UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
NEW ENGLAND - REGION I
ONE CONGRESS STREET, SUITE 1100
BOSTON, MASSACHUSETTS 02114-2023

FACT SHEET

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

NPDES PERMIT NUMBER: MA0020010

NAME AND MAILING ADDRESS OF APPLICANT:

Distrigas of Massachusetts LLC
80 Everett Avenue
Suite 313
Chelsea, MA 02150

NAME AND ADDRESS OF FACILITY WHERE DISCHARGE OCCURS:

Distrigas of Massachusetts LLC
Everett Marine Terminal
18 Rover Street
Everett, MA 02149

RECEIVING WATER(S):

Mystic River (Mystic River Basin, Segment MA71-03)

RECEIVING WATER CLASSIFICATION(S):

SB

SIC CODE: 4922 (Natural Gas Transmission)

1.0 PROPOSED ACTION, TYPE OF FACILITY, AND DISCHARGE LOCATION

Distrigas of Massachusetts LLC (Distrigas) has applied to the U.S. Environmental Protection Agency (EPA) for the re-issuance of a National Pollutant Discharge Elimination System (NPDES) permit to discharge stormwater and process wastewater from its Everett Marine Terminal into the Mystic River. The current permit was issued to Distrigas on September 19, 2001 and expired on September 19, 2006. EPA received a permit renewal application dated March 16, 2006, from Distrigas. Since the permit renewal application was deemed both timely and complete by EPA, the permit has been administratively continued.

The Distrigas Everett Marine Terminal, located in Everett, Massachusetts, as illustrated in Figure 1, is engaged in the regasification, storage and sale of liquefied natural gas (LNG).

1.1 Permit History

April 4, 1973	NPDES application submitted to EPA
March 7, 1975	Public notice of draft NPDES permit No. MA0020010
April 10, 1975	NPDES permit issued to Distrigas of Massachusetts Corporation (DOMAC)
September 13, 1979	Reapplication submitted by DOMAC
July 9, 1987	Reapplication submitted by DOMAC
October 27, 1988	Amended reapplication submitted by DOMAC
January 28, 1999	Reapplication submitted by DOMAC including new 36-inch storm drain system outfall (Outfall No. 001), replacing existing 24-inch storm drain
February 4, 2000	EPA minor permit modification to allow use of new outfall under the provisions of 40 CFR §122.63
September 15, 2000	Letter to EPA from DOMAC changing name to Distrigas of Massachusetts LLC (Distrigas)
March 12, 2001	Reapplication submitted amending January 28, 1999, application
June 6, 2001	Public notice of draft NPDES permit No. MA0020010 reissuance
September 19, 2001	NPDES permit reissued to Distrigas.
March 16, 2006	Reapplication submitted by Distrigas
July 28, 2006	Letter from EPA to Distrigas authorizing continued current permit coverage after permit expiration date

2.0 DESCRIPTION OF DISCHARGE

The sources of flow to Outfall No. 001 include condensate from LNG vaporizer units (2 sets), test water for fire pumps, boiler blowdown, hot water heater drainage, groundwater infiltration into the storm drain system, stormwater runoff from the site, and stormwater runoff from offsite catch basins that are connected to the facility's storm drain system.

2.1 Sanitary Sewage

Domestic wastewater is generated by employees of the operating plant. With a typical staff of approximately 40 employees, approximately 800 gallons per day of sanitary wastewater is generated based on the Massachusetts Title 5 factors (310 CMR 15.203) to estimate sewage flow. All sanitary sewage generated at the site is accommodated by the City of Everett municipal sewer collection system.

3.0 RECEIVING WATER DESCRIPTION

Distrigas process wastewater (LNG vapor unit condensate, fire pump test water, boiler blowdown and heater drainage), groundwater infiltration and stormwater discharge through Outfall No. 001 to the Mystic River (Segment MA71-03). This 0.5 square mile, tidal segment of the Mystic River extends from the Amelia Earhart Dam (between Somerville and Everett) to the mouth of the river at its confluence with Chelsea River and Boston Harbor as illustrated in Figure 1.

Segment MA71-03 is classified as a Class SB (CSO) water body by the Massachusetts Surface Water Quality Standards [314 CMR 4.00]. Class SB waters are "designated as an excellent habitat for fish, other aquatic life, and wildlife, including for their reproduction, migration 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 CMR 4.05(4)(b)]

The "(CSO)" qualification to the SB water quality standard indicates that "these waters occasionally are subject to short-term impairment of swimming or other recreational uses due to untreated CSO [combined sewer overflow] discharges in a typical year, and the aquatic life community may suffer adverse impact yet is still generally viable. In these waters the uses for Class B and SB waters are maintained after the implementation of long term control measures described in the approved CSO long term control plan, except as identified in such plan."

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). Segment MA71-03 of the Mystic River is listed in the Massachusetts Year 2008 Integrated List of Waters as a "water requiring a TMDL", indicating that while this segment has been identified as being impaired, no TMDL has been developed for the pollutants causing the impairment. The pollutants requiring TMDLs in Segment MA71-03 of the Mystic River are identified in the Integrated List as priority pollutants, metals, unionized ammonia, other inorganics, organic enrichment/low dissolved oxygen, pathogens, oil and grease, taste, odor and color.

4.0 LIMITATIONS AND CONDITIONS

The effluent limitations of the draft permit, the monitoring requirements, and any implementation schedule (if required) may be found in the draft permit.

5.0 PERMIT BASIS: STATUTORY AND REGULATORY AUTHORITY

5.1 General Requirements

The Clean Water Act (CWA) prohibits the discharge of pollutants to waters of the United States without a National Pollutant Discharge Elimination System (NPDES) permit unless such a discharge is otherwise authorized by the CWA. The NPDES permit is the mechanism used to implement technology and water quality-based effluent limitations and other requirements to discharges including monitoring and reporting of the discharge of pollutants. The 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 CFR 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.

5.2 Technology-Based Requirements

Subpart A of the 40 CFR §125 establishes criteria and standards for the imposition of technology-based treatment requirements in permits under Section 301(b) of the CWA, including the application of EPA promulgated effluent limitations and case-by-case determinations of effluent limitations under Section 402(a)(1) of the CWA.

Technology-based treatment requirements represent the minimum level of control that must be imposed under Sections 301(b) and 402 of the CWA (see 40 CFR §125 Subpart A) to meet best practicable control technology currently available (BPT) for conventional pollutants and some metals, best conventional control technology (BCT) for conventional pollutants, and best available technology economically available (BAT) for toxic and non-conventional pollutants. In general, technology-based effluent guidelines for non-POTW facilities must have been complied with as expeditiously as practicable but in no case later than three years after the date such limitations are established and in no case later than March 31, 1989 [See 40 CFR §125.3(a)(2)]. Compliance schedules and deadlines not in accordance with the statutory provisions of the CWA can not be authorized by a NPDES permit.

EPA has not promulgated technology-based National Effluent Guidelines for stormwater or other non-sanitary discharges from Natural Gas Transmission stations and terminals (Standard Industrial Code 4922). In the absence of technology-based effluent guidelines, the permit writer is authorized under Section 402(a)(1)(B) of the CWA to establish effluent limitations on a case-by-case basis using Best Professional Judgment (BPJ).

5.3 Water Quality-Based Requirements

Section 301(b)(1)(C) of the CWA requires that effluent limitations based on water quality considerations be established for point source discharges when such limitations are necessary to meet state or federal water quality standards that are applicable to the designated receiving water. This is necessary when technology-based limitations would interfere with the attainment or maintenance of water quality in the receiving water.

Under Section 301(b)(1)(C) of the CWA and EPA regulations, NPDES permits must contain effluent limits more stringent than technology-based limits where more stringent limits are necessary to maintain or achieve state or federal water quality standards.

Water quality standards consist of three parts: (1) beneficial designated uses for a water-body or a segment of a water-body; (2) numeric and/or narrative water quality criteria sufficient to protect the assigned designated use(s); and (3) anti-degradation requirements to ensure that once a use is attained it will not be degraded. The Massachusetts Surface Water Quality Standards (WQS), found at 314 CMR 4.00, include these elements. The WQS limit or prohibit discharges of pollutants to surface waters to assure that surface water quality standards of the receiving waters are protected and maintained or attained. These standards also include requirements for the regulation and control of toxic constituents and require that EPA criteria, established pursuant to Section 304(a) of the CWA, shall be used unless a site specific criterion is established.

The draft permit must limit any pollutant or pollutant parameter (conventional, non-conventional, and toxic) that is or may be discharged at a level that causes or has the "reasonable potential" to cause or

contribute to an excursion above any water quality standard (40 CFR §122.44(d)). An excursion occurs if the projected or actual in-stream concentration exceeds an applicable water quality criterion. In determining "reasonable potential", EPA considers: (1) existing controls on point and non-point sources of pollution; (2) pollutant concentration and variability in the effluent and receiving water as determined from the permit's re-issuance application, monthly discharge monitoring reports (DMRs), and State and Federal Water Quality Reports; (3) sensitivity of the indicator species used in toxicity testing; (4) known water quality impacts of processes on waste waters; and (5) where appropriate, dilution of the effluent in the receiving water.

5.4 Anti-backsliding

Anti-backsliding as defined in 40 CFR §122.44(l)(1) requires reissued permits to contain limitations as stringent or more stringent than those of the previous permit unless the circumstances allow application of one of the defined exceptions to this regulation. As explained above, anti-backsliding applies to limits contained in the existing permit and, therefore, these limits are continued in the draft permit.

5.5 Anti-degradation

The Commonwealth of Massachusetts' anti-degradation provisions, found in 314 CMR 4.04, ensure that provisions in 40 CFR §131.12 are met. Anti-degradation provisions ensure that all existing uses in the receiving water, along with the level of water quality necessary to protect those existing uses, are maintained and protected. The effluent limits in the draft permit should ensure that provisions in 314 CMR 4.04 are met. The State is also asked to certify that the anti-degradation provisions of State law are met.

The Mystic River is classified as a Class SB water body by the Commonwealth of Massachusetts and, as such, is designated as habitat for fish, other aquatic life and wildlife, and for primary (e.g., wading and swimming) and secondary (e.g., fishing and boating) contact recreation. Class SB waters may also be suitable for shellfish harvesting; however, there are no areas within the Mystic River near Outfall No. 001 currently approved by the State for such use.

6.0 EXPLANATION OF THE PERMIT'S EFFLUENT LIMITATION(S)

6.1 Facility Information

The Distrigas LNG regasification facility is located in the City of Everett immediately north and east of the Everett-Boston boundary (Figure 1-Locus Map). The site comprises a 35.5-acre parcel of industrial-zoned land (Figure 2-Site Plan). Of the 35.5-acres, only 24.7-acres are dry land with the balance being inundated by the Mystic River. The industrial neighborhood in which Distrigas lies is bounded on the west by Robin Street, on the north by Beacham Street, on the east by Commercial Street, and on the South by the Mystic River. The site is at an elevation of about 16 feet National Geodetic Vertical Datum (NGVD).

Presently the site contains two insulated LNG storage tanks contained within a large earthen dike, LNG ship unloading facilities, LNG vaporization facilities, LNG truck loading facilities, as well as office, control and maintenance buildings.

The sources of flow from the facility to Outfall No. 001 are: discharge condensate from LNG vaporizers (2 sets of units), test water for fire pumps, groundwater infiltration, stormwater runoff from the site, and catch basins on Rover Street.

6.2 Contributions to Permitted Outfalls

In general, rainfall runoff from buildings and yard areas will flow by gravity to the Mystic River via an existing drainage system. Other flow contributions include process wastewater generated in the gasification process at the site. Specific contributions to Outfall No. 001 are described below.

6.2.1 Water Condensate from the High Pressure Expansion Vaporizers

The Distrigas high pressure expansion (HPE) vaporizers, manufactured by Kaldair Company, are direct fired with natural gas. LNG submerged combustion vaporizers utilize a burner and heat exchanger in a single vessel filled with water. The water bath is used as the heat transfer media with LNG flowing through a tube coil immersed in the water bath. The water bath is heated by a natural gas-fired burner(s) with the combustion gas discharged into the water bath via sparger tubes to maintain a water bath temperature of approximately 70 °F. The condensing water from the submerged combustion process results in a net production of water in the water bath and the overflow from the water bath is directed to the storm drain system. The high pressure vaporizer condensate maximum flow is approximately 80 gallons per minute (gpm). This process wastewater mixes with other Site wastewater flows prior to discharge to the Mystic River through Outfall No. 001.

The amount of condensate flow varies with the rate of gas firing in the Kaldair vaporizers. pH is continuously analyzed and controlled by the addition of sodium carbonate (Na_2CO_3). The sodium carbonate is injected automatically into the vaporizer hot water tubs, as required, based on continuous analyzer readings. The application (March 16, 2006) documented a maximum temperature of the water condensate from the High Pressure Expansion Vaporizers of 90 °F.

6.2.2 Water Condensate from the Low Pressure Expansion Vaporizers

The Distrigas low pressure (LP) vaporizers, manufactured by the Ryan Co., are direct fired with natural gas. LNG submerged combustion vaporizers utilize a burner and heat exchanger in a single vessel filled with water. The water bath is used as the heat transfer media with LNG flowing through a tube coil immersed in the water bath. The water bath is heated by a natural gas-fired burner(s) with the combustion products discharged into the water bath via sparger tubes to maintain a water bath temperature of approximately 70 °F. The condensing water from the submerged combustion process results in a net production of water in the water bath and the overflow from the water bath is directed to the storm drain system. The LP condensate maximum flow is approximately 21 gpm. The process wastewater mixes with other site wastewater flows prior to discharge through Outfall No. 001.

The amount of condensate flow varies with the rate of gas firing in the Ryan vaporizers. pH is continuously analyzed and controlled by the addition of sodium carbonate (Na_2CO_3). The sodium carbonate is injected automatically into the vaporizer hot water tubs, as required, based on continuous analyzer readings. The application (March 16, 2006) documented a maximum temperature of the water condensate from the LP Expansion Vaporizers of 120 °F.

6.2.3 Fire Pump Testing

The Distrigas Everett Marine Terminal Site has a 1,500 gpm engine driven fire pump. Operational safety procedures require that the pump operates weekly for 10 minutes. During this test, the pump discharges directly to a site catch basin. The water being pumped is taken directly from the City of Everett water system and is not treated.

6.2.4 Groundwater Infiltration

Prior to the Distrigas liquefied natural gas (LNG) operations, the site housed a manufactured gas plant (MGP). Historical impacts related to the MGP operation have been documented and addressed by a previous owner under the Massachusetts Contingency Plan (MCP). Previous reports document that the primary source of release at the facility is from the historic MGP-related activities (Release Tracking Number #3-0302). Reported total cyanide concentrations in soils range across the site from non-detect to as high as 139 mg/kg. Cyanide concentrations in shallow groundwater have arithmetic average concentrations of 1,361 ug/l across the site. In general, cyanide concentrations in groundwater reduce with depth and are historically highest in the northeast portion of the site (GEI, 2005).

In an effort to reduce or eliminate contaminated groundwater infiltration into the storm drain system, Distrigas replaced 1,200 feet of outfall pipe with a 36-inch diameter gravity pipe in December of 2000 (GEI, 2009) from approximately SD-2 down-gradient through SD-3, and continuing to SD-6, SD-7, and Outfall No. 001. The replaced pipe runs along a Distrigas roadway toward the southwest from the facility as illustrated in Figure 2. The continued flow of groundwater into the storm drain system at the site, however, has not been estimated. A portion of remaining storm drain system underwent a video inspection on August 8, 2008. The inspection detected severe breaks in the seam of the clay tile storm drain (Clean Harbors, 2008). The inspection detected leaky seams and documented evidence of groundwater infiltration into the storm drains.

Two sample rounds were conducted at the site measuring free cyanide within the groundwater and storm drain system. These sample rounds were conducted on May 18, 2006 and August 29, 2006. Rainfall data observed at Boston Logan International Airport (KBOS) obtained from the National Oceanic and Atmospheric Administration (NOAA) National Climatic Data Center by EPA documented several rainfall events prior to each of the sampling rounds (4.65 inches total 3 days prior to 5/18/06, 0.65 inches total 3 days prior to 8/29/06). Both sampling rounds, however, were conducted after a dry 24-hour antecedent period. Results of the analysis are summarized in Table 1 below at locations as illustrated in Figure 2.

Reports submitted under the MCP to MassDEP document high concentrations of cyanide observed in the storm drain system (at locations of SD-2 and SD-3, Figure 2). These results are generally consistent with the concentrations observed in groundwater samples collected in monitoring wells MW-2, MW-9, and MW-10 in May and August, 2006 (PS&S, 2008).

Based on the observed visual evidence of groundwater infiltration into the storm drain system documented during the inspection conducted in 2008 in addition to the correlation of cyanide concentrations within the storm drain system and the groundwater, EPA believes that contaminated groundwater is infiltrating into the storm drain system. This, in turn, results in elevated cyanide concentrations at Outfall No. 001 discharging directly to the Mystic River.

Table 1: Observed Total and Free Cyanide Concentrations

	5/18/2006 (Low Tide)		8/29/2006 (Low Tide)	
Sample ID*	Total Cyanide (ug/l)	Free Cyanide (ug/l)	Total Cyanide (ug/l)	Free Cyanide (ug/l)
MW-2	224	22	116	10
MW-9	832	64	495	187
MW-10	531	171	280	103
SD-1	126	14	121	<10
SD-2	511	42	632	39
SD-3	494	46	495	30
SD-4	<5	<10	<5	<10
SD-5	96	<10	8	<10
SD-6	468	156	210	187
SD-7	446	149	247	146

*Locations illustrated in Figure 2.

Therefore, EPA concludes that cyanide-contaminated groundwater infiltrates into the storm drain system, is diluted with process wastewater generated continuously with facility operations during dry-weather flow periods, and mixes with process wastewater and stormwater flows during wet-weather periods. This mixed effluent from groundwater infiltration and process wastewater is then discharge to the Mystic River.

6.2.5 Overland Flow

An investigation to characterize stormwater runoff chemistry was conducted in 1997 at the site. As described by GEI (2005), stormwater runoff samples were collected by 'partially burying two jars covered with filter fabric in shallow soil within the bermed area near the mouth of the sub-impoundment area" for a period of 18 days. The collected samples contained 3,860 ug/L of total cyanide (by method 9010B) and 380 ug/L Physiologically Available cyanide (PACN).

The results of the study suggest that stormwater runoff from the site may have elevated cyanide concentrations due to contact with contaminated soils. Site conditions have improved since the 1997 study, including the addition of approximately 2 feet of fill material to raise the elevation of the surface within the containment areas in addition to an improved sump system within the containment areas. EPA site visits conducted on March 6, 2008, and April 16, 2009, documented that the bermed site is covered by crushed stone and soil in areas that are not impervious (e.g., pavement and buildings). Based on the limited results, EPA concludes that stormwater that has come into contact with contaminated soils at the ground surface and runoff into the storm drain system may also contribute to elevated cyanide concentrations in the effluent discharged at Outfall No. 001.

6.2.6 Boiler Blowdown and Hot Water Heater Discharge

Two steam boilers are used to de-ice LNG piping and equipment. Each boiler has blow down of 5 gallons per day when operating at full capacity.

Two (2) Johnston hot water heaters and five (5) Cleaver Brooks hot water heaters are drained

annually for routine maintenance. The wastewater is discharged into the storm drain system at a rate of 10,000 gallons per day (gpd) for each Johnston heater and 3,500 gpd for each Cleaver Brooks heater. Each heater is drained once per year on different days.

6.2.7 Stormwater Runoff

6.2.7.1 Non-Containment Areas Stormwater Runoff

Rainfall runoff from buildings and yard areas outside of LNG containment areas is collected by catch basins and flows, by gravity, to the Mystic River via an existing storm drainage system (Outfall No. 001).

6.2.7.2 Containment Areas

The Site has three LNG stormwater containment areas which are served by sump pumps. These are:

- The diked area containing the two LNG tanks
- The LNG truck scale area
- The Medium Pressure (MP) Vaporizer Area

The LNG tanks diked area is served by three sump pumps, each located in a sub-impoundment area. The areas are designated: North Basin, South Basin and LNG Basin. These pumps all discharge to the storm drainage system via above ground piping. The arrangement of these sumps is such that only surface runoff is collected. The system is designed to exclude groundwater from the sumps.

The other two LNG containment areas are totally concrete lined. The truck scale area has three sump pumps, with the MP Vaporizer area having one sump pump to collect storm water runoff. All of these pumps discharge directly to the storm drainage system via above ground piping.

6.2.7.3 "Off-site" Catch Basins

The flows described above all originate within the Distrigas process area. The drainage system also receives stormwater from three catch basins which are on Distrigas property but outside the normal operational area, downstream of monitoring manhole SD-2. Two of the catch basins are located in Rover Street, downstream of the Island End site input point. The third catch basin is further downstream, but upstream of the Ossipee storm drain connection. Stormwater from these areas is collected and flows by gravity to the Mystic River through Outfall No. 001.

Outfall No. 001 receives the combined flows from the three separate entities listed below. Hydraulic calculations for pipe sizing through Outfall No. 001 are based on 25 year, 10 minute storm, yielding a combined maximum flow rate of 35.7 cubic feet per second (cfs). A 25 year, 24 hour storm will yield approximately:

Distrigas Site	**1,642,300 gallons per day (gpd)**
Island End Site	596,000 gpd
Off-site Flow	78,000 gpd
Ossipee Site	443,000 gpd
Total Flow per event	2,759,300 gpd (4.3 cfs)

Stormwater discharge from the Ossipee Site is covered under the 2008 Multi-Sector General Permit

(MAR05CZ14).

6.3 Permitted Outfalls

All process wastewater, groundwater infiltration and stormwater flows are discharged to the Mystic River via Outfall No. 001. Outfall No. 001 consists of a 36-inch diameter gravity pipe which carries flow from Distrigas and offsite catch basins to the Mystic River. The 36-inch diameter pipe is approximately 1200-feet long and follows a Distrigas roadway southwest from the plant. There is a 2,300 cubic foot (17,200 gallon) detention basin prior to where the Ossipee Aggregate catch basins connect to the outfall pipe. The pipe jogs southeast toward the Boston Sand and Gravel (Ossipee) site and then turns south toward the Mystic River, discharging near the Distrigas boat ramp as illustrated in Figure 2.

Given that Outfall No. 001 is submerged in the Mystic River, the site had been previously permitted to regularly monitor three internal outfalls at the site. These internal outfalls were monitored by the permittee during the previous permit term.

6.3.1 Outfall 001 – Steam Condensate Internal Outfall

The internal sampling point 001 was located near the high pressure vaporizer building labeled as SD-4 on Figure 2. Samples collected from SD-4 consisted of process wastewater generated by condensation of combustion gas vapor that is drained off as it is generated (as described in Sections 6.2.1 and 6.2.2) in addition to stormwater collected by two catch basins within the area designated as "area west of Kaldair vaporizers". As described in Section 6.2.4, samples collected from SD-4 potentially include groundwater infiltration.

Effluent limits for this draft permit are based on BPJ and water quality standards as documented in Section 6.4. The discharge of stormwater and process wastewater to the receiving water need only be characterized by a representative sample(s). Monitoring conducted over the past permit term at three internal locations indicate that the most down-gradient location accessible in the storm drain system (SD-6, detention basin) is representative of the entire discharge. Therefore, this internal sampling location will be discontinued in the draft permit.

6.3.2 Outfall 002 – Manhole "E" Internal Outfall

The internal sampling point 002 was a drainage manhole that was representative of process wastewater (steam boiler blowdown and vaporizer condensate), fire pump test discharge, groundwater infiltration and stormwater drainage. The internal sampling point 002 corresponds to the sampling location 'SD-2' as labeled in Table 1 and illustrated in Figure 2.

Effluent limits for this draft permit are based on BPJ and water quality standards as documented in Section 6.4. The discharge of stormwater and process wastewater to the receiving water need only be characterized by a representative sample(s). Monitoring conducted over the past permit term at three internal locations indicate that the most down-gradient location accessible in the storm drain system (SD-6, detention basin) is representative of the entire discharge. Therefore, this internal sampling location will be discontinued in the draft permit.

6.3.3 Outfall 003 – Combined Discharge to Mystic River (Detention Basin)

The sampling point for Outfall 003 is a concrete basin that is located downstream of the last catch basin associated with the Site and upstream of the Ossippe storm drain connection labeled SD-6 in

Figure 2. The basin has two internal baffles forming three chambers to trap sediment and "floaters". Draw off lines are installed in the first two chambers to remove accumulated contaminants. The third chamber has a draw-off line for sampling of effluent. The capacity of the detention basin is 2,300 cubic feet, or 17,200 gallons. Samples collected from SD-6 represent combined process wastewater flow, groundwater infiltration and stormwater flow.

Effluent limits for this draft permit are based on BPJ and water quality standards as documented in Section 6.4. The discharge of stormwater and process wastewater to the receiving water need only be characterized by a representative sample(s). Monitoring conducted over the past permit term at three internal locations indicate that the most down-gradient location accessible in the storm drain system (SD-6, detention basin) is representative of the entire discharge. Therefore, this internal sampling location will be retained in the draft permit as the sole representative sampling location for Outfall No. 001.

6.4 Derivation of Effluent Limits under the Federal CWA and/or the Commonwealth of Massachusetts Water Quality Standards

The Draft Permit is conditioned to better regulate non-stormwater discharges (e.g., groundwater infiltration and process wastewater) alone or in combination with stormwater runoff to the Mystic River from the site. Stormwater discharges and process wastewater from activities associated with LNG processes into the storm drain system must satisfy practicable control technology currently available (BPT), best conventional technology (BCT) and/or best available technology (BAT) requirements and must comply with more stringent water quality-based limits if BCT or BAT requirements are not adequate.

On September 25, 1992, EPA issued its General Permit for Stormwater Discharge Associated with Industrial Activity, and determined that the minimum BAT/BCT requirement for stormwater discharges associated with industrial activity is a Stormwater Pollution Prevention Plan (SWPPP) [57 FR, 44438]. This general permit was reissued on September 29, 2008 (73 FR 56572) as NPDES Multi-Sector General Permit for Stormwater Discharges Associated with Industrial Activities and is known as the Multi-Sector General Permit (2008 MSGP). Although natural gas pipeline (SIC Code 4922) facilities are not included as an industrial activity eligible for coverage by the MSGP, EPA has included requirements in this draft permit consistent with the intent of the MSGP based on best professional judgment (BPJ). EPA has included requirements in the draft permit to include, for example, the preparation and implementation of a Stormwater Pollution Prevention Plan (SWPPP) as described in Section 6.5.2.

Groundwater discharges that contain regulated contaminants must also satisfy technology and water quality based requirements and must comply with more stringent water quality standards if technology requirements are not adequate. The 2008 MSGP does not authorize contaminated groundwater discharge as it is not listed among the "allowable non-stormwater discharges" as defined in Section 1.1.3 of the 2008 MSGP. EPA has established technology based effluent limits using BPJ for contaminants in the groundwater based on a review of commonly available and utilized groundwater treatment technologies at remediation sites regulated under the Remediation and Miscellaneous Contaminated Sites General Permit (RGP).

The effluent limits and permit requirements included in the Draft Permit are discussed in greater detail below. For the purpose of the draft permit, dry weather is defined as a period when no more than 0.1 inches of rainfall has occurred in the previous 24-hour period. Wet weather is defined as a period when a minimum amount of precipitation has fallen to produce a discharge within the storm

drain system.

6.4.1 Flow

Although there are numerous contributions to Outfall No. 001, stormwater contributes the overwhelming flow volume during precipitation events. The draft permit requires that the date and flow volume be documented and reported to EPA and MassDEP quarterly.

The draft permit retains reporting of quarterly flow estimates from the internal sampling location for Outfall No. 001 in gallons per day at low, slack tide. Quarterly flow estimates are to be reported for both dry and wet weather sampling flows.

6.4.2 Total Suspended Solids (TSS)

Previous permit limits for total suspended solids were set at 100 mg/l based on Best Professional Judgment (BPJ) (2001 Reissuance). DMR reports submitted to EPA document the permittee has consistently met this previous permit limit (summarized in Attachment A) except for results submitted in April 2002. As documented in Attachment A, TSS was reported to be 1,800 mg/l as measured in internal sampling point 003 (detention basin) in DMR data submitted in 2002. As documented in the DMR, the high concentration "resulted from the High Pressure Expansion Process (HPEP) construction activities near the impoundment area during the sampling period."

Since there are no National Effluent Guidelines (NEGs) promulgated for discharges associated with the natural gas transmission sites, the permit writer is authorized under Section 402(a)(1) of the CWA to establish effluent limitations on a case-by-case basis using Best Professional Judgment (BPJ). Although there are no National Water Quality Criteria for suspended solids, EPA has indirectly issued guidance in the 2008 Multi-Sector General Permit for Industrial Activities (MSGP). The 2008 MSGP retained a benchmark of 100 mg/l for TSS. The TSS limits in the draft permit are consistent with the 2008 MSGP and retained in the draft permit in accordance with anti-backsliding provisions.

The draft permit retains the maximum daily effluent limit of 100 mg/l for TSS with sampling to be conducted quarterly at the internal sampling location for Outfall No. 001.

6.4.3 pH

Massachusetts Surface Water Quality Standards require the pH of Class SB waters to be within the range of 6.5 to 8.5 standard units (S.U.). The pH permit range of 6.5 to 8.5, which is to be monitored on a quarterly basis, has been established in accordance with the State Surface Water Quality Standards. The discharge shall not exceed this pH range unless due to natural causes. In addition, there shall be no change from background conditions that would impair any uses assigned to the receiving water class. A summary of the discharge monitoring data submitted by the facility during the time period of April 2002 to December 2008 is included as Attachment A to this Fact Sheet. pH exceedances were documented on three occasions at internal sampling point 002 (manhole "E", SD-2) due to a leaky valve on a tank of sodium bicarbonate (6/30/03), an expected frozen valve on the pH line (12/31/03), and heavy rainfalls previous to the sample collection (3/31/07). The pH limits in the draft permit are retained within the range of 6.5 to 8.6 S.U. in accordance with anti-backsliding provisions.

Distrigas has demonstrated its ability to meet the pH conditions in the current permit (2001 Reissuance). Therefore, the draft permit retains a pH limit for Outfall No. 001 within the range of 6.5 and 8.5 standard units (S.U.) to meet State Surface Water Quality Standards to be reported quarterly.

6.4.4 Cyanide

Compounds containing the cyanide group (CN) at the site have been attributed to historic industrial processes at the site. Cyanide occurs in water in many forms, including: hydrocyanic acid (HCN), the cyanide ion (CN^-), simple cyanides, metallocyanide complexes, and as organic compounds. "Free cyanide" is defined as the sum of the cyanide present as HCN and CN^-. The relative concentrations of these forms depend mainly on pH and temperature.

Both HCN and CN^- are toxic to aquatic life. However, the vast majority of free cyanide usually exists as the more toxic HCN. And, since CN^- readily converts to HCN at pH values that commonly exist in surface waters, EPA's cyanide criteria are stated in terms of free cyanide expressed as CN^-. Free cyanide is a more reliable index of toxicity to aquatic life than total cyanide because total cyanides can include nitriles (organic cyanides) and relatively stable metallocyanide complexes.

Distrigas, as part of their annual Priority Pollutant scan, has regularly analyzed water samples at sampling point 003 (Detention Basin) for total cyanide. In addition, sampling was conducted from both the groundwater and storm drain system in May and August of 2006 for both free and total cyanide (GEI, 2008). The results of the previous testing are summarized in Table 1 in Section 6.2.4.

Regulations found at 40 CFR Part 122.44(d)(ii) require that NPDES permits include effluent limitations for any pollutant, including toxic pollutants, that is or may be discharged that caused, has reasonable potential to cause, or contributes to an excursion above any water quality criterion. An excursion occurs if the projected or actual concentrations in the receiving water exceed the applicable criterion; in the case of free cyanide, the applicable criterion is 1 ug/L for both chronic and acute saltwater criteria based on 2006 National Recommended Water Quality Criteria. Massachusetts Surface Water Quality Standards (314 CMR 4.00) require "all surface waters shall be free from pollutants in concentrations or combinations that are toxic to humans, aquatic life, or wildlife" (314 CMR 4.05(e)). Previous documentation submitted under MCP document detectable concentrations of weak acid dissociable (WAD) cyanide; however, the results were proposed to be "not valid or representative of actual cyanide conditions in Mystic River surface water" due to sulfide interference (GEI, 2008). This outcome was documented to be due to sulfide interference in surface water samples, uncertainty in the detection limit of the method, and absence of WAD cyanide in the sample located closest to the storm sewer discharge.

The reasonable potential analysis relies upon the variability of the pollutant in the effluent in addition to the dilution factor in the receiving water. Effluent limitations are based on free cyanide as described above. To date, Distrigas has collected and analyzed few samples for free cyanide in the system. Samples collected from the Mystic River also indicated interference by sulfides, resulting in inconclusive free cyanide concentrations in the receiving water. Additionally, the Mystic River is a tidal influenced system requiring the development of an appropriate model to determine the dilution factor. While a calculation using the entire tidal flux (645 MGD) of the Mystic River indicates low potential for free cyanide exceedences, the more conservative analysis using a representative low flow (1Q10 for acute, 7Q10 for chronic) has not been performed to effectively characterize the dilution potential for the discharge. Therefore, at this time, EPA is not developing a water-quality based limit for free cyanide. However, the permit requires continued sampling for free cyanide and also requires the permittee to develop an appropriate model to determine a mixing zone and/or

dilution factor within 1 year of permit issuance. If the results of the model and free cyanide monitoring indicate a reasonable potential for water quality exceedences, the permit may be re-opened and modified.

As documented in Sections 6.2.4 and 6.2.5, the source of cyanide detected in the storm drain system appears to be from stormwater after direct contact with contaminated soils in addition to groundwater infiltration into the storm drain system. Therefore, cyanide concentrations observed in past reports are not a result of the discharge of industrial process wastewater (see Sections 6.2.1 and 6.2.2 of this Fact Sheet). To control the activities/operations, which could contribute pollutants to waters of the United States via stormwater discharges at this facility, the draft permit requires the facility to develop a Stormwater Pollution Prevention Plan (SWPPP) with site-specific BMPs as required under 40 CFR §122.44(k)(4) to control or abate the discharge of cyanide. Site-specific BMPs are a permit condition as the corrective actions are reasonably necessary to achieve effluent limitations and standards of the draft permit. At a minimum, the BMPs shall control the infiltration of groundwater into the storm drain system. Additionally, BMPs shall, at a minimum, limit and/or prevent the contact of stormwater runoff with contaminated soils prior to entering the storm drain system. The SWPPP is as equally enforceable as numerical limits.

The draft permit requires that the permittee certify to EPA that site-specific BMPs are developed and implemented for this facility in accordance with the permit's schedule and requirements. The Draft Permit requires that the permittee maintain and update the SWPPP as changes occur at the facility. In addition, the Draft Permit requires the permittee to provide annual certification to EPA and the MassDEP, documenting that the previous year's inspections and maintenance activities were conducted, results recorded, records maintained, and that the facility is in compliance with its SWPPP. A signed copy of the certification is required to be sent each year to EPA and MassDEP as well as appended to the SWPPP within thirty (30) days of the annual anniversary of the effective date of the Permit. This certification will be signed in accordance with the requirements identified in 40 CFR §122.22. A copy of the most recent SWPPP must be kept at the facility and be available for inspection by EPA and MassDEP.

The draft permit requires quarterly reporting of free cyanide concentrations at Outfall No. 001 internal sampling location during both dry and wet weather periods. Representative samples shall be collected during slack low tide. EPA recommends samples be analyzed under ASTM method D7237 (Standard test Methods for Aquatic Free Cyanide with Flow Injection Analysis Utilizing Gas Diffusion Separation and Amperometric Detection) or any approved method as listed under 40 CFR §136.

6.4.5 Temperature

The previous permit (2001 Reissuance) documented a Mystic River tidal flood and ebb flow of approximately 1,000 cfs (645 MGD) for each tidal cycle (1970 Mystic Station Hydrothermal Field Study). This volume was used to illustrate that discharge of high temperature condensate from the High Pressure (Kaldair) and Low Pressure (Ryan) units created an imperceptible change in water temperatures within the Mystic River.

The draft permit presents a conservative analysis of potential thermal impact as a result of the discharge assuming only low flow (7Q10) conditions in the Mystic River. Although the condition of a 7Q10 mixing is unlikely given the tidal influence of the discharge location, the analysis was completed to justify the continued discontinuance of temperature limits in the draft permit. The

calculations as included in Attachment B were performed based on "worst case" conditions, where the river temperature is 32 ºF during winter months (assuming minimum temperature of the river) and 77 ºF during summer months (maximum measured temperature in Boston Harbor, 1994-2007) while vaporizers are concurrently discharging at maximum volumes and temperatures.

Table 2: Temperature Calculations

Vaporizer Unit	Maximum Flow (GPD)	Maximum Discharge Temperature (ºF)	Winter Temperature Differential (ºF)	Summer Temperature Differential (ºF)
Ryan	30,240	120	88	43
Kaldair	115,200	90	58	13
Total Effluent Heat Load			7.8×10^7 BTU/day	2.3×10^7 BTU/day

1 BTU = heat required to raise 1 pound of water 1 ºF
1 gallon of water = 8.3 pounds
Heat Discharged (BTU)/day = C_p (BTU/lb ºF) x mass (lb) x ΔT (ºF)
(ΔT ºF)*(Vaporizer Maximum Flow (GPD))*(8.3 lbs/gal) = BTU/day
(# btu/day)/(8.3 lbs/gallon) = # GPD/1 ºF

During summer months, the maximum discharge would potentially raise river temperatures 1 ºF assuming mixing only occurs with conservative 7Q10 flows as documented at the Amelia Earhart Dam upstream of the site (7Q10 = 4.33 cubic feet per second (2.8 MGD)). During winter months, an increase in temperature of 3.2 ºF is possible. These calculations do not take into account factors that will serve to dissipate heat including the length of the outfall (over 1,200 feet), the addition of stormwater and groundwater infiltration to the outfall and the use of the detention basin. Additionally, the analysis assumes that both vaporization processes are operating concurrently at maximum discharges. Nevertheless, the conservative calculations document that changes in river temperatures are below SWQS for a Class SB water (314 CMR 4.05(b)(2)) which include criteria for maximum temperatures (shall not exceed 85º F nor a maximum daily mean of 80º F; rise in temperature shall not exceed 1.5º F during the summer months and 4.0º F in the winter months).

Given these results, no numerical limits for temperature are included in this permit. However, Distrigas shall measure and report temperature at Outfall No. 001 internal sampling location quarterly. Any changes to the facility that may increase heat discharge from the facility may be cause for reopening the permit for potential modification.

6.4.6 Chlorine

Fire-pump testing is completed weekly for a 10-minute period as described in Section 6.2.3. The pumped water is directly from the City of Everett water system supplied by MWRA, and therefore contains chlorine. Reported minimum chlorine residuals published by MWRA document average concentration of residual chlorine of 1.1 mg/L within the City of Everett water system.

Fire-pump testing results in 15,000 gallons during the 10-minute test. Distrigas reports water condensate production from vaporizers (Section 6.2.1 and 6.2.2) totaling 145,000 gallons per day. The resulting internal dilution of chlorine after mixing with process wastewaters during dry weather flow is 10.3 ug/L. This internal dilution concentration is between 2006 National Recommended

Water Quality Criteria for chronic (7.5 ug/L) and acute (13 ug/L) toxicity. Assuming a minimum dilution utilizing the conservative 7Q10 flow of the Mystic River, there is no reasonable potential for chlorine concentrations to be above Water Quality Standards in the Mystic River. However, the draft permit requires sampling to be conducted quarterly after fire pump testing at Outfall No. 001 internal sampling location. If the results of the sampling indicate a reasonable potential for water quality exceedances, the permit may be re-opened and modified.

6.4.7 Rainfall

The permittee shall maintain a rainfall gage on-site when the air temperature is above freezing and will report the National Weather Service data for Boston (Logan Airport), Massachusetts when the air temperature is below freezing. The permittee shall report the date and duration (in hours) of the storm event(s) sampled and rainfall measurements (in inches) of the storm event that generated the sampled runoff after which no precipitation is forecast for a minimum of 6 hours.

6.4.8 Priority Pollutants

As described above, stormwater and groundwater may come into contact with soil contamination from activities that occurred at the site prior to the operation of the Distrigas facility. The previous permit included the requirement to conduct annual sampling for the 126 EPA Priority Pollutants listed at 40 CFR §423, Appendix A. Fourteen parameters (Table 3) were detected in concentrations above detection limits during the previous permit term as reported in DMR data submitted to EPA. The draft permit will retain annual sampling for selected EPA Priority Pollutants listed at 40 CFR §423, Appendix A at Outfall No. 001 (Table 3).

Table 3: Selected Priority Pollutants

Selected Parameters from Appendix A to 40 CFR Part 423-Priority Pollutants
Benzene
Ethylbenzene
Fluoranthene
Naphthalene
1,2-benzanthracene (benzo(a) anthracene)
Chrysene
1,2-benzoperylene (benzo(ghi) perylene)
Phenanthrene
Pyrene
Toluene
Arsenic
Copper
Total cyanide
Zinc

The permit may be reopened to include chemical specific limitations for the priority pollutants if the sampling data demonstrates that the effluent has reasonable potential to cause or contribute to an excursion above State Water Quality Standards (see 40 CFR §122.44(d)(1)(iii)).

6.5 Additional Permit Conditions

6.5.1 Storm Drain Evaluation (Special Study)

A storm drain evaluation (study) to evaluate the relative contribution of potentially contaminated water from both groundwater infiltration and stormwater that has come into direct contact with contaminated soils is included in the draft permit. The proposed evaluation includes the following:

1. Conduct a visual inspection and video inspection of the readily accessible portions of the old storm drain system to identify components that are potentially located below the groundwater table and that are likely to contribute to groundwater infiltration.
2. Directly measure the flow rate of water and free cyanide concentrations into a minimum of five (5) separate catch basins within the storm drain system that are likely attributable to groundwater infiltration. These measurements shall be collected during dry weather and at slack low tide to assess the contribution of water from groundwater infiltration to the storm drain system and to limit the measurement of water attributable to tidal flux.
3. Directly measure the flow rate of stormwater runoff into the storm drain system and free cyanide concentrations in stormwater runoff to the storm drain system at a minimum of five (5) separate manhole locations during a storm event. These measurements shall be collected during wet weather and slack low tide to assess the contribution of water from overland flow of precipitation (runoff), and to limit the measurement of water attributable to tidal flux.

6.5.2 Stormwater Pollution Prevention Plan

The Distrigas 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. To control the activities/operations, which could contribute pollutants to waters of the United States, potentially violating the State's Water Quality Standards, the Draft Permit requires the facility to develop, implement, and maintain a Stormwater Pollution Prevention Plan (SWPPP) containing best management practices (BMPs) appropriate for this specific facility (See Sections 304(e) and 402(a)(1) of the CWA and 40 CFR §122.44(k)).

The goal of the SWPPP is to reduce, or prevent, the discharge of pollutants through the stormwater system. The SWPPP serves to document the selection, design and installation of control measures, including BMPs. Additionally, 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 this 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 non-numeric effluent limitation that supports any numeric effluent limitations in the Draft Permit. Consequently, compliance with the Draft Permit SWPPP requirements is as equally enforceable as numerical limits.

This process involves the following four main steps:

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

7.0 ESSENTIAL FISH HABITAT

Under the 1996 Amendments (PL 104-267) to the Magnuson-Stevens Fishery Conservation and Management Act (16 U.S.C. §1801 et seq. (1998)), EPA is required to consult with the National Fisheries Services (NOAA Fisheries) if EPA's action or proposed action that it funds, permits, or undertakes, may adversely impact any essential fish habitat (EFH). The Amendments broadly define essential fish habitat as: waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity (16 U.S.C. § 1802 (10)). Adversely impact means any impact which reduces the quality and/or quantity of EFH (50 C.F.R. § 600.910 (a)). Adverse effects may include direct (e.g., contamination or physical disruption), indirect (e.g., loss of prey, reduction in species' fecundity), site-specific or habitat-wide impacts, including individual, cumulative, or synergistic consequences of actions.

Essential fish habitat is only designated for species for which federal fisheries management plans exist (16 U.S.C. §1855 (b) (1)(A)). EFH designations for New England were approved by the U.S. Department of Commerce on March 3, 1999. The Mystic River in the vicinity of the Mystic Station in Charlestown and Everett is designated EFH for 31 species of finfish and mollusks as shown in Table 2 (attached).

EPA has concluded that the limits and conditions contained in this draft permit minimize adverse effects to EFH species for the following reasons:

- This is a re-issuance of an existing permit that expired in 2006;
- The draft permit requires the Permittee to conduct a Storm Drain Evaluation (Section 6.5.1) to determine the source(s) of cyanide to the storm drain system. In addition, the draft permit requires site-specific BMPs to control free cyanide concentrations within the storm drain system;
- The permit will prohibit violations of the state water quality standards.

EPA believes that the draft permit limits adequately protect EFH near the discharge location, and therefore additional mitigation is not warranted. If adverse impacts to EFH are detected as a result of this permit action, or if new information is received that changes the basis for our conclusion, NOAA Fisheries will be notified and an EFH consultation will be reinitiated.

8.0 ENDANGERED SPECIES ACT (ESA)

EPA has reviewed the federal endangered or threatened species of fish and wildlife to see if any listed species might potentially be impacted by the re-issuance of this NPDES permit. Based on the normal distribution of these species, it is highly unlikely that they would be present in the vicinity of this discharge. Therefore, consultation under Section 7 of the ESA with National Marine Fisheries Service or United States Fish and Wildlife Service is not required.

9.0 STATE CERTIFICATION REQUIREMENTS

EPA may not issue a permit unless the MassDEP certifies that the effluent limitations contained in the permit are stringent enough to assure that the discharge will not cause the receiving water to violate State Surface Water Quality Standards or unless state certification is waived. The staff of the MassDEP has reviewed the draft permit and advised EPA that the limitations are adequate to protect

water quality. EPA has requested permit certification by the State pursuant to 40 CFR §124.53 and expects that the draft permit will be certified.

10.0 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 the EPA contact listed in Section 11.0.

Any person, prior to such date, may submit a request in writing for a public hearing to consider the Draft Permit to EPA and MassDEP. Such requests shall state the nature of the issues proposed to be raised in the hearing. A public meeting may be held if the criteria stated in 40 CFR § 124.12 are satisfied. In reaching a final decision on the Draft Permit, the EPA will respond to all significant comments and make these responses available to the public at EPA's Boston office.

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

11.0 EPA CONTACT

Additional information concerning the draft permit may be obtained between the hours of 8:00 a.m. and 4:00 p.m., Monday through Friday, excluding holidays from:

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

Table 2: Summary of Essential Fish Habitat Designation

Boundary	North	East	South	West
Coordinate	42 30.0' N	71 00.0' W	42 20.0' N	71 10.0' W

Square Description (i.e. habitat, landmarks, coastline markers): Waters within the Atlantic Ocean within the square within Massachusetts Bay and within Boston Harbor affecting the following: South Boston, MA., Boston, MA., Chelsea River, Mystic River, Charles River, East Boston, MA., Chelsea, MA., Orient Heights, and most of Logan Airport.

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)				
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

References

GEI Consultants, Inc., 2005. Phase II Comprehensive Site Assessment Addendum, Method 3 Risk Characterization, Phase III Remedial Action Plan Addendum, and Partial Class C Response Action Outcome. Submitted to Massachusetts Department of Environmental Protection.

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GEI Consultants, Inc., 2008. Storm Drain and Mystic River Cyanide Testing Data, Distrigas of Massachusetts-Liquefied Natural Gas Facility, 18 Rover Street, Everett, Massachusetts. Submitted to KeySpan Energy Delivery.

Clean Harbors Environmental Services, 2008. Video Inspection Report of Storm Water Line. Submitted to Distrigas/Suez of Massachusetts LLC.

GEI Consultants, Inc., 2009. Class C-2 Response Action Outcome Statement, Former Benzol and Byproducts Plant Site, Everett, MA. Submitted to Massachusetts Department of Environmental Protection.

GEI Consultants, Inc., 2009. MEMO: Storm Drain Evaluation, Distrigas Liquefied Natural Gas Facility, 18 Rover Street, Everett, MA (GEI Project No. 04344-0). Submitted to National Grid.

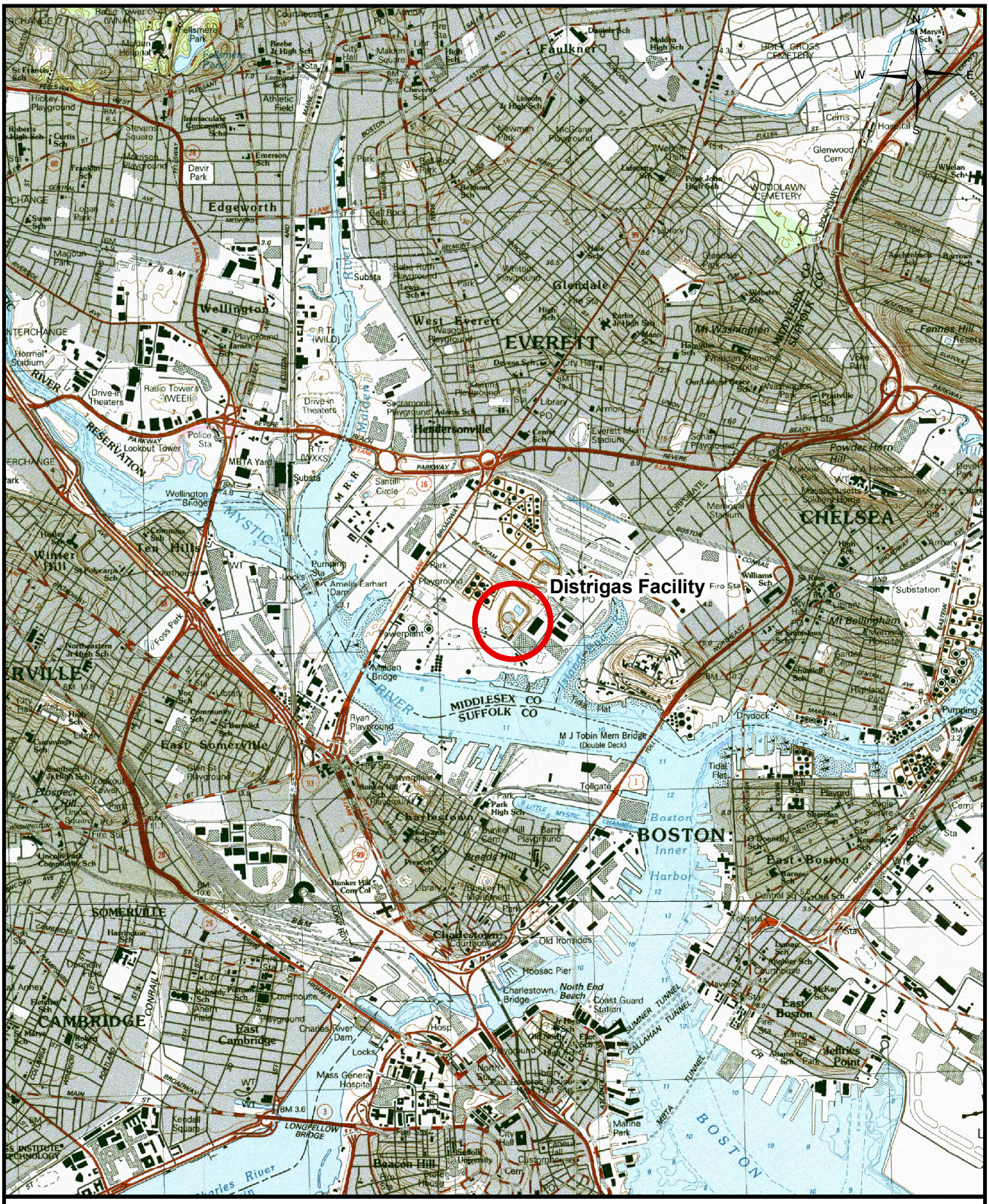

Figure 1 Locus Map

Distrigas of Massachusetts LLC
NPDES Permit No: MA0020010
Everett, Massachusetts

Source: USGS Topographic Map
Boston North Quadrangle

2,000 1,000 0 2,000 4,000 6,000

Scale: In Feet

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

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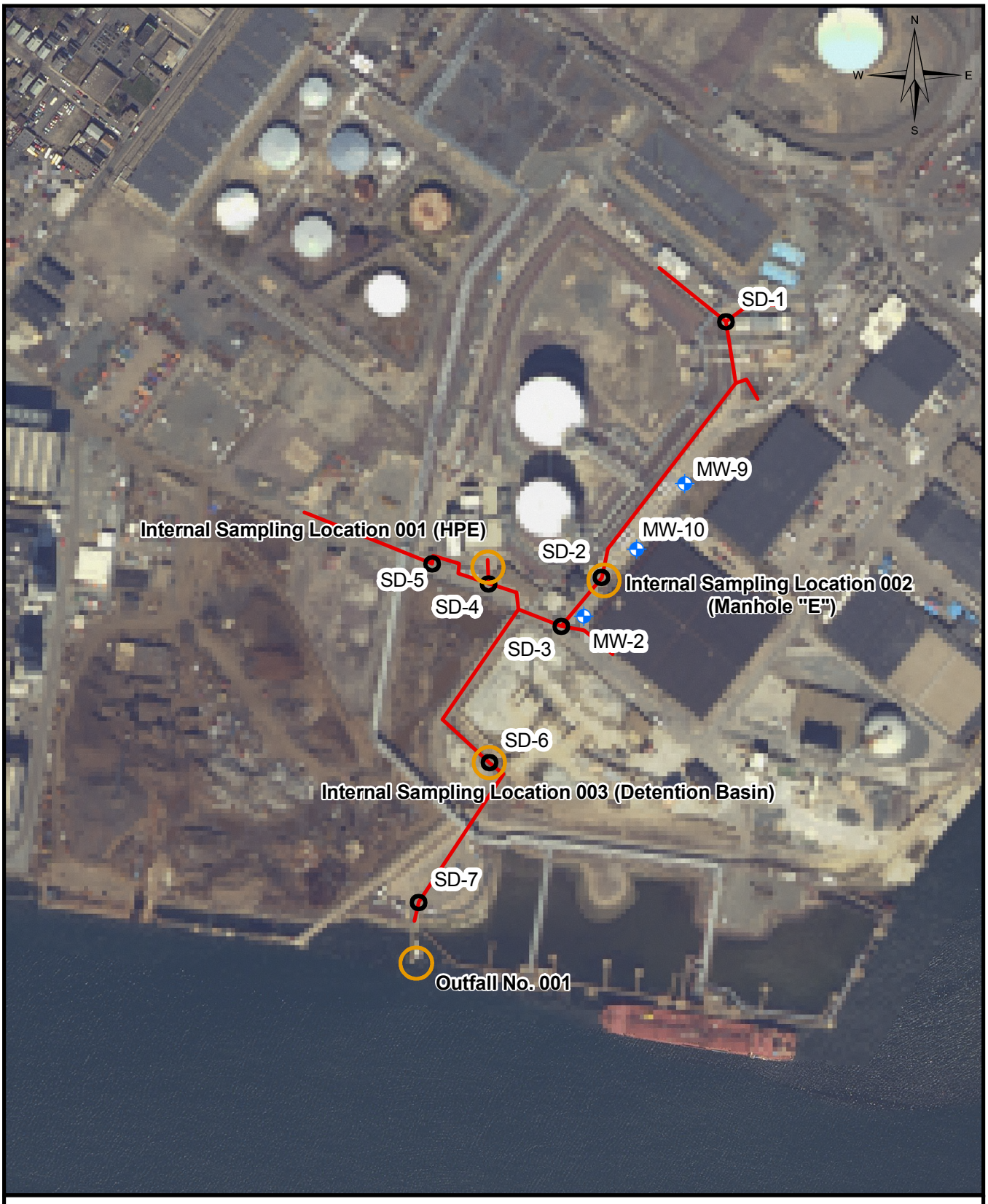

Legend

- GEI Monitoring Wells
- Catch Basins/Manholes
- Active Storm Drain
- Permitted Outfalls

Figure 2

Distrigas of Massachusetts LLC
NPDES Permit No: MA0020010
Everett, Massachusetts

500 250 0 500

Scale: In Feet

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

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