered species, the rainbow smelt is present in the vicinity of the discharge and the receiving water is a spawning habitat for this species. Rainbow smelt are currently being studied by the United States Fish and Wildlife Service (USFWS) for inclusion on its endangered species list and is also considered a species of concern for the National Marine Fisheries Service (NMFS) due to declining landings through the 1990's.

The proposed effluent limits in the Draft Permit are sufficiently stringent to assure that WQS will be met for aquatic life protection and for all species, including endangered and threatened species. EPA is coordinating a review of this finding with NMFS through the Draft Permit and Fact Sheet; however, further consultation under Section 7 of the ESA is not required.

If adverse impacts to ESA do occur as a result of this permit action, or if new information becomes available that changes the basis for this determination, then NMFS will be notified and consultation will be promptly initiated. During the public comment period, EPA has provided a copy of the Draft Permit and Fact Sheet to both NMFS and USFWS.

9.0 Monitoring and Reporting

The permit's monitoring requirements have been established to yield data representative of the facility's pollutant discharges under the authority of Sections 308(a) and 402(a)(2) of the CWA

and consistent with 40 C.F.R. §§ 122.41 (j), 122.43(a), 122.44(i) and 122.48. The monitoring program in the permit specifies routine sampling and analysis which will provide ongoing, representative information on the levels of regulated constituents in the wastewater discharge streams. The approved analytical procedures are found in 40 C.F.R. Part 136 unless other procedures are explicitly required in the permit.

Monitoring will also provide information to ensure that operation of the Clean Harbors facility does not interfere with the attainment of state water quality requirements. See CWA §§ 301(b)(1)(C) and 401(a)(1); 40 C.F.R. § 122.4(d). In addition, the monitoring requirements are reasonable and appropriate in light of the need to gather data to help ensure that the permit, and future renewals of it, will comply with the CWA, Endangered Species Act and the Magnuson-Stevens Fishery Conservation and Management Act, 16 U.S.C. §§ 1801, et seq.

The Permittee is obligated to monitor and report sampling results to EPA and the MassDEP within the time specified within the permit. Timely reporting is essential for the regulatory agencies to expeditiously assess compliance with permit conditions.

The Draft Permit includes new provisions related to Discharge Monitoring Report (DMR) submittals to EPA and the State. The Draft Permit requires that, no later than one year after the effective date of the permit, the Permittee submit all monitoring data and other reports required by the permit to EPA using NetDMR, unless the Permittee is able to demonstrate a reasonable basis, such as technical or administrative infeasibility, that precludes the use of NetDMR for submitting DMRs and reports ("opt-out request").

In the interim (until one year from the effective date of the permit), the Permittee may either submit monitoring data and other reports to EPA in hard copy form, or report electronically using NetDMR.

NetDMR is a national web-based tool for regulated Clean Water Act permittees to submit discharge monitoring reports (DMRs) electronically via a secure Internet application to U.S. EPA through the Environmental Information Exchange Network. NetDMR allows participants to discontinue mailing in hard copy forms under 40 C.F.R. § 122.41 and § 403.12. NetDMR is accessed from the following url: http://www.epa.gov/netdmr. Further information about NetDMR, including contacts for EPA Region 1, is provided on this website.

EPA currently conducts free training on the use of NetDMR, and anticipates that the availability of this training will continue to assist permittees with the transition to use of NetDMR. To participate in upcoming trainings, visit http://www.epa.gov/netdmr for contact information for Massachusetts.

The Draft Permit requires the Permittee to report monitoring results obtained during each calendar month using NetDMR, no later than the 15th day of the month following the completed reporting period. All reports required under the permit shall be submitted to EPA as an electronic attachment to the DMR. Once a permittee begins submitting reports using NetDMR,

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

The Draft Permit also includes an "opt-out" request process. Permittees who believe they can not use NetDMR due to technical or administrative infeasibilities, or other logical reasons, must demonstrate the reasonable basis that precludes the use of NetDMR. These permittees must submit the justification, in writing, to EPA at least sixty (60) days prior to the date the facility would otherwise be required to begin using NetDMR. Opt-outs become effective upon the date of written approval by EPA and are valid for twelve (12) months from the date of EPA approval. The opt-outs expire at the end of this twelve (12) month period. Upon expiration, the permittee must submit DMRs and reports to EPA using NetDMR, unless the permittee submits a renewed opt-out request sixty (60) days prior to expiration of its opt-out, and such a request is approved by EPA.

Until electronic reporting using NetDMR begins, or for those permittees that receive written approval from EPA to continue to submit hard copies of DMRs, the Draft Permit requires that submittal of DMRs and other reports required by the permit continue in hard copy format. Hard copies of DMRs must be postmarked no later than the 15th day of the month following the completed reporting period.

10.0 State Certification Requirements

EPA may not issue a permit in the Commonwealth of Massachusetts unless MassDEP either certifies that the effluent limitations contained in the permit are stringent enough to assure that the discharge will not cause the receiving water to violate the MA WQS, or waives this certification. The staff of the MassDEP has reviewed the Draft Permit. EPA has requested permit certification by the state pursuant to 40 C.F.R. § 124.53 and expects that the Draft Permit will be certified.

In addition, EPA may not issue a permit for a facility that discharges in a coastal zone, under the provisions of the Coastal Zone Management (CZM) Act, 16 U.S.C. §1451 et seq., and its implementing regulations, until the permittee submits a certification that it's activities will be consistent with the state CZM policies and the state CZM office concurs with the permitee's certification. See 15 C.F.R. §930 et seq. and 40 C.F.R. §122.49(d). The cover letter that accompanies the Draft Permit sent to Clean Harbors provides instructions on how to comply with this requirement.

11.0 Comment Period, Hearing Requests, and Procedures for Final Decisions

All persons, including applicants, who believe any condition of the Draft Permit is inappropriate must raise all issues and submit all available arguments and all supporting material for their arguments in full by the close of the public comment period, to Sharon DeMeo, U.S. EPA,

Office of Ecosystem Protection, Industrial Permits Branch, 5 Post Office Square, Suite 100, Boston, Massachusetts 02109-3912 or via email to demeo.sharon@epa.gov.

Any person, prior to such date, may submit a request in writing to EPA and the States Agency for a public hearing to consider the Draft Permit. Such requests shall state the nature of the issues proposed to be raised in the hearing. A public hearing may be held after at least thirty days public notice whenever the Regional Administrator finds that response to this notice indicates significant public interest. In reaching a final decision on the Draft Permit, the EPA will respond to all significant comments and make these responses available to the public at EPA's Boston office.

Following the close of the comment period and after a public hearing, if such hearing is held, EPA will issue a final permit decision and forward a copy of the final decision to the Applicant and each person who has submitted written comments or requested notice. Within 30 days following the notice of the final permit decision, any interested person may submit a petition for review of the permit to EPA's Environmental Appeals Board consistent with 40 C.F.R. § 124.19.

12.0 EPA and State Contacts

Additional information concerning the Draft Permit may be obtained between the hours of 9:00 A.M. and 5:00 P.M., Monday through Friday, excluding holidays from:

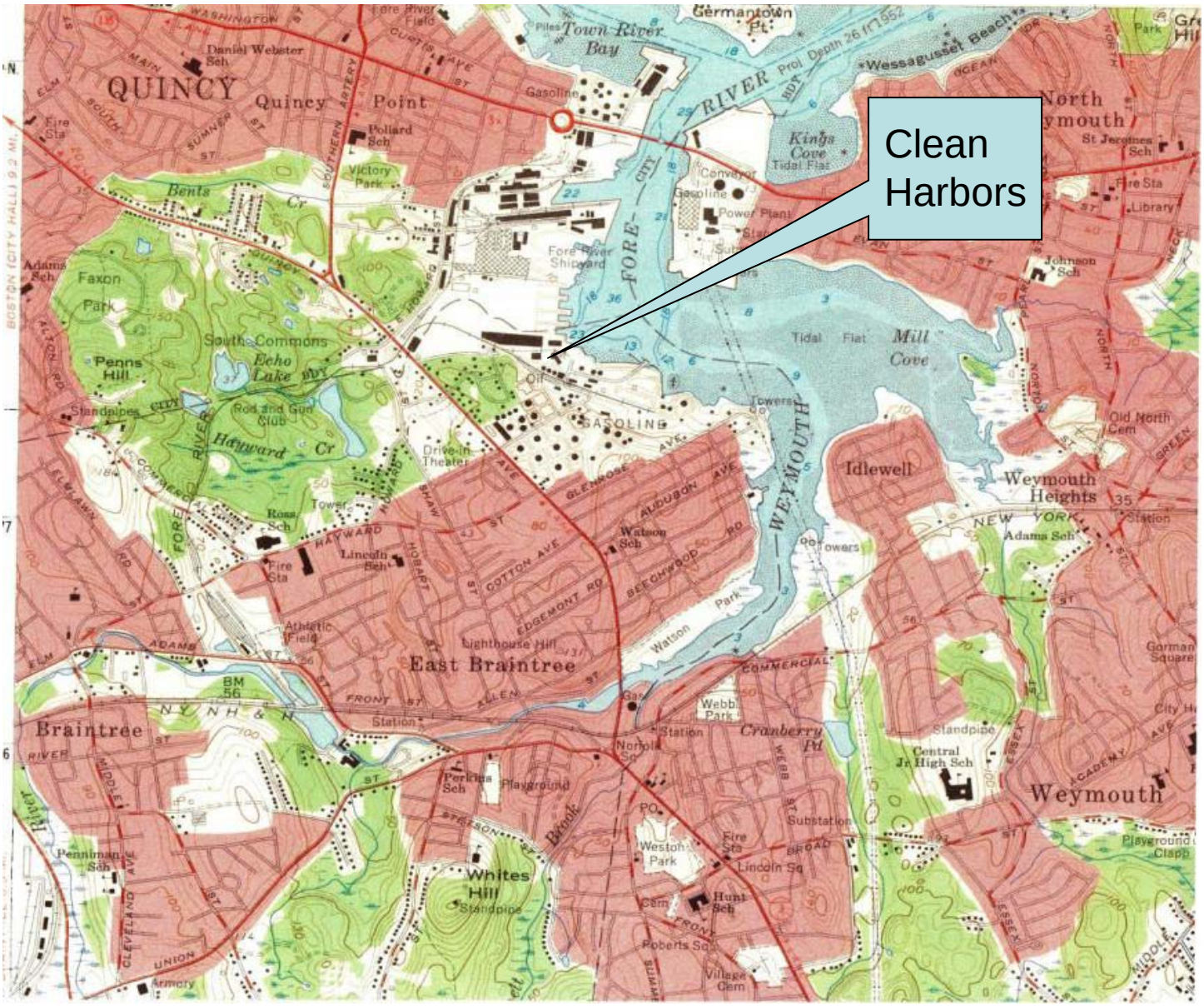
Sharon DeMeo, Environmental Engineer
U.S. Environmental Protection Agency - Region 1
Office of Ecosystem Protection
5 Post Office Square, Suite 100
Boston, Massachusetts 02109-3912
Telephone: (617) 918-1995 / FAX No.: (617) 918- 0995
email: demeo.sharon@epa.gov

Kathleen Keohane, Environmental Engineer
Massachusetts Department of Environmental Protection
Division of Watershed Management
Surface Water Discharge Permit Program
627 Main Street, 2nd Floor
Worcester, Massachusetts 01608
Telephone: (508) 767 - 2856 / FAX No.: (508) 791- 4131
email: kathleen.keohane@state.ma.us

January, 2011

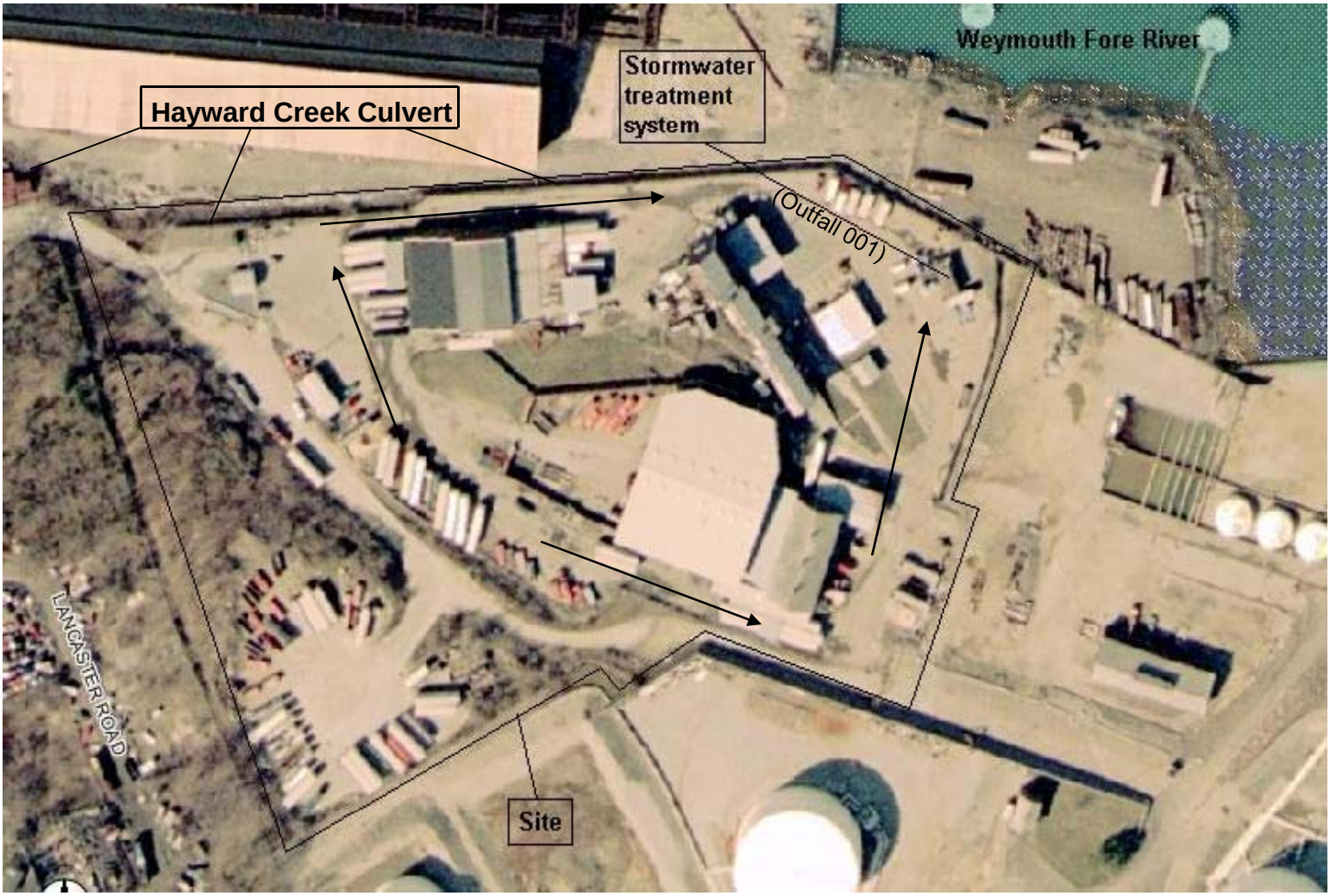
Stephen S. Perkins, Director
Office of Ecosystem Protection
U.S. Environmental Protection Agency

Attachment A



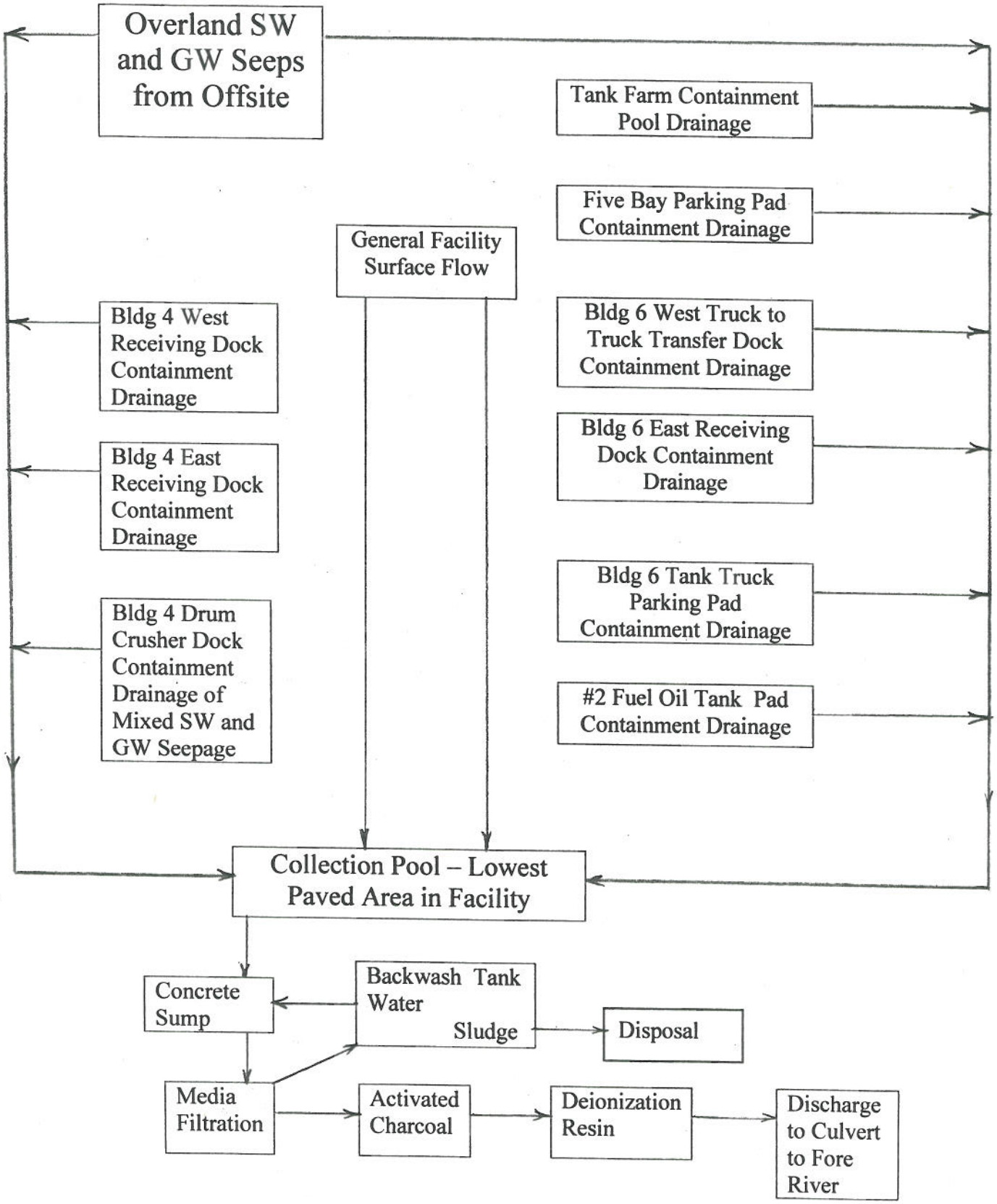
USGS 1958 Weymouth, MA
AMS 6868111 NW-Series V814

Attachment B



Drainage Routes

Source: http://maps.massgis.state.ma.us/WETLANDS12K/viewer.htm



Attachment C - Process Flow Diagram

ATTACHMENT D

SAMPLING RESULTS (Jan '07 – April '10)

MONITORING PERIOD END DATE	Flow (MGD)		Oil & Grease (mg/L)	pH (S.U.)
	Average Monthly	Maximum Daily	Maximum Daily	Min Daily
1/31/2007	0.01	0.59*	2.2	7.31
2/28/2007	0.01	0.2	0	7.07
3/31/2007	0.21	0.03	0	6.79
4/30/2007	0.04	0.19	0	6.86
5/31/2007	0.01	0.18	0	6.9
6/30/2007	0.01	0.24	0	6.92
7/31/2007	0	0.09	0	6.49
8/31/2007	0	0.16	0	6.36
9/30/2007	0.01	0.19	0	6.11
10/31/2007	0.01	0.25	0	6.39
11/30/2007	0.01	0.23	0	6.26
12/31/2007	0.03	0.24	0	6.71
1/31/2008	0.01	0.21	0	6.54
2/29/2008	0.04	0.18	0	6.53
3/31/2008	0.03	0.22	0	6.46
4/30/2008	0.01	0.23	0	6.3
5/31/2008	0.01	0.23	0	5.75
6/30/2008	0.01	0.23	0	6.5
7/31/2008	0.02	0.26	0	6.16
8/31/2008	0.01	0.15	0	6.27
9/30/2008	0.03	0.17	0	6.64
10/31/2008	0.01	0.27	0	6.7
11/30/2008	0.02	0.3	0	6.22
12/31/2008	0.03	0.17	0	5.96
1/31/2009	0.01	0.19	1.8	6.41
2/28/2009	0.01	0.21	0	6.7
3/31/2009	0.01	0.18	0	6.88
4/30/2009	0.02	0.06	0	5.62
5/31/2009	0.01	0.17	0	5.85
6/30/2009	0.01	0.01	0	5.45
7/31/2009	0.02	0.11	0	5.83
8/31/2009	0.01	0.12	0	6.02
9/30/2009	0.02	0.16	0	6.47
10/31/2009	0.03	0.23	0	5.68
11/30/2009	0.02	9.2*	0	6.89
12/31/2009	0.25	0.25	0	6.04
1/31/2010	0.01	0.16	0	6.28
2/28/2010	0.01	0.07	0	6.87
3/31/2010	0.02	0.08	0	6.55
4/30/2010	0.01	0.06	0	6.45
2002 Permit Limits	**Report**	**Report**	**5 mg/L**	**6.5 - 8.5 S.U.**
Minimum	0	0.01	0	5.45
Maximum	0.25	0.27	1.8	7.31
# Measurements	40	40	40	40
# Exceeds Limits	NA	NA	0	22
# Zeros	2	0	38	NA

* outlier

ATTACHMENT D

SAMPLING RESULTS (Jan '07 – April '10)

MONITORING PERIOD END DATE	Solids, total suspended (mg/L)		Lead, total (Pb ug/L)
	Average Monthly	Maximum Daily	Maximum Daily
1/31/2007	13	13	6
2/28/2007	7.5	7.5	0
3/31/2007	6	28	8
4/30/2007	12	12	8
5/31/2007	0	0	2
6/30/2007	0	0	0
7/31/2007	0	0	0
8/31/2007	0	0	0
9/30/2007	0	0	2
10/31/2007	10	10	1
11/30/2007	0	0	0
12/31/2007	0	0	0
1/31/2008	0	0	0
2/29/2008	16	16	23
3/31/2008	0	0	3
4/30/2008	7	7	4
5/31/2008	0	0	0
6/30/2008	0	0	1
7/31/2008	0	0	0
8/31/2008	0	0	0
9/30/2008	0	0	2
10/31/2008	0	0	0
11/30/2008	0	0	0
12/31/2008	0	0	0
1/31/2009	5	5	4
2/28/2009	0	0	0
3/31/2009	0	0	0
4/30/2009	0	0	0
5/31/2009	0	0	1
6/30/2009	0	0	1
7/31/2009	0	0	0
8/31/2009	0	0	0
9/30/2009	0	0	0
10/31/2009	0	0	0
11/30/2009	0	0	0
12/31/2009	0	0	0
1/31/2010	0	0	2
2/28/2010	0	0	0
3/31/2010	0	0	0
4/30/2010	0	0	0
2002 Permit Limits	**20 mg/L**	**30 mg/L**	**8.1 ug/L**
Minimum	0	0	0
Maximum	16	28	23
# Measurements	40	40	40
# Exceeds Limits	0	0	1
# Zeros	32	32	25

ATTACHMENT D

SAMPLING RESULTS (April '04 – April '10)

MONITORING PERIOD END DATE	Benzene, Ethylbenzene, Toluene, Xylenes combination (BTEX) (ug/L)	Polynuclear Hydrocarbons, aromatic(PAH) (ug/L)	Polychlorinated biphenyls (PCBs)	Benzene
	Maximum Daily	Maximum Daily	Maximum Daily	Maximum Daily
4/30/2004	0	0	0	0
10/31/2004	0	0	0	0
4/30/2005	0	0	0	0
10/31/2005	0	0	0	0
4/30/2006	0	0	0	0
10/31/2006	0	0	0	0
4/30/2007	0	0	0	0
10/31/2007	0	0	0	0
4/30/2008	0	0	0	0
10/31/2008	0	0	0	0
4/30/2009	0	0	0	0
10/31/2009	0	0	0	0
4/30/2010	0	0	0	0
2002 Permit Limits	**100 ug/L**	**10 ug/L**	**1 ug/L**	**5 ug/L**
Minimum	0	0	0	0
Maximum	0	0	0	0
# Measurements	13	13	13	0
# Exceeds Limits	0	0	0	0
# Zeros	13	13	13	13

ATTACHMENT D

SAMPLING RESULTS (Jan '01 – June '09)

MONITORING DATE	LC50 Static Marine Acute Mysid. Bahia (%) Minimum Daily
1/16/2001	100
5/16/2001	100
9/26/2001	100
12/11/2001	100
1/17/2002	100
2/22/2002	100
9/17/2002	100
2/5/2003	100
5/15/2003	100
8/6/2003	100
11/6/2003	100
6/11/2004	100
6/09/2005	100
6/30/2006	100
6/4/2007	100
6/5/2008	100
6/25/2009	100
2002 Permit Limits	**100**
Minimum	100
Maximum	100
# Measurements	17
# Exceeds Limits	0

ATTACHMENT D

SAMPLING RESULTS (Jan '01 – June '09)

TEST/ MONITORING DATE	Aluminum (mg/L)	Cadmium (mg/L)	Chromium (mg/L)	Copper (mg/L)	Lead (mg/L)	Nickel (mg/L)	Zinc (mg/L)	Total Solids (mg/L)
1/16/2001	2.09	ND	0.007	0.078	0.035	0.024	0.23	689
5/16/2001	0.242	ND	ND	0.021	0.006	0.003	0.062	643
9/26/2001	0.28	ND	0.001	0.004	0.002	0.001	0.008	19.5
12/11/2001	0.07	ND	ND	ND	ND	ND	0.01	96.5
1/17/2002	0.16	ND	ND	0.02	0.002	ND	ND	230
2/22/2002	0.16	ND	ND	0.02	0.002	ND	ND	230
9/17/2002	0.42	ND	ND	ND	0.004	ND	0.02	34
2/5/2003	0.37	0.003	0.012	0.17	0.004	0.025	0.055	990
5/15/2003	0.05	ND	ND	ND	0.001	0.005	0.005	4.2
8/6/2003	0.184	ND	ND	ND	ND	0.014	0.077	110
11/6/2003	0.115	ND	0.006	ND	0.001	0.005	0.008	170
6/11/2004	0.01	ND	ND	<0.01	ND	0.006	NR	110
6/09/2005	NR	<0.001	<0.001	NR	<0.001	NR	NR	300
6/30/2006	<0.01	<0.001	<0.001	0.002	<0.001	0.11	0.148	350
6/04/2007	0.088	<0.001	<0.001	NR	0.002	0.002	NR	76
6/5/2008	0.142	<0.001	<0.001	0.002	0.001	0.006	0.153	48
6/25/2009	0.06	<0.001	<0.001	0.002	0.001	0.002	0.045	45
2002 Minimum Quantification Levels	**0.02**	**0.001**	**0.005**	**0.0025**	**0.005**	**0.004**	**0.0025**	**NA**
Minimum	<0.01	<0.001	<0.001	ND	<0.001	ND	ND	<4
Maximum	2.09	0.003	0.012	0.17	0.035	0.11	110	990
# Measurements	16	17	17	15	17	16	15	17

ND = not detected
NR = not reported

ATTACHMENT D

SAMPLING RESULTS (Jan '01 – June '09)

MONITORING DATE	Total Suspended Solids (mg/L)	Total Organic Carbon (mg/L)	Specific Conductance (µmhos/cm)	Temperature (°C)	Dissolved Oxygen (mg/L)	Salinity %	Total Residual Chlorine (mg/L)	Ammonia as N (mg/L)
1/16/2001	142	4.6	1000	23	8.1	1	NA	0.31
5/16/2001	<2.0	7.9	1500	24	8	0	<0.1	<0.10
9/26/2001	<2.0	<2.0	1500	24	7.8	0	<0.1	<0.10
12/11/2001	<2.0	2.6	1600	21	8.4	1	<0.1	<0.1
1/17/2002	<2.0	2.8	160	22	9.1	0	<0.1	0.32
2/22/2002	<2.0	2.8	900	24	8.4	1	<0.1	0.24
9/17/2002	4.0	<2.0	1400	20	8.4	0	<0.1	0.646
2/5/2003	6.1	2.6	1400	24	5.9	1	<0.1	0.273
5/15/2003	4.0	2	1200	24	8.1	0	<0.1	0.38
8/6/2003	<4.0	3	1850	25	8.2	0	<0.1	<0.1
11/6/2003	<4.0	3.3	250	24	5.2	0	<0.1	0.12
6/11/2004	<2.0	7.9	210	25	8.4	0	<0.1	<0.10
6/09/2005	<5	1.9	NA	NA	NA	<0.5	<0.02	0.28
6/30/2006	<5	1.2	570	NA	7.7	<0.5	<0.02	0.07
6/04/2007	<5	7.3	NA	NA	NA	NR	NA	0.05
6/5/2008	<5.0	6.2	NA	NA	NA	NR	NA	0.23
6/25/2009	<5.0	1.2	NA	NA	NA	NR	NA	0.17
2002 Minimum Quantification Levels	**NA**	**0.5**	**NA**	**NA**	**NA**	**NA**	**NA**	**0.1**
Minimum	<2.0	1.2	160	20	5.2	0	<0.02	0.07
Maximum	142	7.9	1850	25	9.1	1	0.1	0.646
# Measurements	17	17	13	12	13	14	13	17

ND = not detected
NR = not reported

Attachment E

Summary of Essential Fish Habitat (EFH) Designation

10□ x 10□ Square Coordinates:

Boundary	North	East	South	West
Coordinate	42° 20.0□ N	70° 50.0□ W	42° 10.0□ N	71° 00.0□ W

Square Description (i.e. habitat, landmarks, coastline markers): Waters within the Atlantic Ocean within Massachusetts Bay and within Boston Harbor within the square affecting from north of Black Rock Beach in Cohasset, MA., to Long Island Bridge in Quincy, MA., and including off of Quincy, MA., Hull, MA. These waters also affect the following islands: Peddocks, Long, Gallops, Spectacle, Lovell, Georges, Hangman, Rainsford, southern Great Brewster, and the northwest tip of Thompson, along with Quincy Bay. Also affected include: Worlds End, Planters Hill, Bumkin I., Sheep I., Nantasket Beach, Strawberry Ledge, Harding Ledge, Thieves Ledge, Ultonia Ledge, Pt. Allerton, Spinnaker I., Grape I., Slate I., Hingham Harbor, Hingham MA., Back River, Weymouth, MA., N. Weymouth, MA., Weymouth Fore River, Quincy Pt., Town River Bay, Houghs Neck, and Moon Head.

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

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

Attachment E

Attachment F

Clean Harbors of Braintree
Storm Water Treatment
System Description

Storm water generated by rain and snow will collect at the northeast area of the site. The existing stormwater collection is a 5 foot diameter concrete sump serviced by a concrete sluice way. Water collected will be pumped by a submersible pump system. Submersible pumps are installed in the sump and will be activated by a rising level. The pumps will be configured to operate in a lead-lag mode. One pump starting at a high level, with an additional pump starting at a higher level.

Water is pumped from the sump through 2 backwashable multimedia filters for removal of particulates. Multimedia filtration will remove the Total Suspended Solids, and the insoluble lead. Following the multimedia filters, the water flows through a multi chamber bag filter. This bag filter will remove remaining fines from the multimedia filters.

Water will proceed through 2 granular activated carbon adsorption units to treat and remove the oil, grease and organics. After the carbon adsorbers, water is routed through another multi chamber bag filter. This bag filter will remove any fines produced by the carbon.

Water will them be directed through 2 ion exchange units. These ion exchange units will treat and remove the soluble lead contained in the stormwater. An additional ion exchange unit is provided with greater flow capabilities to supply polishing of the discharge if necessary. Sampling will determine a continuing need for polishing.

Pumps

Submersible Pumps are 10 Horsepower, Stancor model P-50 high head, with solid silicone carbide vs. silicone carbide seal faces. Each pump has a hardened stainless steel semi-open multi vane impeller. Motors have integral thermal protection. Maximum discharge pressure is 165 feet of water.

Multimedia filters

Multimedia filters F-10 and F-15 are 6 feet diameter vessels with 5 foot straight sides, and a maximum working pressure of 125 psi. The multimedia filters utilize separate layers of filter media to attain good quality water filtration. The stormwater enters the top of each vessel and flows down through the separate layers of filter minerals. The first, 20 cubic feet of .6 -.8 mm anthracite, collects the bulk of the coarse particles, followed by 55 cubic feet of .3 - .5 mm filter sand to collect smaller particles. Layers of garnet media, #12 and #50 will remove particles down to the 10 micron size. Service of these filters will vary from 2-20 gallon per square foot.

Bag Filters

Bag filters are Filter Specialists, Inc. model FSPN-800-6-304-TY34. The vessels are constructed of 304 stainless steel and are rated for 100 psi. They are equipped with 6 inch inlet and outlet connections and hydraulic lid lifters. Each filter housing will accommodate 4 bag filters.

Granular Activated Carbon Adsorption Units

The high quality granular activated carbon contained in the adsorption units, 10,000 lbs. each, will adsorb oil, grease and organics. The use of carbon, manufactured from select grades of bituminous coal, results in a high-activity, durable product with a high internal

surface area with maximum pore size to effectively adsorb a broad range of high and low molecular weight organic compounds. Each adsorption vessel will handle up to 350 gallons per minute.

Ion Exchange Units

Ion exchange units, IE-50 and IE-55 are 6 feet diameter vessels with 5 foot straight sides, and a maximum working pressure of 125 psi. The ion exchange units contain 100 cubic feet of ion exchange resin to remove positively charged ions. A brine water tank system for ion bed regeneration is present but not currently in use

Polishing Ion Exchange Unit

Polishing ion exchange unit, IE-60 is 6 feet diameter with 4 foot straight sides, and a maximum working pressure of 125 psi. The ion exchange units contain 60 cubic feet of ion exchange resin to remove positively charged ions. If it is shown that adequate treatment is obtained by the ion exchange units, the polishing unit can be by-passed.