

AUTHORIZATION TO DISCHARGE UNDER THE
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM

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

Boston Ship Repair, LLC
32A Drydock Avenue
Boston, MA 02210

is authorized to discharge from the facility located at

32A Drydock Avenue
Boston, MA 02210

to receiving water named

Boston Inner Harbor to Massachusetts Bay (Boston Harbor Basin, MA70-02)

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

This permit shall become effective on the first day of the calendar month following sixty (60) days after signature if comments are received. If no comments are received, this permit shall become effective upon the date of signature.

This permit expires at midnight, five (5) years from the last day of the month preceding the effective date.

This permit supersedes the permit issued on September 28, 2007.

This permit consists of 11 pages in Part I including effluent limitations, monitoring requirements, and state permit conditions, 35 pages in the Best Management Practices (BMP) Document, and 25 pages in Part II, Standard Conditions.

Signed this 10th day of September, 2013.

/S/ SIGNATURE ON FILE

Ken Moraff, Acting Director
Office of Ecosystem Protection
Environmental Protection Agency
Boston, MA

David Ferris, Director
Massachusetts Wastewater Management Program
Department of Environmental Protection
Commonwealth of Massachusetts
Boston, MA

Part 1.A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

1. During the period beginning on the effective date and lasting through the expiration date, the permittee is authorized to discharge Graving Dock Dewatering (Main Pump) water and stormwater associated with ship repair and maintenance activities ¹ from outfall serial number 001 . Such discharges shall be limited and monitored by the permittee as specified below:				
<u>EFFLUENT CHARACTERISTIC</u>		<u>EFFLUENT LIMITS</u>		<u>MONITORING REQUIREMENTS</u>
<u>PARAMETER</u>	<u>AVERAGE MONTHLY</u>	<u>MAXIMUM DAILY</u>	<u>MEASUREMENT FREQUENCY</u>	<u>SAMPLE TYPE</u>
Total Flow	*****	Report GPD	Daily when discharging	Estimate ²

2. During the period beginning on the effective date and lasting through the expiration date, the permittee is authorized to discharge Graving Dock Dewatering water (Stripping Pump), non-contact cooling water, and stormwater associated with ship repair and maintenance activities ¹ from outfall serial number 002 . Such discharges shall be limited and monitored by the permittee as specified below:				
<u>EFFLUENT CHARACTERISTIC</u>		<u>EFFLUENT LIMITS</u>		<u>MONITORING REQUIREMENTS</u>
<u>PARAMETER</u>	<u>AVERAGE MONTHLY</u>	<u>MAXIMUM DAILY</u>	<u>MEASUREMENT FREQUENCY</u>	<u>SAMPLE TYPE</u>
Total Flow	*****	Report GPD	Daily when discharging	Estimate ²
Total Suspended Solids	Report mg/l	Report mg/l	Weekly when discharging	Grab ³
Total Copper	*****	Report mg/l	1/Quarter	Grab ³
Priority Pollutant Scan	Report ug/l		1/Year ³	Grab ^{3,4}

Footnotes are listed on Pages 3 and 4.

Part 1.A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (CONTINUED)

3. During the period beginning on the effective date and lasting through the expiration date, the permittee is authorized to discharge non-contact ocean water associated with the Fire Suppression Main and Cooling Pump system through outfall serial number 003 . Such discharges shall be limited and monitored by the permittee as specified below:				
<u>EFFLUENT CHARACTERISTIC</u>		<u>EFFLUENT LIMITS</u>		<u>MONITORING REQUIREMENTS</u>
PARAMETER	<u>AVERAGE MONTHLY</u>	<u>MAXIMUM DAILY</u>	<u>MEASUREMENT FREQUENCY</u>	<u>SAMPLE TYPE</u>
Total Flow	*****	Report GPD	Daily when discharging	Estimate ²

4. During the period beginning on the effective date and lasting through the expiration date, the permittee is authorized to discharge ocean water from the Caisson Ballast system from outfall serial number 005 . Such discharges shall be limited and monitored by the permittee as specified below:				
<u>EFFLUENT CHARACTERISTIC</u>		<u>EFFLUENT LIMITS</u>		<u>MONITORING REQUIREMENTS</u>
PARAMETER	<u>AVERAGE MONTHLY</u>	<u>MAXIMUM DAILY</u>	<u>MEASUREMENT FREQUENCY</u>	<u>SAMPLE TYPE</u>
Total Flow	*****	Report GPD	Daily when discharging	Estimate ²

Footnotes:

1. The activities which may contribute pollutants to the discharge from Outfalls 001 and 002 include but are not limited to the following: materials storage, materials processing and handling, abrasive blasting, water blasting, welding, and painting.
2. For flow, report the maximum flow rates and total flow for each operating date and the total flow for each month. Attach this data to each Discharge Monitoring Report (DMR) form. Effluent flow can be measured or estimated through the use of the pump capacity curves applicable to the pumps generating the discharge at the site. For those months when a discharge does not occur, the permittee must still submit the monthly DMR with the appropriate no discharge (NODI) code for each parameter.

Part 1.A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (CONTINUED)

3. Sampling shall be conducted at a point prior to discharge to Outfall 002 and prior to mixing with any other stream. Any change in sampling location must be reviewed and approved in writing by EPA and MassDEP. All samples shall be tested using the analytical methods found in 40 CFR §136, or alternative methods approved by EPA in accordance with the procedures in 40 CFR 136.

4. A priority pollutant (PP) scan shall be conducted during the fourth full calendar year of this permit, during the calendar quarter of April to June. Sampling for this scan shall be conducted while a vessel is docked and repairs on the outside of such vessel are being conducted, such as abrasive blasting or welding. All results of this scan shall be reported as a total and the report, with all lab results, shall be submitted with the quarterly DMR which is due by July 15th. The list of parameters to be tested is found in Part C of EPA's Form 2C application, although there are some portions of the pollutant list that are not required to be analyzed. The permittee shall analyze only for parameters 1M through 15M, and parameters 1V through 31V of the Form 2C application. Sampling for the PP scan shall be conducted any time when there is no precipitation and at least 48 hours after a storm event that was greater than 0.1 inches in magnitude. If there is no discharge during the April to June quarter, the permittee shall enter the appropriate NODI code on the June DMR and sampling may be conducted alternatively for the PP scan during the calendar quarter of July to September with the results to be submitted with the September DMR which is due by October 15th.

Part I.A. (Continued)

- a. The discharge shall not cause a violation of the water quality standards of the receiving waters.
- b. The discharge shall not cause objectionable discoloration of the receiving waters.
- c. The discharge shall contain neither a visible oil sheen, foam, nor floating solids at any time.
- d. The results of sampling for any parameter above its required frequency must also be reported.
- e. Discharges to Boston Inner Harbor shall be free from pollutants in concentrations or combinations that settle to form harmful deposits, float as foam, debris, scum or other visible pollutants. Such discharges shall be adequately treated to insure that the surface waters remain free from pollutants which produce odor, color, taste, or turbidity in the receiving water which is not naturally occurring and would render it unsuitable for its designated uses.

5. Toxics Control

- a. The permittee shall not discharge any pollutant or combination of pollutants in toxic amounts.
- b. Any toxic components of the effluent shall not result in any demonstrable harm to aquatic life or violate any state or federal water quality standard which has been or may be promulgated. Upon promulgation of any such standard, this permit may be revised or amended in accordance with such standards.

6. Numerical Effluent Limitations for Toxicants

EPA or MassDEP may use the results of the chemical analyses conducted pursuant to this permit, as well as national water quality criteria developed pursuant to Section 304(a)(1) of the Clean Water Act (CWA), state water quality criteria, and any other appropriate information or data, to develop numerical effluent limitations for any pollutants, including but not limited to those pollutants listed in Appendix D of 40 CFR Part 122.

7. All existing manufacturing, commercial, mining, and silvicultural dischargers must notify the Director as soon as they know or have reason to believe:

- a. That any activity has occurred or will occur which would result in the discharge, on a routine or frequent basis, of any toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following "notification levels":
 - (1) One hundred micrograms per liter (100 ug/l);
 - (2) Two hundred micrograms per liter (200 ug/l) for acrolein and acrylonitrile; five hundred micrograms per liter (500 ug/l) for 2,4-dinitrophenol and for 2-methyl-4,6-dinitrophenol; and one milligram per liter (1 mg/l) for antimony;

- (3) Five (5) times the maximum concentration value reported for that pollutant in the permit application in accordance with 40 CFR §122.21(g)(7); or
 - (4) Any other notification level established by the Director in accordance with 40 CFR §122.44(f).
- b. That any activity has occurred or will occur which would result in the discharge, on a non-routine or infrequent basis, of any toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following "notification levels":
- (1) Five hundred micrograms per liter (500 ug/l);
 - (2) One milligram per liter (1 mg/l) for antimony;
 - (3) Ten (10) times the maximum concentration value reported for that pollutant in the permit application in accordance with 40 CFR §122.21(g)(7); or
 - (4) Any other notification level established by the Director in accordance with 40 CFR §122.44(f).
- c. That they have begun or expect to begin to use or manufacture as an intermediate or final product or byproduct any toxic pollutant which was not reported in the permit application.
8. This permit may be modified, or revoked and reissued, on the basis of new information in accordance with 40 CFR §122.62.

B. UNAUTHORIZED DISCHARGES

The permittee is authorized to discharge only in accordance with the terms and conditions of this permit and only from the outfalls listed in Parts I A.1. through I.A.4. of this permit. Discharges of wastewater from any other point sources are not authorized by this permit and shall be reported in accordance with Section D.1.e. (1) of the General Requirements (Part II) of this permit (Twenty-four hour reporting).

C. STORMWATER POLLUTION PREVENTION PLAN

1. The Best Management Practices Document, dated January 2002, is a fully enforceable element of this permit. Upon the effective date of the permit, the permittee shall continue to implement this BMP Document to reduce, or prevent, the discharge of pollutants to the receiving waters identified in this permit. The BMP Document shall be replaced by a Stormwater Pollution Prevention Plan (SWPPP) consistent with the requirements of this Part. All provisions of the 2002 BMP Document shall be incorporated into the SWPPP. The SWPPP shall serve as a tool to document the permittee's compliance with the BMP terms of this permit. Development guidance and a recommended format for the SWPPP are available on the EPA website for the Multi-Sector

General Permit (MSGP) for Stormwater Discharges Associated with Industrial Activities (<http://cfpub.epa.gov/npdes/stormwater/msgp.cfm>).

2. The BMP Document shall be replaced by a SWPPP and be certified by the permittee within ninety (90) days after the effective date of this permit, in accordance with the requirements identified in 40 CFR §122.22. A copy of this certification shall be sent to EPA and MassDEP within one hundred and twenty (120) days of the effective date of this permit. The BMP Document shall be in effect until the SWPPP is certified.
3. The SWPPP shall be prepared in accordance with good engineering practices and shall be consistent with the general provisions for SWPPPs included in the most current version of the MSGP. The most current MSGP at the effective date of this permit was effective May 27, 2009. The general SWPPP provisions are included in Part 5. Additionally, the permittee shall incorporate into the SWPPP all the specific pollution control activities and other requirements found in the MSGP's Industrial Sector R, Ship and Boat Building or Repairing Yards. The SWPPP shall specifically identify materials and processes that contribute total copper to Outfall 002 's and implement measures to minimize the discharge of total copper.

Specifically, the SWPPP shall document the selection, design, and installation of control measures and contain the elements listed below:

- a. A pollution prevention team with collective and individual responsibilities for developing, implementing, maintaining, revising and ensuring compliance with the SWPPP.
 - b. A site description which includes the activities at the facility; a general location map showing the facility, receiving waters, and outfall locations; and a site map showing the extent of significant structures and impervious surfaces, directions of stormwater flows, and locations of all existing structural control measures, stormwater conveyances, pollutant sources (identified in Part 3.c. below), stormwater monitoring points, stormwater inlets and outlets, and industrial activities exposed to precipitation such as, materials storage, disposal, and material handling.
 - c. A summary of all pollutant sources which includes a list of activities exposed to stormwater, the pollutants associated with these activities, a description of where spills have occurred or could occur, a description of non-stormwater discharges, and a summary of any existing stormwater discharge sampling data.
 - d. A description of all stormwater controls, both structural and non-structural.
 - e. A schedule and procedure for implementation and maintenance of the control measures described above and for the quarterly inspections and best management practices (BMPs) described below.
4. The SWPPP shall document the appropriate best management practices (BMPs) implemented or to be implemented at the facility to minimize the discharge of pollutants in stormwater to waters of the United States and to satisfy any non-numeric technology-based effluent limitations included in this permit. At a minimum, these BMPs shall be consistent with the control measures described in the most current version of the MSGP. In the current MSGP (effective May 27, 2009), these control measures are described in Part 2.1.2. Specifically, BMPs must be selected and implemented to satisfy the following non-numeric technology-based effluent limitations:

- a. Minimizing exposure of manufacturing, processing, and material storage areas to stormwater discharges.
 - b. Good housekeeping measures designed to maintain areas that are potential sources of pollutants.
 - c. Preventative maintenance programs to avoid leaks, spills, and other releases of pollutants in stormwater discharged to receiving waters.
 - d. Spill prevention and response procedures to ensure effective response to spills and leaks if or when they occur.
 - e. Erosion and sediment controls designed to stabilize exposed areas and contain runoff using structural and/or non-structural control measures to minimize onsite erosion and sedimentation, and the resulting discharge of pollutants.
 - f. Runoff management practices to divert, infiltrate, reuse, contain, or otherwise reduce stormwater runoff.
 - g. Proper handling procedures for salt or materials containing chlorides that are used for snow and ice control.
5. All areas with industrial materials or activities exposed to stormwater and all structural controls used to comply with effluent limits in this permit shall be inspected, at least once per quarter, by qualified personnel with one or more members of the stormwater pollution prevention team. Inspections shall begin during the 1st full calendar quarter after the certification date of this SWPPP. EPA considers calendar quarters as follows: January to March; April to June; July to September; and October to December. The permittee shall document the following information for each inspection and maintain the records along with the SWPPP:
- a. The date and time of the inspection;
 - b. The name(s) and signature(s) of the inspector(s);
 - c. Weather information and a description of any discharges occurring at the time of the inspection;
 - d. Results of observations of stormwater discharges, including any observed discharges of pollutants and the probable sources of those pollutants;
 - e. Any control measures needing maintenance, repairs or replacement; and,
 - f. Any additional control measures needed to comply with the permit requirements.
6. The permittee shall amend and update the SWPPP within fourteen (14) days of any changes at the facility that result in a significant effect on the potential for the discharge of pollutants to the waters of the United States. Changes which may affect the SWPPP include, but are not limited to, the following activities: a change in design, construction, operation, or maintenance, which has a significant effect on the potential for the discharge of pollutants to the waters of the United States; a release of a reportable quantity of pollutants as described in 40 CFR §302; or a determination by the permittee, EPA, or MassDEP that the SWPPP appears to be ineffective in achieving the general objectives of controlling pollutants in stormwater discharges associated with industrial activity.

7. Any amended, modified, or new version of the SWPPP shall be re-certified and signed by the permittee in accordance with the requirements identified in 40 CFR §122.22. The permittee shall also certify, at least annually, that the previous year's inspections and maintenance activities were conducted, results recorded, records maintained, and that the facility is in compliance with this permit. If the facility is not in compliance with any aspect of this permit, the annual certification shall state the non-compliance and the remedies which are being undertaken. Such annual certifications also shall be signed in accordance with the requirements identified in 40 CFR §122.22. The permittee shall maintain at the facility a copy of its current SWPPP and all SWPPP certifications (the initial certification, re-certifications, and annual certifications) signed during the effective period of this permit, and make these available for inspection by EPA and MassDEP. In addition, the permittee shall document in the SWPPP any violation of any applicable stormwater effluent limits with a date and description of the corrective actions taken.

D. MONITORING AND REPORTING

1. **For a period of 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, a web-based tool that allows permittees to electronically submit discharge monitoring reports (DMRs) and other required reports via a secure internet connection. **Beginning no later than one year after the effective date of the permit**, the permittee shall begin reporting using NetDMR, unless the facility is able to demonstrate a reasonable basis that precludes the use of NetDMR for submitting DMRs and reports. Specific requirements regarding submittal of data and reports in hard copy form and for submittal using NetDMR are described below:

- a. Submittal of Reports Using NetDMR

NetDMR is accessed from: <http://www.epa.gov/netdmr>. **Within one year of the effective date of this permit**, the permittee shall begin submitting DMRs and reports required under this permit electronically to EPA using NetDMR, unless the facility 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”).

DMRs shall be submitted electronically to EPA 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 electronic attachments to the DMRs. 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 shall continue to send hard copies of reports other than DMRs to MassDEP until further notice from MassDEP.

- b. Submittal of NetDMR Opt-Out Requests

Opt-out requests must be submitted in writing to EPA for written approval at least sixty (60) days prior to the date a facility would be required under this permit to begin using NetDMR. This demonstration shall be valid for twelve (12) months from the date of EPA

approval and shall thereupon expire. At such time, DMRs and reports shall be submitted electronically to EPA unless the permittee submits a renewed opt-out request and such request is approved by EPA. All opt-out requests should be sent to the following addresses:

Attn: NetDMR Coordinator

U.S. Environmental Protection Agency, Water Technical Unit
5 Post Office Square, Suite 100 (OES04-1)
Boston, MA 02109-3912

and

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

c. Submittal of Reports in Hard Copy Form

Monitoring results shall be summarized for each calendar month and reported on separate hard copy Discharge Monitoring Report Form(s) (DMRs) postmarked no later than the 15th day of the month following the completed reporting period. All reports required under this permit shall be submitted as an attachment to the DMRs. Signed and dated originals of the DMRs, and all other reports or notifications required herein or in Part II shall be submitted to the Director at the following address:

U.S. Environmental Protection Agency
Water Technical Unit (OES04-SMR)
5 Post Office Square - Suite 100
Boston, MA 02109-3912

Duplicate signed copies of all reports or notifications required above shall be submitted to the State at the following addresses:

MassDEP – Northeast Region
Bureau of Waste Prevention (Industrial)
205B Lowell Street
Wilmington, MA 01887

and

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

Any verbal reports, if required in **Parts I** and/or **II** of this permit, shall be made to both EPA-New England and to MassDEP.

E. STATE PERMIT CONDITIONS

1. This authorization to discharge includes two separate and independent permit authorizations. The two permit authorizations are (i) a federal National Pollutant Discharge Elimination System permit issued by the U.S. Environmental Protection Agency (EPA) pursuant to the Federal Clean Water Act, 33 U.S.C. §§1251 et seq.; and (ii) an identical state surface water discharge permit issued by the Commissioner of the Massachusetts Department of Environmental Protection (MassDEP) pursuant to the Massachusetts Clean Waters Act, M.G.L. c. 21, §§ 26-53, and 314 CMR 3.00. All of the requirements contained in this authorization, as well as the standard conditions contained in 314 CMR 3.19, are hereby incorporated by reference into this state surface water discharge permit.
2. This authorization also incorporates the state water quality certification issued by MassDEP under § 401(a) of the Federal Clean Water Act, 40 CFR 124.53, M.G.L. c. 21, § 27 and 314 CMR 3.07. All of the requirements (if any) contained in MassDEP's water quality certification for the permit are hereby incorporated by reference into this state surface water discharge permit as special conditions pursuant to 314 CMR 3.11.
3. Each Agency shall have the independent right to enforce the terms and conditions of this permit. Any modification, suspension or revocation of this permit shall be effective only with respect to the Agency taking such action, and shall not affect the validity or status of this permit as issued by the other Agency, unless and until each Agency has concurred in writing with such modification, suspension or revocation. In the event any portion of this permit is declared, invalid, illegal or otherwise issued in violation of State law such permit shall remain in full force and effect under Federal law as an NPDES permit issued by the U.S. Environmental Protection Agency. In the event this permit is declared invalid, illegal or otherwise issued in violation of Federal law, this permit shall remain in full force and effect under State law as a permit issued by the Commonwealth of Massachusetts.

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Best Management Practices
Rev. 1, Jan. 2002

Reviewed

B.Marinello
EPA Monitor

Approved

Ed Snyder
President



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Boston Ship Repair, LLC

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Best Management Practice BSR-BMP-01

Section 1, Introduction to Boston Ship Repair, Inc.

Boston Ship Repair Inc. is a facility located in Boston Harbor at 32 A Drydock Ave, Boston MA. It is located on eleven (11) acres of land, including a granite walled graving dock. See Plot plan 001. It maintains three buildings, Building 1- Pump House, Building 2-Store Room, Outside Machinists Shop and Carpenter Shop, Building 23 - Storage Room and Bathroom. It's offices are situated in two trailers located near the Dry-Dock.

Boston Ship Repair, Inc. is dedicated to the repair and modification of sea going vessels. The company's employees are members of Local 25 of the IUMSWA Union. The number varies with the work on hand and may run as high as 120 although the average number is closer to 30.

The principals of Boston Ship Repair, Inc. are:

Steve DiLeo	President
Harry Nichol森	Treasure and Comptroller.
Edward Snyder	General Manager
Bernard Marinello	EPA Monitor

Its sole dry-dock is identified as Dry-Dock No. 3 on the plot plan. It is a graving dock built from concrete, stone and granite by the United States Navy back in 1915 Its sole dry-dock is identified as Dry-Dock No. 3 on the plot plan. It is a graving dock built from concrete, stone and granite by the United States Navy back in 1915. Its dimensions are 1075 feet long, 149 feet wide and 51 feet deep. The dewatering pump has a capacity of 105,000 gallons per minute. During a normal drydock evolution pumping is required for approximately 8 hours. An approximate total of 6,400,000 gallons of water is pumped within this time frame. The outfall is into Boston Harbor.

The dock has the capacity to dock most of the world's vessels. The dock has the capacity to dock most of the world's vessels. Two recent dockings were of the Battleship USS Massachusetts and the Queen Elizabeth.

Boston Ship Repair does not engage in manufacturing or material treatments. Its sole business is the repair and modification of seagoing vessels. The pollutants generated are primarily the result of these repairs. They are identified on Pages 4 and 5 of Section two of the Best Management Plan.



Best Management Practice BSR-BMP-01

Section 2, Facility Pollutants

1.0 General Objectives

This Best Management Procedure herein describes the operational aspects of Boston Ship Repair's Dock No. 3 De-Watering discharge and the known locations of other discharge and drainage. The intent of this procedure is to identify pollutants generated at the facility by shipyard activities and to minimize any discharge of these pollutants into the Boston Harbor. This procedure will be part of Boston Ship Repair's request for a NPDES Permit.

2.0 Specific Objectives

The specific objectives of this plan are as follows

- 2.1 To provide instructions to all responsible parties and the procedures to follow to avoid introducing contaminants into the receiving waters
- 2.2 Separating non-contact cooling water, uncontaminated ballast water and hydrostatic test water from contamination by bilge wastes, oily water, and toxic sources.
- 2.3 Prevent visible foam and discolorations from being released into receiving waters.
- 2.4 Insuring that no unpermitted wastewater discharges occur in the facility.
- 2.5 To maintain areas where water discharges are released, free of debris and toxic materials, ensuring that contaminants are not washed into the receiving waters.
- 2.6 To improve safe working conditions by eliminating hazardous conditions.
- 2.7 To comply with the United States Environmental Protection Agency, The Massachusetts Department of Environmental Protection and the City of Boston regulations relevant to Clean Air, and Clean Water.

3.0 Boston Ship Repair Pollutants

3.1 Boston Ship Repair (BSR) is solely concerned with the repair and modification of marine vessels. These activities may include abrasive blasting and painting. It does no manufacturing or treatment of materials. The pollutants that may result from BSR activities are therefore limited to the following:

- 3.1.1 Vessel Discharges treatment
- 3.1.2 Abrasive blasting and Painting
- 3.1.3 Stormwater Runoff

3.2 Vessel discharges are identified as listed:

- 3.2.1 Sanitary wastes (Black Water)
- 3.2.2 Shower and lavatory sink water and laundry water (Grey Water)
- 3.2.3 Bilge and oily water contaminated ballast water
- 3.2.4 Non-contact cooling water is water, which is pumped into the various systems, which need to be cooled during operations. It may be either fresh or sea-water



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Section 2, Facility Pollutants continued.

3.3 Abrasive Blasting and Painting Pollutants

3.3.1 Spent grit, used to remove paint from surfaces, consisting primarily of Silicon, iron, aluminum or calcium oxides.

3.3.2 Paint chips and powder from removed paint.

3.4 Hydro-blasting, high-pressure water sprays pollutants

3.4.1 The water used for such operations flow into the graving dock.

3.4.2 The paint chips removed from such operations fall into the graving dock along with the hydro-blast water.

3.5 Paints and thinners

3.5.1 All paints and thinners may be pollutants in the form of airborne particles and spills, which reach the receiving waters.

3.6 Storm Water Runoff

3.6.1 Storm water runoffs contain trapped sediments and pollutants from various areas of the shipyard including paved areas. They flow into the City of Boston's sewer system.



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Best Management Practice BSR-BMP-01

Section 3, Boston Ship Repair Best Management Practices

This section consists of BSR's Best Management Practices to be used for control for pollutants in Boston Ship Repair, Inc. They have been numbered for ease in referencing and so that future changes and improved practices may be added easily. Each Best Management Practice data sheet provides a discussion on the need for the BMP, a description of the BMP, criteria related to its proper functioning and related concerns. While they may need to be reviewed on a case by case basis, the primary intent of each BMP should always be maintained under every given condition. A number of BMPs herein are intended to function in conjunction with other BMPs. The inspector should review each BMP thoroughly to obtain a complete understanding of how and why they are implemented.

Boston Ship Repair, Inc. BMP Data Sheet Listing.

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Best Management Practice BSR-BMP-01

BMP No. 1.0, Sanitary Waste Disposal

Rev. Jan. 8, 02

General

Ocean going vessels have an on board Collection, Holding and Transfer (CHT) system for sanitary wastewater. The systems are necessary to prevent discharge of sanitary waste while the ship is within navigable waters of the U.S.

BMP

Boston Ship Repair yard Superintendent will, when the CHT system requires to be pumped out and the effluent to be transferred, assure that it shall be hooked up and pumped into the Boston Sewer System. The CHT system shall be properly cleaned prior to work. And the tank cleaning effluent must be discharged into the sewer system or hauled away by a septic hauler.

BMP Objective.

When a vessel is placed in a Boston Ship Repair's dry dock, discharge of sanitary wastewater into the dock, where it will reach the Boston harbor is prohibited. Some means of transferring the wastewater to a land base sewerage system must be available. The Ship's sanitary wastewater holding tanks are to be connected to the land system and pumped out as necessary.

Criteria

A CHT system consists of a male, camlock type, quick disconnect coupling. A disconnect coupling dust cap is used to plug the discharge line when wastewater is not being pumped to a sewerage system. In order to pump out the CHT system, a hose attachment between the discharge coupling and the land based sewerage system is installed. This hose will have a female, cam-lock type quick disconnect coupling at one end and a male connector at the other end. The male connector will be connected directly into the sewerage system. All connections shall be watertight and repaired promptly when leaks occur. Boston Ship Repair's yard Superintendent has the responsibility to assure all connections are proper.



BMP No. 2.0, Gray Water Disposal

1.0 Gray Water disposal is Through the City of Boston Sewage system. BSR accomplishes the disposal as identical with CHT disposal



Best Management Practice BSR-BMP-3.0

BMP No. 3.0 Bilge and Contaminated Ballast Water and Oily Wastewater.

General

Vessels that are dry-docked at Boston Ship Repair, Inc. for repairs generally are carrying bilge and contaminated Ballast water, which must be disposed of properly. Ballast water is typically seawater that has been pumped into the ship's ballast tanks to provide necessary stability. In most cases the ballast water will have been disposed of overboard prior to the vessel entering U.S. waters, or possibly just prior to entering the dry dock.

Ship Compartments in lower decks generally collect excess fluids from pumps, leaking pipes or connections and cleaning operations, which constitutes bilge water. Bilge water is characteristically oily due to the presence of solvents, oil and heavy lubricants in the engine compartments.

BMP

At Boston Ship Repair, Inc., bilge water and contaminated ballast water discharge ports must be connected to a land based collection system or an approved temporary holding vessel or tank. The land-based collection may be accomplished via barge collection or tank truck transport or when approved by the local municipality discharged into the City of Boston's sanitary sewer system following any necessary treatment. Bilge and contaminated ballast waters must be treated to remove the potential pollutants that may be present.

BMP Objective

BSR Ship Superintendent and Yard Superintendent will, in order to prevent contact with potential pollutants (i.e., sediment, blast abrasives, paint chips, trash, etc.) which may be on the dry dock floor to prevent the discharge of potentially oily bilge and ballast water to surface waters. In order to provide necessary treatment for the bilge and ballast waters, which can be contaminated with oily pollutant, the discharge ports for these wastewaters must be connected and pumped into a collection system.

Criteria

Connections to bilge and ballast discharge outlets may be accomplished through the use of screw on scupper fittings, bolt-on scuppers or various flange fittings. If these fittings are not applicable, bolts can be welded to the vessel hull and bolt-on scuppers can be applied. The approval of the vessel captain is necessary for this action. Discharge outlets not in use, or of unknown origin should be plugged with wood corks or capped with closed flange connections while the vessel is docked.

Concerns

All pumping, valve, metering and coupling equipment must be watertight. Leaks must be immediately repaired when discovered. (See BMP 5.0)

The design flow of the collection and treatment system must be adequate to receive the volume of bilge and contaminated ballast water being transferred. Land based storage tanks may be used to equalize the flow to the treatment system.



Best Management Practice BSR-BMP-4.0

BMP No. 4.0 Miscellaneous Discharges

General

There are a number of miscellaneous types of potential discharges that are not specifically addressed in this manual. They include condensate discharges, air compressor lubricant leakage, degreasing solutions, hopper washwater, ground water leakage in walls of dry-dock, maintenance equipment leakages and discharges from vessels sea chests.

BMP

Boston Ship Repair, Inc. management, through its officers in charge, superintendents, foremen and inspection personnel schedule regular, shop to shop and operation to operation, surveys to identify potential miscellaneous discharges and to establish procedures to ensure the correct handling of each.

BMP Objective:

Miscellaneous discharges throughout Boston Ship Repair facility must be handled on a case by case basis, due to their variability. Questions about the regulatory aspect of a specific discharge should be addressed to the EPA monitor for resolution. Some discharges may be disposed of within the sanitary sewer system. Other discharges may be directed to the storm sewer system or discharged directly into the Boston Harbor, after receipt of a NPEDES permit. Sea Chest water must be treated as bilge water. Graving dock ground water infiltration is treated as storm water and discharged accordingly. Maintenance shop chemicals, i.e. degreasing compounds, solvents, are appropriately contained and disposed of as per manufacturer recommendations and state and local requirements. Dust collection hopper washwater and grit remnants shall be treated as spent abrasive and bilge water.

Concerns

Boston Ship Repair's EPA Monitor will assist shipyard personnel in locating and identifying miscellaneous discharges. Discharge of pollutants to Boston Harbor is prohibited once a vessel is placed into BSR's dry-dock. A means of transferring the wastewater to a land based collection/treatment facility will be provided by BSR's Yard Superintendent.



Best Management Practice BSR-BMP-5.0

BMP No. 5 Leaking Pipe, Hose and Valve Connections

General

Vessel repair and overhauls require Boston Ship Repair personnel to make various hose and piping connects between the vessel and shore. These connections include sanitary waste disposal, gray water disposal, bilge and ballast water disposal, non contact cooling water supply, steam supply and fire water supply among others. Due to the number of hoses, valves and couplings it is imperative that leaks are prevented. Leakage from any of these point could fall into the dry-dock and discharge into Boston Harbor.

BMP

Leaks that are detected from hose fittings (valves, meters, straight couplings, reducers, Etc. must be repaired immediately. A stock of hose and piping appurtenances, commonly used is maintained in Boston Ship Repair's store room.

BMP Objective.

No approved discharges from moored or dry-docked vessels in BSR's facility are allowed to enter the adjacent waters or the dry dock. Repairs must be taken immediately upon discovery of leaks.

Concerns:

Hose and hose connection replacement items are kept stocked in Boston Ship Repair, Inc. stock room. The Yard Superintendent and or the Trade Foremen conduct a general inspection of operational hoses and appurtenances on a regular basis.



Best Management Practice BSR-BMP-6.0 Revised Jan 8 '02

BMP No. 6.0, Oil Storage and Containment

General

Large quantities of oil and oily water may be collected, pumped and transported in tank trucks from Boston Ship Repair, Inc. from vessels docking at Dry Dock No. 3. Bilge water and tank cleaning water are the primary sources of oily contaminants on board a vessel. BSR does not maintain oil and water separators and therefore transport waste oils and oily water to recycling facility, where the oil is recycled into a usable product.

BMP

The volumes of oil and oily wastewater collected are pumped into tank trucks as needed. Any oil drums or other temporary storage will require containment and an impervious liner. Hose connections will be tight and drip pans placed under each, covered with absorbent clothes. Booms shall be placed around all moored or stationary vessels, barges or lighters. Placement of the booms is such as to maximize the containment of spills. Periodic adjustment is made as necessary to ensure proper placement. Booms will not be necessary for vessels docked; the graving dock is a completely contained dock.

BMP Objective

Since oil containment and transport is a common task at Boston Ship Repair, Inc., the possibility of an oil spill is ever present. It is imperative that containment berms around oil storage tanks/drums are designed to contain the stored volume should accidents occur. This subject will be discussed weekly at the foremen meetings to emphasize the need for compliance and to reinforce their knowledge of Oil Spill Procedures. Oil Spill procedures are posted in the foremen shop and in the conference room. Responsibility for Oil Spill functions are specified therein and alternates listed. Where additional training of individuals is noted, the EPA Monitor will supply the same and maintain records of training.

Criteria

The lining within the bermed containment area must be impervious (i.e., concrete, steel or low pervious material (i.e., synthetic liners) The direct discharge of rainwater trapped inside an oil storage containment berm shall not occur. Such water must be pumped or transported to a waste containment tank or tank truck.

Concerns

An array of oil cleanup materials is kept on site in the BSR's Storeroom. Boston Ship Repair supervisors are knowledgeable of the appropriate uses of these materials. The type of impervious liner used within every containment berm and the containment area is periodically checked by BSR's EPA Monitor to ensure that oil leaks from the tanks cannot infiltrate into the ground. Boston Ship Repair, Inc. maintains an "Oil Spill" procedure to be used in case of a petroleum product spill into Boston Harbor.



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Best Management Practice BSR-BMP-7.0

BMP No.7.0 Graving Dock Cleanup

General

Boston Ship Repair, may conduct major vessel repair, overhaul and construction in its graving docks. A vessel will be brought into a graving dock while the dock is flooded and positioned onto large support blocks. The dock end will be sealed with a caisson and the graving dock will be emptied of all water. The vessel is left standing freely on the support blocks and is then ready for cleaning and overhaul work.

Floor channels are used to collect wash and runoff water. The channels direct these flows to a sump pump, which discharges, into the Boston Harbor at a permitted discharge point. The channels may be fitted with sediment traps although this is not the usual case.

Vessel maintenance and overhaul work generates numerous sources of pollutants. These pollutants include blast abrasives, paint, paper trash, discarded construction materials, sediment, marine growth, oil, solvents, and plastics. Tank and compartment cleaning within the vessel interior may also generate discharges of cleaning water. Bilge water, ballast water, non-contact cooling water, gray water and black water (sanitary wastewater) are also be managed. (See BMPs 1.0 to 5.0). Since these pollutants fall upon the dock floor there lies a possibility of pollutants being discharged with wash water, accidental discharge, or storm water that is collected in the dry-dock discharge sumps. Various BMPs (i.e., directional hoses, dock floor drains, etc. are implemented to reduce the possibility of this happening.

BMP

BSR's Yard Superintendent on a regular basis accomplishes clean up of the graving dock floor to remove trash, blast abrasive, oil and other pollutants. He maintains records of each cleaning occurrence. The materials and or fluids collected by such cleanup are disposed of in appropriate disposal bins/containment tanks.

After a vessel has been docked in BSR's dry-dock; all dock floor drains shall be completely covered with tight fitting plywood, metal covers or tarpaulin.

The floor channels and sediment traps shall be checked weekly by BSR's Yard Superintendent and cleaned of all blast abrasive and refuse. Water shall not be used to wash grit or other materials into the channels.

Before the graving dock is flooded, the cleanup of the floor must be completed and inspected. Hosing of the dock floor with water is not an acceptable cleanup technique and will not be performed. Hydrostatic leaks and gate leakage must be collected and diverted to dock channel drains. This water shall not be permitted to contact contaminants on the graving dock floor.



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BMP No.7.0 Graving Dock Cleanup (continued)

BMP Objective

BSR's objective is to maintain a daily cleaning schedule of the graving dock floor to reduce the potential for pollutants to enter the drainage system via storm water runoff or by accidental ship discharge. Discharges from the docked vessel must not come in contact with the dock floor. Any non-contact cooling water will be piped, through flexible hosing, to an acceptable discharge point (i.e., floor channels or sump.)

BSR cleans the dock at the end of each blasting shift to minimize dock particulate pollutants from entering the channels or dock sumps. All materials are vacuumed or swept up and disposed of. Hose testing water is allowed to contact the dock floor after the cleanup of the floor has occurred.

Criteria

BSR's dock floor cleanup will be accomplished under the supervision of its Yard Superintendent, with the use of all or some of the equipment listed below:

1. Front end loaders
2. Tractor sweepers
3. Mechanical blowers.
4. Mobile sweepers
5. Mobile Vacuum
6. Hand Brooms
7. Stationary Vacuums.

Mobile sweepers are capable of picking up spent abrasive that is several inches deep. The sweeper's grit containment bin can be mechanically lifted by the operator using the sweeper arm and emptied directly into a designated grit refuse bin.

Front-end loader operators scrape the graving dock floor in areas that are smooth and flat. The grit is pushed into a pile and then picked up and emptied.

Mechanical blowers can be used to blow grit from between the keel blocks, from underneath stationary equipment and disposal bins and from underneath support scaffolding. Upon completion of mechanical cleanup, a manual broom sweeping is performed to finish grit removal. Various types of stationary vacuums are capable of providing grit cleanup.

Channels are kept clean and inspected for cleanliness prior to dock flooding.

Concerns

Boston Ship Repair's Yard Superintendent will maintain records of each graving dock cleaning. If an area is inaccessible to a front-end loader or mechanical sweeper, vacuums, shovels or brooms should be used to complete the clean up of blast abrasive and other solid pollutants.



BMP No. 7.0 Graving Dock Cleanup (continued)

BSR's Yard Superintendent, following the completion of dock work, will assure that the channels are cleaned of pollutant materials.

Prior to flooding the dock, filters and absorbent materials must be removed from the dock floor. During periods of rainfall.



Best Management Practice BSR-BMP-8.0

BMP No. 8.0 Water Cleaning

General

Prior to BSR performing ship maintenance, the exterior vessel hull must be cleaned of attached sediment and marine growth. Low-pressure water spray is used to clean vessel hulls when only the surface layer of sediment and marine growth is to be removed. This technique generates a large volume of wash water with the potential of transporting solid particulates in the form of runoff. The runoff is discharged through dock floor channels.

BMP

Wash water runoff shall be channeled through filter fences before discharging into the Boston Harbor.

BMP Objective

Water spraying techniques used to clean vessel hulls produce a scattered water pattern, which can be difficult to control or contain. Since water cleaning by spray is used to remove only attached sediment and marine growth; this runoff is allowed to discharge from dry docks. The runoff is filtered through straw bales or similar filter material to reduce the particulates. The particulate matter is cleaned up during the daily dry dock cleaning.

Criteria

Straw bales or other filter material may be used by BSR to filter the wash water runoff. Bales are arranged to filter all runoff from the water cleaning operation. The bales are replaced as necessary to provide appropriate treatment.

The filter material used may be woven or non-woven burlap, nylon, polyester, or other fabrics available.

Concerns

The filter material are periodically removed and replaced to maintain effectiveness. Water may periodically pool in the area of the filter fence due to sediment, grit and other particulates becoming trapped. When this occurs, the obstructing material will be cleaned up and disposed of in a designated waste bin.

Prior to flooding the graving dock all filter material are removed.



Best Management Practice BSR-BMP-9

BMP No. 9.0 Water Blasting, Hydro-blasting, and Water Cone Blasting.

General

Water-blasting, hydro-blasting, water-cone blasting is performed by Boston Ship Repair to either clean sediment and marine growth from the vessel hull or to remove the top layers of hull paint. These techniques generate large volumes of water with the potential of transporting existing pollutants to the Boston Harbor waters.

BMP

Water blasting, hydro blasting, and water-cone blasting shall not be accomplished by BSR unless prior clean up of the dry-dock floor is completed.

Water blasting runoff shall be channeled through straw bales and or other filters to catch most of the particles of paint and marine growth. Once the floor is dry the collected particles may be removed employing graving dry-dock cleaning methods.

BMP Objective

Water blasting techniques produce a scattered water pattern, which is difficult to control, or contain. Unless prior cleanup of the dock has been conducted, it is difficult to prevent water blast from contacting pollutants.

Criteria

Runoff generated from water-blasting, hydro-blasting, and water-cone blasting shall not be allowed to discharge directly into surface waters from Boston Ship Repair's graving dock.

Concerns

All pump connection, valves, meters and couplings must be watertight. Leaks must be immediately repaired when discovered.



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Best Management Practice BSR-BMP-10

BMP No. 10.0 Hydrostatic Testing.

General

General work and repairs are continually being performed on the interior or exterior of vessels docked in Boston Ship Repair's dry-dock. Occasionally, water pressure hose testing of a repaired structure (i.e., ship interior tank welds, door seals or exterior spot weld) must be conducted. Water is used to fill and pressurize an interior tank or high-pressure water may be sprayed on a weld from outside the vessel. In some cases water can splatter in all directions as a test is conducted. The water will collect on the floor of the dock and find its way into Boston Harbor.

BMP

Hose and high water pressure testing is minimized wherever possible. Pollutant materials such as sediment, blast grit or trash on the dock floor must be cleaned up prior to initiation of the test. The water should be piped or channeled whenever possible to reduce contact with the dock floor.

BMP Objective

Hose testing may result in the inadvertent mixing and discharge of test water and existing pollutants. Therefore the potential for this occurring is reduced by strict cleanup of the dry dock floor prior to beginning the test.

Concerns

Pump testing which may require large volumes of water will be conducted with a complete recycle system that does not allow water to come into contact with the dock floor. In all cases BSR will attempt to pump water from the adjacent surface waters and recycle it back through the pump under test.



Best Management Practice BSR-BMP-11
BMP No. 11.0 Shrouding and Containment

General

Vessel repairs generally involve abrasive blasting and painting. These operations are carried out on the vessel's interior compartments and tanks and the exterior hull and decks. The use of abrasives and paint represent a potential pollutant source and a threat to the water surface.

BMP

While performing abrasive blasting or painting operations on the vessel's hulls, Boston Ship Repair ensures containment of grit and paint particles by placing shrouds, strung along a length of the dry dock walls. It is fastened to the walls and the vessel deck by ropes and cables. This minimizes the amount of grit and paint particles escaping into the air, and into receiving waters. BSR, wherever feasible, performs vacuum blasting and roller or brush painting of decks. When this cannot be accomplished, a dome like shroud is erected around the area to be abrasive blasted and painted.

BMP Objective

Boston Ship Repair's objective is to minimize the amount of airborne pollutants by proper and efficient operation of equipment and by properly placed containments.

Concerns

The shrouds must be properly designed, constructed, positioned and erected.
Employees must be trained in the efficient and proper use of blasting and spraying equipment.
Equipment must be checked prior to use to assure its proper functioning and minimizing over spray.



Best Management Practice BSR-BMP-12
BMP No. 12.0 Yard Inspection

General

Boston Ship Repair performs a variety of repairs, cleaning painting, construction and fabrication operations. Despite the continual changing maintenance operations, manpower requirements and repair schedules BSR gives a high priority to good housekeeping and BMP control. New employees are provided with initiation schooling to emphasize the importance of maintaining BMP controls and to report potential and existing environmental problems.

BMP

BSR's Yard Superintendent is responsible for routine inspections of all on-site waterfront, pier and docking facilities. The inspection include an evaluation of BMP control implementation and effectiveness. The inspections include the observation of:

1. Repair activities along the dry dock.
2. Abrasive blast material storage areas
3. Trash and waste container disposal areas,
4. Drip pan and drum platform temporary storage areas.
5. Oil containment/berm areas
- 6 Waste oil transfer operations
7. Areas adjacent to storm drain inlets

Frequent surveillance of the shipyard support shops and outside contractor sites are conducted to inspect for the possibility that pollutants have entered the storm drain system via tub or sink drains in the shops.

BMP Objective

The purpose of BSR's inspection is to keep abreast of changing conditions within the shipyard, to observe employee, contractor BMP controls and good housekeeping performance, to identify potential pollutant source problems and determine conditions which require resolution through immediate action.

Concerns

Action will be taken immediately to correct specific noted problems. Follow-up actions are undertaken to ensure that specific concerns have been addressed.



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Best Management Practice BSR-BMP-13 BMP No. 13.0 General Yard Maintenance

General

Boston Ship Repair performs a variety of repair, cleaning painting, construction and fabrication. The repairs vary from ship to ship and the number and type of employees vary likewise. It therefore is a primary responsibility of BSR supervision to assure employees are kept knowledgeable about their responsibility in maintaining a clean environment. This is accomplished most effectively when employee's actions are observed by their foremen and by the results of the Yard Superintendent's inspection (BMP 11).

BMP

BSR's Yard Superintendent makes a schedule, daily, or as needed, for cleaning crews to accomplish the following:

1. Remove and properly dispose of general yard refuse, such as paper, plastics, cans, containers bottles, used fabrication materials, scrap.
2. Cleanup spent blast grit.
3. Clean drip pans and drip platforms.
4. Remove and dispose of saturated soils.
5. Ensure that trash cans and trash bins are in appropriate locations adjacent to piers, and dry-dock.
6. Remove and dispose of all refuse found on the water surface of the dock.

BMB Objective

The objective of the above is to use accepted practices to maintain a clean yard. An organized clean yard provides an environment that reduces the potential for pollutants to enter the Boston Harbor. A clean up crew walks through the yard conducting cleanup tasks of a general nature and per the instructions of the Yard Supervisor.

Concerns

It is unlikely that the shipyard can maintain the intent of this BMP without the cooperation of its employees and the dedication of the cleaning crew. Management must continually promote the concept of "Good Housekeeping"



Best Management Practice BSR-BMP-14
BMP No. 14 Abrasive Blast Material Containment

General

Boston Ship Repair performs vessel blasting and painting on numerous vessels. Abrasive blasting is one of the preliminary tasks performed when a vessel is docked for repairs and maintenance. The blasting is accomplished with coal slag, copper slag or similar material. Blasting generates a large volume of spent abrasive, which must be cleaned up and disposed of on a frequent basis.

BMP

Spent blast abrasive must be stored in proper containment vessels while on the shipyard site. Disposal bins must have covers to prevent rainwater from entering and percolating through the stored abrasive.

BMP Objective

Boston Ship Repair's objective is to store all spent abrasive in appropriate containment vessels until ultimate disposal off site. Proper containment involves not allowing any storm water runoff or accidental discharges to come in contact with the abrasive. The grit will be stored in containers or on an impervious surface with tarpaulin covers.

Criteria

The containment structures will consist of specifically designed hoppers for grit or metal bins with covers. When necessary, an impervious surface with tarpaulin covers may be used temporarily.

Concerns

There must be appropriate volume available on site to contain all spent abrasive produced. Grit must be cleaned up between blasting shifts.



Best Management Practice BSR-BMP-15.0
BMP No. 15.0 Temporary Drip Pan and Drum Storage

General

Maintenance at Boston Ship Repair is continually being conducted which involve the mixing and pouring of fluids. In the process the fluids may be transported a short distances and temporarily stored in open containers. Paints, thinners, oil solvents and cleansers can be accidentally spilled or mishandled, creating an environmental hazard.

BMP

Drip pans and drum storage platforms are used by BSR to hold containers of fluids, which are used, at the shipyard. Drop cloths are placed underneath the drip pans and drum storage platforms to catch and soak and slop spillage.

BMP Objective

The drip pans and drum storage platforms ensure that spillage from fluid containers, such as paint buckets, do not soak into the soil or enter nearby surface waters. The pans and platforms are easily moveable and are used in the immediate work area by all employees conducting the work tasks. Drip pans are a precautionary measure only; leaks shall be repaired promptly. (BMP 5.0)

Criteria

Once the task is complete, the pans and platforms are cleaned and stored in the designated areas. The drop cloths are stored with the drip pans. They are periodically replaced.

Concerns

It is the responsibility of Boston Ship Repair's supervisors and foremen to ensure that employees and contractors use drip pans and drum storage platforms. The procurement of these articles must be made prior to start of job.

Each drip pan should be used to contain only one type of fluid while in use. This avoids the possibility of incompatible fluids such as acids and caustics, being mixed. The drip pans when full must be emptied in designated containment tanks for storage prior to disposal. Disposal will be in compliance with Local, State and Federal Regulations.



Best Management Practice BSR-BMP-16.0

BMP No. 16.0 Paint Can and Miscellaneous Container Disposal.

General

Boston Ship Repair's vessel repairs provide a continual source of empty paint cans and oil or solvent containers. General maintenance of vehicles, motors, pumps, engines and boilers also generate numerous leftover fluid containers and cans which must be discarded.

BMP

Empty cans and containers of paints, solvents, lubricants and oil must be disposed of daily in designated waste disposal bins. The disposal bins must be emptied or exchanged by the yard Superintendent as need arises.

BMP Objective.

Boston Ship Repair's objective is to ensure that waste cans and containers generated by shipyard maintenance operations are disposed of in an appropriate and efficient manner. Therefore, the cans are not allowed to accumulate on site and become a potential source of pollutants or leachate run off from storm water. The waste cans must be dry or wiped dry prior to being placed in a disposal bin.

Criteria

The disposal bins should be placed in locations as designated by the Yard Superintendent. The bins will be large enough to adequately store the waste cans generated between pickups by the disposal service.

Concerns

The top of the waste disposal bin shall remain closed to prevent rainwater from trickling over the discarded containers. This prevents the rainwater from picking up potential pollutants and leaking from the disposal bin. Regular disposal of the waste containers must be made.

The waste cans must be placed in the disposal bins, not stacked in areas adjacent to the bin.

Incompatible or reactive materials may not be disposed of in the same bins.



Best Management Practice BSR-BMP-17.0
BMP No. 17.0 Storm Drain Protection

General

Boston Ship Repair has a number of storm drain inlets prevalent through out the yard. The drains are fed by storm water runoff within the yard. The possibility of trash, loose grit, sediment and oil of being picked up and carried to the dry dock therefore exists. There are three storm water outfalls in the dry-dock. These outfalls are identified, numbered and permitted under the NPDES permit system and are shown on the attached plot plan.

BMP

Boston Ship Repair provides and installs filter media and fences around storm drain system while allowing storm water to enter. Additionally the dry-dock uses straw bales as filters to catch particle matter and prevent it from entering Boston Harbor.

BMP Objective

The filter fence used at BSR may be of woven or non-woven burlap, nylon, polyester, or other fabrics. Support posts are placed on the inside of the filter material around the outside of the storm grate with the straw bales formed around the filter fence. The filter fabric is cleaned or replaced as necessary.

Concerns

Excessive ponding may result following the installation of the inlet protection. Post storm cleaning may be required to alleviate the temporary ponding. After each storm the filter fence will be inspected to determine whether the fence materials and supports need re-establishment. All used filtering and absorbent materials must be disposed of in appropriate trash receptacles.



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Best Management Practice BSR-BMP-18.0 BMP No. 18.0 Record Keeping

Rev. Jan 8. '02

General

Boston Ship Repair, by nature of the ship repair business, requires constant need of repair, replacement inspection and cleanup of BMP installations. Records indicating a history of inspection and maintenance are therefore required. Training is an ongoing process at BSR and records of formal training provided to the foremen and employees are maintained by the EPA Monitor or designated alternate. On the job training of employees is not maintained excepting when it is determined that additional individual training is needed.

BMP

Records are maintained to document BMPs at the facility. The records maintained include the following:

1. Quantities source and type of petroleum wastes collected for disposal.
2. Quantities of abrasive, which are used for blasting, and quantities that are retrieved through clean up.
- 3 Date of installation of a BMP control, inspections, subsequent repairs
4. A listing of BMP Equipment and supplies
5. Date, Time, description and action taken for chemical or oil spills.
6. The location, quantities, destination and hauler of vessel discharge waters, and spent abrasive material.

Criteria

BSR's designated EPA Monitor maintains record keeping, including training records. The records are maintained in his office for review upon request from an authorized party.



Best Management Practice BSR-BMP-19.0
BMP No. 19 Spill Control and Counter Measure Plan.

General

Boston Ship Repair, by nature of the ship repair business, is involved in the pumping, tank truck storage, containment and treatment of petroleum products.

The US EPA mandates via 40 CFR 112 that facilities having above ground storage capacity of 1,320 gallons or 42,000 gallons below ground must have a SPCC Plan. Boston Ship Repair, Inc. does not have under ground storage facilities, nor does it store petroleum of any large quantities above ground. It has prepared and maintains on site, a spill control procedure for possible need, although it is not required.

BMP Objective

In the event of an oil spill or other pollutant spill emergency, an on site SPCC Plan greatly enhances the prospect for adequate response, containment and clean up before environmental damage is done.

Criteria

BSR's SPCC Plan includes the following:

1 A method for the prediction of the direction, rate of flow and total quantity of oil that could be discharged from the vessel, or tanker truck, etc.



Best Management Practice BSR-BMP-20.0
BMP No. 20 BMP Training.

Revised Jan.8 '02

General

Boston Ship Repair recognizes the importance of having its employees aware of the purpose of BMP procedures and structures.

BMP

BSR management provides all employees with regularly scheduled BMP seminars and discussions relating to shipyard pollutants. The training emphasized procedure, BMP techniques, and supervisory responsibility and accounting. Sub- Contractor firms in the facility are urged to participate in BMP training.

BMP Objective.

Training employees about the fundamentals of BMP control lessens the chance of recurrent pollutant discharges. Providing each supervisor and employee with a sense of responsibility and accounting ensures that solutions are found for recurrent problems.

Concerns

The primary concern is that not enough emphasis is given to teaching employees about BMPs. Each new employee should be made aware of BMPs on the first day of work and a copy of them provided to him.



Best Management Practice BSR-BMP-01

Section 4, BMP Inspections and Inspection Reports

General

Boston Ship Repair, Inc. performs periodic inspections of its dry-dock, shipyard facility and employee adherence to BMPs. Inspection data sheets are annotated with the results of the inspections. They are provided to the EPA Monitor and maintained in his office for review by management or other authorized individuals.

The inspections may be conducted by BSR's Yard Superintendent; its EPA Monitor or other management designated individual.

The inspections are designed to assure BSR management of employee understanding and compliance with BSR's Best Management Practices.

The following Inspection Forms may be used:

1. Graving Dock Inspection Form, Before docking, After docking, during Painting.
2. Shipyard Inspection Form
3. Inspection Report Summary.

The inspections may be of a routine nature, or as a response to a complaint or negative report, or as a follow up to assure corrective action was taken on previous noted discrepancies. All inspection reports are signed and dated. Additional comments relevant to the findings are encouraged by management and are written on the report.



BSR Graving Dock Inspection Report

Accomplished by: _____

Date: _____

Applicable portions of BMPs 4, 7, 13, 14, 17, 22, 24

Floor surface of Dock prior to Docking

	OK	NG	NA.	Comments
Trash cleaned				
No oil spills				
Machinery removed				
Drains are cleaned				
Filters removed from storm out falls				
Grit cleaned from floor and disposed of.				
No Grit or sediment in drains				



BSR Graving Dock Inspection Report

Accomplished by: _____

Date: _____

After Vessel Docking

Applicable portions of BMPs 1, 2, 4, 5, 15, 16,

	OK	NG	NA.	Comments
Sanitary Waste hooked to Sewer				
Miscellaneous discharges				
Water cleaning				
Leaking pipes, hose etc.				
Temp. Drip pan & Drum Storage				
Paint Can Bins				
Oil Storage & containment				



BSR Graving Dock Inspection Report

Accomplished by: _____

Date: _____

Applicable portions of BMPs 4, 7, 13, 14, 17, 22, 24
Floor surface of Dock prior to Docking

	OK	NG	NA.	Comments
Trash cleaned				
No oil spills				
Machinery removed				
Drains are cleaned				
Filters removed from storm out falls				
Grit cleaned from floor and disposed of.				
No Grit or sediment in drains				



BSR Graving Dock Inspection Report

Accomplished by: _____

Date: _____

After Vessel Docking

Applicable portions of BMPs 1, 2, 4, 5, 15, 16,

	OK	NG	NA.	Comments
Sanitary Waste hooked to Sewer				
Miscellaneous discharges				
Water cleaning				
Leaking pipes, hose etc.				
Temp. Drip pan & Drum Storage				
Paint Can Bins				
Oil Storage & containment				



BSR Shipyard Inspection Report

Accomplished by: _____

Date: _____

	OK	NG	NA.	Comments
Water Surface pollutants				
Misc. discharges				
Paint & Grit Storage				
Paint and grit clean up				
Hose/pipe leakage				
Paint Can Bins in place & covered				
Drip pan usage				
Oil containments				
Storm Water Drains				
Trash				
Pollutant spills				
Shrouds and containments				
Employee training accompl.				
Sub-Contr. Training.				



**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: **MA0040142**

PUBLIC NOTICE START AND END DATES: September 10, 2013 – October 9, 2013

NAME AND MAILING ADDRESS OF APPLICANT:

**Boston Ship Repair, LLC
32A Drydock Avenue
Boston, MA 02210**

NAME AND ADDRESS OF FACILITY WHERE DISCHARGE OCCURS:

**Boston Ship Repair, LLC
32A Drydock Avenue
Boston, MA 02210**

RECEIVING WATER(S): **Boston Inner Harbor to Massachusetts Bay**
{USGS Hydrologic Code #01090001 – Boston Inner Harbor (70-02)}

RECEIVING WATER CLASSIFICATION(S): **Class SB, CSO**

SIC CODES: **3731** (Ship building and repairing)

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1.0 PROPOSED ACTION, TYPE OF FACILITY AND DISCHARGE LOCATION

Boston Ship Repair, LLC (BSR), the “Permittee”, has applied to the U.S. Environmental Protection Agency for reissuance of a NPDES permit to discharge into Boston Harbor. The permittee is engaged in the repair and modification of sea going vessels. BSR leases this shipyard from the Boston Redevelopment Authority (BRA). See **Figure 1** for the facility location, **Figure 2** for a site plan of the facility and **Figure 3** for a water flow diagram of all outfalls.

2.0 DESCRIPTION OF TREATMENT SYSTEM AND DISCHARGES

BSR leases this shipyard and graving dock, also designated as Drydock number 3, located on Boston Harbor, from the BRA. This drydock was built in 1915 by the United States Navy and is located on an 11 acre site at 32A Drydock Road. The drydock is constructed of concrete, stone, and granite and is 1075 feet long, 149 feet wide, and 51 feet deep.

The site includes several buildings which provide a variety of services to docked vessels, as shown on **Figure 2**. These services include abrasive blasting, painting, and mechanical repairs. The BSR offices are located on site in two office trailers adjacent to the drydock.

A summary of recent Discharge Monitoring Reports (DMRs) data may be found in **Attachment A**. These data comprise the period between January 2009 and December 2012 which is referred to as the “monitoring period” in this fact sheet.

2.1 Sources of Discharge

2.1.1 *Outfall 001: Dry Dock Dewatering - Main Pump*

Seagoing vessels contract with BSR for service and repairs and typically have a scheduled time period when they will be docked for such service. When there is no vessel in the dry dock, the dry dock is typically kept flooded. As a vessel approaches the dry dock, the caisson gate is opened and the vessel is brought into the dry dock with the assistance of tug boats and winches. After a vessel is securely in the dry dock and positioned over the keel blocks, the caisson gate is sealed. At this point, up to fifty million gallons of ocean water is pumped from the dry dock through Outfall 001 to Boston Inner Harbor. The pumping rate is up to 103,000 GPM. The main pump loses head when the dry-dock water depth is less than approximately three feet. The remainder of the water is removed by a stripping pump described below. When all repairs and servicing of such vessel is completed, usually within one to two weeks, the dry dock is flooded and the vessel is floated back out into Boston Harbor.

2.1.2 *Outfall 002: Dry Dock Dewatering - Stripping Pump (internal outfall)*

Water in the dry dock that is not removed by the main pump is removed by a stripping pump with a 267,400 gallon per hour pumping rate capacity through Outfall 002 to Boston Inner Harbor. The stripping pump is also used to remove both water that leaks around the caisson seal and the rain water that collects in the dry dock and usually pumps for a few hours of every day that a vessel is docked. This outfall may also contain some non-contact cooling water which may be used in refrigeration and air conditioning systems on docked vessels.

In 2006, the permittee discovered that this outfall structure experienced a pipe failure. This failure was below grade and could not be easily accessed for repair. Therefore, the permittee re-routed this discharge in early 2007 so that it now discharges to the same outfall structure as Outfall 001. Whereas previously these two outfalls were a few feet from each other, they now share a common discharge point at 34 feet below the mean low water (MLW) level. This outfall continues to be designated as Outfall 002 and is an internal outfall that must be sampled in the dry dock at a point prior to discharging to Outfall 001.

2.1.3 *Outfall 003: Fire Suppression and Non-Contact Pump Cooling Water*

The shipyard maintains an ocean water fire main as a safety precaution while vessels are docked at the facility. This fire pump is an electric, deep well pump, which pumps water continuously when vessels are docked and typically discharges this water back out to the harbor about 50 feet from the pump location to Outfall 003. This pump has a pumping rate capacity of 864,000 gallons per day, so that roughly this amount of water is discharged every day that while a vessel is docked. A relatively small volume of this water is sometimes used as non-contact cooling water in refrigeration and air conditioning systems on docked vessels and varies considerably depending on the size of the vessel, the amount of crew on board and the time of year. This non-contact cooling water is pumped to the dry dock and is discharged through Outfall 002 with the other stripping pump discharges to Boston Inner Harbor.

2.1.4 *Outfall 005: Caisson Ballast Water*

Caisson ballast (ocean) water is discharged to Boston Inner Harbor and replaced with air to raise the caisson and seal the dry dock. Each docking and undocking operation results in the estimated discharge of 363,400 gallons of water from this caisson system.

2.1.5 *Outfall 004: Infiltration Sump Water (Non-NPDES Discharge)*

Dockside infiltration water is pumped from a sump into the municipal sewer collection system. Although this is identified as an outfall in the BSR application dated May 15, 2012, the discharge is regulated as a contributor to the municipal collection system, rather than in this individual permit.

2.2 Vessel Wastes:

Normal wastes produced aboard seagoing vessels include sanitary water, grey water, contaminated bilge water and non-contact cooling water. These waters are not authorized for discharge to Boston Harbor, with the exception of the occasional non-contact cooling water while vessels are docked as described above. These wastewaters are either discharged to the Boston Water and Sewer Commission collection system or hauled off site for appropriate disposal. The handling of these waters is detailed in the facility's Best Management Practices (BMP) Document. Pursuant to this reissued permit, the BMP Document will be replaced by a Stormwater Pollution Prevention Plan (SWPPP).

2.3 Sediment:

Sediment enters the dry dock when the caisson is lowered to dock or undock a ship. Sediment removed from the dry dock floor is not allowed to be discharged to Boston Harbor. These sediments are collected and hauled off site for disposal in accordance with solid waste disposal regulations. The handling of these waters shall be detailed in the facility's SWPPP. A total suspended solids (TSS) monitoring requirement has been maintained for Outfall 002, to confirm that the BMPs are effective in minimizing the solids being discharged to Boston Harbor.

2.4 Solid Wastes:

Blasting grit, paint chips, paint cans and all other forms of solid waste are disposed off site in conformance with all appropriate solid waste regulations. As noted earlier, the BMP plan addresses these activities and explains measures the permittee takes to minimize the discharge of any of these materials to Boston Harbor.

3.0 RECEIVING WATER DESCRIPTION

The Massachusetts Surface Water Quality Standards (SWQS), found at 314 CMR 4.00, designate Boston Inner Harbor (Segment MA70-02) as a Class SB (CSO) water.

Class SB waters are described in the MA SWQS (314 CMR 4.05(4)(b)) and 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. Waters with a SB(CSO) designation are occasionally subject to short-term impairment of swimming or other recreational uses due to untreated combined sewer overflows (CSO) discharges in a typical year [314 CMR 4.06(1)(11)]. The SB(CSO) designation for this water was adopted by MassDEP and approved by

EPA, based on information included in the Massachusetts Water Resource Authority's (MWRA) July 1997 Combined Sewer Overflow Plan and Environmental Impact Report.

Sections 305(b) and 303(d) of the CWA require that States complete a water quality inventory and develop a list of impaired waters. Specifically, Section 303(d) of the 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 a Total Maximum Daily Load (TMDL) for each pollutant that is prohibiting a designated use(s) from being attained. In Massachusetts, these two evaluations have been combined into an Integrated List of Waters. The integrated list format provides the status of all assessed waters in a single, multi-part list.

Boston Inner Harbor is listed on the *Final Massachusetts Year 2012 Integrated List of Waters*¹ as a Category 5 waterbody, which are those classified as "Waters requiring a TMDL". The pollutants and conditions contributing to this impairment are as follows: fecal coliform, *Enterococcus*, dissolved oxygen, and Polychlorinated Biphenyls (PCBs) in fish tissue.

Although the receiving water is impaired for bacteria as noted above, this permit does not contain any monitoring for bacteria as there are no known sources of bacteria discharged from this site. As noted in Part 2.2 above, any sanitary water that is generated on any docked vessels is not authorized to be discharged to the receiving water and any such water is either connected to Boston Water and Sewer's sanitary collection system or otherwise disposed of off site.

MassDEP is required under the CWA to develop a TMDL for waterbodies that are identified as impaired. A TMDL is essentially a pollution budget designed to restore the health of a water body. A TMDL first identifies the source(s) of the pollutant from direct and indirect discharges in order to next determine the maximum amount of pollutant (including a margin of safety) that can be discharged to a specific water body while maintaining water quality standards for designated uses. It then outlines a plan to meet the goal. No TMDLs have been finalized for this waterbody segment.

4.0 LIMITATIONS AND CONDITIONS

The effluent limitations and all other requirements described in Part 6 of this Fact Sheet may be found in the draft permit.

¹ <http://www.mass.gov/eea/agencies/massdep/water/watersheds/total-maximum-daily-loads-tmdls.html>

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 including monitoring and reporting. This draft NPDES permit was developed in accordance with various statutory and regulatory requirements established pursuant to the CWA and any applicable State regulations. The regulations governing the EPA NPDES permit program are generally found at 40 CFR Parts 122, 124, 125, and 136.

When developing permit limits, EPA must consider the most recent technology-based treatment and water quality-based requirements. Subpart A of 40 CFR Part 125 establishes criteria and standards for the imposition of technology-based treatment requirements in permits under Section 301(b) of the CWA, including the application of EPA-promulgated effluent limitations and case-by-case determinations of effluent limitations under Section 402(a)(1) of the CWA. EPA is required to consider technology and water quality-based requirements as well as all limitations and requirements in the existing permit when developing permit limits.

5.2 Technology-Based Requirements

Technology-based treatment requirements represent the minimum level of control that must be imposed under Sections 301(b) and 402 of the CWA (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 achievable (BAT) for toxic and non-conventional pollutants.

In general, the statutory deadline for non-POTW, technology-based effluent limitations 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.

In the absence of published 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).

The effluent monitoring requirements have been established to yield data representative of the discharges under the authority of Section 308(a) of the Clean Water Act, according to regulations set forth at 40 CFR § 122.41(j), 122.44(i) and 122.48. The monitoring

program in the permit specifies routine sampling and analysis which will provide continuous information on the reliability and effectiveness of the installed pollution abatement equipment. The approved analytical procedures are to be found in 40 CFR 136 unless other procedures are explicitly required in the permit.

There are no applicable technology guidelines (effluent limitations guidelines) for Shipbuilding and Repair. EPA issued the Draft Development Document for Proposed Effluent Limitations Guidelines and Standards for the Shipbuilding and Repair Point Source Category in December of 1979. These draft Guidelines were never finalized. In the absence of published technology-based effluent guidelines, 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). See 40 CFR §§125.3 (c)(2) and (c)(3). The factors to be considered in developing BAT limits are set forth at 40 CFR §§ 125.3(c)(2)(i) and (ii) and 125.3(d)(3)(i) - (vi) and include, among other things, the age of existing facilities, engineering issues, process changes, non-water quality-related environmental impacts, and the costs of achieving required effluent pollutant reductions.

5.3 Water Quality-Based Requirements

Water quality-based limitations are required in NPDES permits when EPA and the State determine that effluent limits more stringent than technology-based limits are necessary to maintain or achieve state or federal water quality standards (WQS). See Section 301(b)(1)(C) of the CWA.

Receiving water requirements are established according to numerical and narrative standards adopted under state law for each water quality classification. 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 concentration, are used. 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 CFR § 122.44(d)(1) and are implemented under 40 CFR § 122.45(d).

A facility's design flow is used when deriving constituent limits for daily and monthly time periods as well as weekly periods where appropriate. Also, the dilution provided by the receiving water is factored into this process where appropriate. Narrative criteria from the state's WQS are often used to limit toxicity in discharges where (a) a specific pollutant can be identified as causing or contributing to the toxicity but the state has no numeric standard; or (b) toxicity cannot be traced to a specific pollutant.

EPA regulations require NPDES permits to contain effluent limits more stringent than technology-based limits where more stringent limits are necessary to maintain or achieve state or federal WQS. The permit must address any pollutant or pollutant parameter (conventional, non-conventional, toxic and whole effluent toxicity) that is or may be discharged at a level that causes or has "reasonable potential" to cause or contribute to an excursion above any water quality criterion. See 40 CFR Section 122.44(d)(1). An

excursion occurs if the projected or actual in-stream concentration exceeds the applicable criterion. In determining reasonable potential, EPA considers (a) existing controls on point and non-point sources of pollution; (b) pollutant concentration and variability in the effluent and receiving water as determined from the permit application, monthly Discharge Monitoring Reports (DMRs), and State and Federal Water Quality Reports; (c) sensitivity of the species to toxicity testing; (d) known water quality impacts of processes on wastewater; and, where appropriate, (e) dilution of the effluent in the receiving water.

Water quality standards consist of three parts: (a) beneficial designated uses for a water body or a segment of a water body; (b) numeric and/or narrative water quality criteria sufficient to protect the assigned designated use(s); and (c) antidegradation requirements to ensure that once a use is attained it will not be degraded. The Massachusetts Surface Water Quality Standards (MA SWQS), found at 314 CMR 4.00, include these elements. The state will limit or prohibit discharges of pollutants to surface waters to assure that surface WQS 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 conditions of the permit reflect the goal of the CWA and EPA to achieve and then to maintain water quality standards.

Consistent with the MA SWQS promulgated at 314 CMR 4.03(2) and MassDEP guidance documents, MassDEP may set water quality based discharge limits based on a "mixing zone". Generally, mixing zones are areas in which exceedances of numeric WQS are allowed, provided that, among other things, these exceedances do not result in acute toxicity and that the mixing zone will still be protective of the narrative requirements of the WQS. In addition, mixing zones cannot be disproportionately large so as to interfere with the attainment of the designated uses assigned to the water body segment. All applicable numeric water quality criteria must be met at the edge of the mixing zone, and the other requirements of the state mixing zone must also be satisfied.

5.4 Antibacksliding

A permit may not be renewed, reissued or modified with less stringent limitations or conditions than those contained in the previous permit unless in compliance with the antibacksliding requirements of the CWA [see Sections 402(o) and 303(d)(4) of the CWA and 40 CFR §122.44(1)(1 and 2)]. EPA's antibacksliding provisions prohibit the relaxation of permit limits, standards, and conditions except under certain circumstances. Effluent limits based on BPJ, water quality, and state certification requirements must also meet the antibacksliding provisions found at Section 402(o) and 303(d)(4) of the CWA. Since all proposed permit conditions are at least as stringent as those of the current permit, antibacksliding is not applicable for this permit reissuance.

5.5 Antidegradation

Federal regulations found at 40 CFR 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 these 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.

5.6 State Certification

Under Section 401 of the CWA, EPA is required to obtain certification from the state in which the discharge is located that all water quality standards or other applicable requirements of state law, in accordance with Section 301(b)(1)(C) of the CWA, are satisfied. EPA permits are to include any conditions required in the state's certification as being necessary to ensure compliance with state water quality standards or other applicable requirements of state law. See CWA Section 401(a) and 40 CFR §124.53(e). Regulations governing state certification are set out at 40 CFR §124.53 and §124.55. EPA regulations pertaining to permit limits based upon water quality standards and state requirements are contained in 40 CFR §122.44(d).

6.0 EXPLANATION OF PERMIT'S EFFLUENT LIMITATIONS

6.1 Stormwater Pollution Prevention Plan (SWPPP)

The 2007 permit established a requirement for the permittee to develop and implement a Best Management Practices (BMP) Plan to address potential discharges of pollutants to the receiving water from operations at the site. The CWA allows the use of BMPs where specific numerical effluent limitations are not practical. The Best Management Practices Document produced by BSR, dated January 2002, was included as an integral part of the 2007 NPDES permit. Pursuant to 40 CFR §122.44(k)(4), BMPs may be expressly incorporated into a permit on a case-by-case basis where it has been determined they are needed to carry out the provisions of the CWA (see CWA, Section 304(e)). EPA incorporated the BMP document into the 2007 permit as a fully enforceable requirement based on Best Professional Judgment (BPJ). The authority for BPJ is contained in Section 402(a)(1) of the CWA, which authorizes the EPA Administrator to issue a permit containing "such conditions as the Administrator determines are necessary to carry out the provisions of the Act". The NPDES regulations in 40 CFR §125.3 state that permits developed on a case-by-cases basis under Section 402(a)(1) of the CWA must consider (1) the appropriate technology for the category class of point sources of which the applicant is a member, based on available information, and (2) any unique factors relating to the applicant.

The draft Development Document noted in Part 5.2 above stated in part:

The studies conducted by the Environmental Protection Agency (EPA) determined that the imposition of national industry-wide numerical limitations and standards is impractical at this time. This document therefore, provides guidance which recommends specific best management practices. Such management practices should be tailored to specific facilities. This determination shall in no way restrict the use numerical limitations in NPDES permits.

The best management practices identified in this document shall be guidance for the determination of best practicable control technology currently available [BPT], best available control technology economically achievable [BAT], and best available demonstrated control technology.

No final effluent guidelines have been issued for this point source category. EPA had determined for the 2007 permit that the permittee's BMP Document, dated January 2002, conformed to those BMPs recommended in the Draft Development Document and made a BPJ determination that the BMP Document prepared at that time represented a level of pollution control that was both BCT and BAT for this applicant.

For this reissued permit, since Outfall 001 has a stormwater component associated with activities at this site, the Agencies have determined it is preferable to replace this BMP plan with a Stormwater Pollution Prevention Plan (SWPPP). The SWPPP is a more comprehensive plan with which to address potential discharges to Boston Inner Harbor associated with these activities. There has been recent guidance developed that specifically addresses the potential discharge of pollutants from ship repair facilities in EPA's Multi-Sector General Permit (MSGP) for Stormwater Discharges Associated with Industrial Activities. (<http://cfpub.epa.gov/npdes/stormwater/msgp.cfm>). The latest MSGP was effective May 27, 2009. The permittee shall refer to the specific BMPs for Industrial Sector R, Ship and Boat Building or Repairing Yards when developing its SWPPP.

BSR stores and handles numerous chemicals on its property which could result in the discharge of pollutants to Boston Inner Harbor either directly or indirectly through storm water runoff. Operations include, but are not limited to, the following activities from which there is or could be site runoff: materials storage, materials processing and handling, abrasive blasting, water blasting, welding, and painting. To control these and other activities and operations which could contribute pollutants to waters of the United States, potentially violating the MA SWQS, the Draft Permit continues the existing permit's requirement to continue to implement the BMP Document that was developed for the prior permit. However, this permit requires the permittee to replace the BMP Document with a SWPPP containing best management practices (BMPs) appropriate for this facility (See Sections 304(e) and 402(a)(1) of the CWA and 40 CFR §125.103(b)). The SWPPP must be certified and implemented within ninety (90) days after the effective date of this permit, in accordance with the requirements identified in 40 CFR §122.22.

The goal of the SWPPP is to reduce, or prevent, the discharge of pollutants to outfalls with a stormwater component or from other areas of the site. The SWPPP requirements in the Draft Permit are intended to provide a systematic approach by which the permittee shall at all times, properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of the permit. The SWPPP shall be prepared in accordance with good engineering practices and identify potential sources of pollutants, which may reasonably be expected to affect the quality of stormwater discharges associated with industrial activity from the facility. The permit requires that the permittee specifically consider measures in the SWPPP which will reduce the effluent levels of total copper, which have been found to be relatively high from Outfall 002 as discussed in Part 6.2 below. The SWPPP is a supporting element to any numerical effluent limitations in the Permit and is an enforceable element of this permit.

Implementation of the SWPPP involves the following four main steps:

- (1) Forming a team of qualified facility personnel who will be responsible for developing and updating the SWPPP and assisting the plant manager in its implementation;
- (2) Assessing the potential storm water pollution sources;
- (3) Selecting and implementing appropriate management practices and controls for these potential pollution sources; and
- (4) Periodically re-evaluating the effectiveness of the SWPPP in preventing storm water contamination and in complying with the various terms and conditions of the Permit.

To minimize preparation time of the SWPPP, the permittee may, for example, reflect requirements for Spill Prevention Control and Countermeasure (SPCC) plans [under Section 311 of the CWA and 40 CFR Part 112], Corporate Management Practices, etc.; and may incorporate any part of such plans into the SWPPP by reference. Provided these references address specific pollution prevention requirements and the goals of the SWPPP, they can be attached to the SWPPP for review and inspection by EPA and MassDEP personnel. Although relevant portions of other environmental plans, as appropriate, can be built into the SWPPP, ultimately however, it is important to note that the SWPPP should be a comprehensive, stand-alone document.

Pursuant to Section 304(e) of the CWA and 40 CFR §125.103(b), best management practices (BMP) may be expressly incorporated into a permit on a case-by-case basis where necessary to carry out Section 402(a)(1) of the CWA.

Generally, BMPs should include processes, procedures, schedules of activities, prohibitions on practices, and other management practices that prevent or reduce the discharge of pollutants in storm water runoff. A copy of the most recent SWPPP shall be kept at the facility and be available for inspection by EPA and MassDEP. The draft permit requires the permittee to continue to implement the current BMP plan, but to develop, certify, and implement a SWPPP plan no later than ninety (90) days after the permit's effective date. The SWPPP is a supporting element to any numerical effluent limitations which minimizes the discharge of pollutants through the proper operation of

the facility. Consequently, the SWPPP is as equally enforceable as the numerical limits and other requirements of this permit. See **Part I.C.** of the permit for specific SWPPP requirements.

6.2 Effluent Monitoring

The regulations at 40 CFR 122.44(i)(1)(ii) require monitoring of *the volume of effluent discharged from each outfall*. Consistent with the 2007 permit, the total flow for Outfalls 001, 002, 003 and 005 shall be reported with each discharge occurrence. To report these total flow values, the permittee shall measure by meter or estimate the discharge volume of each of the regulated discharges from pump curves, for the pumps used at applicable locations. As an attachment to the Discharge Monitoring Reports that are submitted monthly, the permittee shall also submit additional effluent flow tables for each outfall that show the volume pumped each day of the month that pumping occurred as well as the maximum flow rate. As noted earlier, the DMR results for the period of January 2009 through December 2012 are shown in Attachment A and are summarized below.

Outfall 001 – Dry Dock Dewatering – Main Pump

The current permit requires monitoring and reporting of flow for each occasion that the dry dock is emptied and flooded. The permittee reports the daily discharge of water through this pump, as estimates based on pump curves consistent with this main pump. Flows from this pump are up to 50 million gallons per docking and undocking event, but are often in the range of 30 to 40 million gallons. During some periods when vessels are not docked, the permittee discharges water that has accumulated in the dry dock when the stripping pump was not being used. During the monitoring period of 2009 through 2012, flow from Outfall 001 averaged 42.7 MGD per month while the highest total monthly flow was 170.6 MGD.

Outfall 002 – Dry Dock Dewatering and Non-Contact Cooling Water – Stripping Pump

As with the main pump discharging to Outfall 001, the permittee records the amount of flow as an estimate, based on pump capacity curves for discharges to Outfall 002. As discussed earlier, this discharge was re-routed so that it now discharges to the same outfall structure as Outfall 001. Outfall 002, is now an internal outfall, where sampling may be conducted at the last accessible point prior to discharge to Outfall 001. During the monitoring period, the monthly average flow through Outfall 002 was 1.76 MGD, while the highest total monthly flow was 13 MGD.

In order to confirm that the BMPs are effective at minimizing pollutants to the receiving water, this permit has maintained a monitoring requirement for total suspended solids (TSS) that was established in the 2007 permit. This requirement is also being maintained to be consistent with antibacksliding regulations. Since the stripping pump operates when repairs are ongoing for docked vessels, it was determined Outfall 002 would be the most likely outfall to contain solids and pollutants associated with the ship repair operations

listed in Part 2.0 above. During the monitoring period, TSS levels averaged 12.8 mg/l with a high value of 121 mg/l.

TSS shall continue to be monitored once per week while the stripping pump is in operation. The 2007 permit required an annual priority pollutant scan to be conducted for the Outfall 002 effluent. This scan was required due to the variety of potential pollutants that are present on the dry dock floor from activities conducted on vessels and based on the assumption that Outfall 002 was believed to have the highest concentration of solids and other pollutants. These scans resulted in most parameters not being detected, with the exception of the parameters shown below:

Priority Pollutant Scan Results

Year	Parameters	Concentration, ug/l	Instream water quality criterion, acute, ug/l
2008	copper	330	4.8
	zinc	250	90
2009	copper	560	4.8
	zinc	340	90
	beryllium	5	none
2010	copper	330	4.8
	zinc	150	90
	total xylenes	3.5	none
2011	copper	270	4.8
2012	copper	330	4.8
	phenols	150	10,000 (human health based)

In order to determine whether these pollutants would have the potential to cause or contribute to any WQS violations, an analysis of the total copper and total zinc effluent levels was conducted, since the levels of copper and zinc were highest relative to the applicable water quality criteria (WQC) of those parameters that were detected. In order to determine the potential for total copper and total zinc levels to cause or contribute to

WQS violations, an assessment of the dilution available to this discharge was made. Modeling has been conducted on the tidal exchange experienced in Boston Harbor by Signell and Butman (1992)². The authors used a box model, which is a hydrodynamic model to describe flushing dynamics between Massachusetts Bay and Boston Harbor. As described in Kelly (1998)³, this modeling showed that the volume of water exchanged during tidal mixing represented an annual average of 3500 to 4300 m³/sec. The lower figure is equivalent to about 79,840 MGD. In comparison to tidal exchange, the average freshwater flow to the entire harbor was 37 m³/sec or about 840 MGD.

Thus, the available dilution is dominated by the tidal exchange. It is assumed that the Inner Harbor, where BSR's discharge is located, experiences a moderate amount of the estimated 79,840 MGD of tidal flushing that occurs in the main harbor. With the conservative assumption that the area of BSR's discharge receives only 1% of this tidal exchange, or about 800 MGD, BSR's average maximum daily discharge amount of 1.76 MGD would still be diluted about 455 times (800/1.76). Using the highest copper value detected, 560 ug/l, this dilution would result in an estimated instream concentration for total copper of about 1.2 ug/l (560/455), compared to the instream water quality criterion of 4.8 ug/l. Using the highest zinc value detected, 340 ug/l, this dilution would result in an estimated instream concentration for total zinc of about 0.75 ug/l (340/455), compared to the instream water quality criterion of 90 ug/l.

Therefore, with this magnitude of available dilution, there is not a reasonable potential that the discharge of copper or zinc from Outfall 002 would cause or contribute to a WQS violation. However, due to the limited effluent data for copper and the high relative concentrations detected relative to the instream WQC, the draft permit has established a quarterly monitoring requirement for copper for Outfall 002 and a requirement in its SWPPP for the permittee to consider measures to reduce effluent copper levels.

This permit will continue to rely on the TSS limits for Outfall 002 as well as the permittee's adherence to its current BMP Document, which will be superseded by a SWPPP, to limit the amount of pollutants that are discharged to the receiving water from the dry dock. Although the annual PP scan requirement has been eliminated, EPA believes it is warranted to require a one time PP scan of Outfall 002 as a screening to be considered during the next permit reissuance. Therefore, the draft permit has established this one time screening to be conducted during the fourth year of the permit.

² Signell, R.P. Butman, B. (1992) Modeling tidal exchange and dispersion in Boston . Harbor. J. Geophysical Resources 97:15191-15606

³ Kelly, J.R. (1988) Quantification and potential role of ocean nutrient loading to Boston Harbor, MA Marine Ecology Progress Series, Vol. 173: 53-65, 1998

Outfall 003: Fire Suppression Water

Any time that a vessel is docked at this site, the permittee must have a fire suppression system charged and ready to be used. When charged, this system discharges up to 864,000 gallons per day. Since this discharge is ocean water that is pumped into and out of this system, only a flow monitoring requirement has been maintained for this outfall. During the monitoring period, flows to Outfall 003 have been fairly constant, with a monthly average of 0.83 MGD while the highest total monthly flow was 0.869 MGD.

Outfall 005: Caisson Ballast Water

Caisson ballast (ocean) water is discharged to Boston Harbor and replaced with air to raise the caisson and seal the dry dock. There is a discharge from this system with each docking and undocking procedure. Since this discharge is ocean water that is pumped into and out of this system, only a flow monitoring requirement has been maintained for this outfall. During the monitoring period, flows to Outfall 005 have been fairly constant, with a monthly average of 328 MGD while the highest total monthly flow was 363.4 MGD.

7.0 ESSENTIAL FISH HABITAT DETERMINATION (EFH)

Under the 1996 Amendments (PL 104-267) to the Magnuson-Stevens Fishery Conservation and Management Act (16 U.S.C. § 1801 et seq. (1998)), EPA is required to consult with the National Marine Fisheries Services (NMFS) if EPA's action or proposed actions that it funds, permits, or undertakes, may adversely impact any EFH such 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 CFR § 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.

As described in Part 1.0 of this Fact Sheet, BSR has applied for the reissuance of this NPDES Permit. With appropriate monitoring requirements, this permit allows BSR to discharge water from the dry dock to Boston Inner Harbor. EPA intends to reissue the facility's NPDES permit for these discharges. Thus, BSR will continue to discharge these waters to Boston Inner Harbor through Outfalls 001, 002, 003 and 005. The characteristics of these outfalls are described earlier in this Fact Sheet.

EFH 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 following is a list of the EFH species and applicable lifestage(s) for Massachusetts Bay, which includes Boston Inner Harbor:

Species	Eggs	Larvae	Juveniles	Adults
Atlantic cod (<i>Gadus morhua</i>)	X	X	X	X
Haddock (<i>Melanogrammus aeglefinus</i>)	X	X		
pollock (<i>Pollachius virens</i>)	X	X	X	X
whiting (<i>Merluccius bilinearis</i>)	X	X	X	X
Red hake (<i>Urophycis chuss</i>)	X	X	X	X
white hake (<i>Urophycis tenuis</i>)	X	X	X	X
winter flounder (<i>Pseudopleuronectes americanus</i>)	X	X	X	X
yellowtail flounder (<i>Pleuronectes ferruginea</i>)	X	X	X	X
Windowpane flounder (<i>Scophthalmus aquosus</i>)	X	X	X	X
American plaice (<i>Hippoglossoides platessoides</i>)	X	X	X	X
ocean pout (<i>Macrozoarces americanus</i>)	X	X	X	X
Atlantic halibut (<i>Hippoglossus hippoglossus</i>)	X	X	X	X
Atlantic sea scallop (<i>Placopecten magellanicus</i>)	X	X	X	X
Atlantic sea herring (<i>Clupea harengus</i>)		X	X	X
long finned squid (<i>Loligo pealei</i>)	n/a	n/a	X	X
short finned squid (<i>Illex illecebrosus</i>)	n/a	n/a	X	X
Atlantic butterfish (<i>Peprilus triacanthus</i>)	X	X	X	X
Atlantic mackerel (<i>Scomber scombrus</i>)	X	X	X	X
Summer flounder (<i>Paralichthys dentatus</i>)				X
scup (<i>Stenotomus chrysops</i>)	n/a	n/a	X	X
black sea bass (<i>Centropristus striata</i>)	n/a		X	X
surf clam (<i>Spisula solidissima</i>)	n/a	n/a	X	X
bluefin tuna (<i>Thunnus thynnus</i>)			X	X

A review of the relevant essential fish habitat information provided by NMFS indicates that EFH has been designated for 23 managed species within the NMFS boundaries encompassing Massachusetts Bay. It is possible that a number of these species utilize these receiving waters for spawning, while others are present seasonally.

Based on the relevant information examined, EPA finds that adoption of the draft permit will satisfy EFH requirements. The discharge of this dry dock dewatering, non-contact cooling water, storm water, and fire suppression and caisson ballast waters are not expected to adversely impact the EFH directly or indirectly. The permittee is required to adhere to its BMP plan (to be superseded by a SWPPP) which addresses all sources of potential pollutants and to implements measures that will prevent or minimize their introduction to the receiving water. During the public comment period, EPA has provided a copy of the Draft Permit and Fact Sheet to NMFS for consultation with NMFS under Section 305(b)(2) of the Magnuson-Stevens Act for EFH.

8.0 ENDANGERED SPECIES ACT

Section 7(a) of the Endangered Species Act (ESA) of 1973, as amended grants authority to and imposes requirements upon Federal agencies regarding endangered or threatened species of fish, wildlife, or plants (“listed species”) and 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 critical habitat. The U.S. 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 and threatened species of fish, wildlife, and plants to see if any such listed species might potentially be impacted by the reissuance of this NPDES permit. The review has focused primarily on marine mammals, sea turtles and anadromous fish since the discharge is into Boston Inner Harbor. 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 listed species in Boston Harbor.

The proposed monitoring requirements and continued implementation of the site’s BMP plan in the draft permit (to be superseded by a SWPPP) are sufficiently stringent to assure that WQS will be met for aquatic life protection and for all species, including endangered and threatened species. 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 CFR §§ 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 CFR Part 136 unless other procedures are explicitly required in the permit.

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 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 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 CFR § 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 cannot 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 have otherwise been required to begin using NetDMR. Opt-outs become effective upon the date of written approval by EPA and are valid for twelve (12) months. 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 unless the State Water Pollution Control Agency with jurisdiction over the receiving waters 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 Water Quality Standards. The staff of 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.

11.0 PUBLIC COMMENT PERIOD, PUBLIC HEARING, AND PROCEDURES FOR FINAL DECISION

All persons, including applicants, who believe any condition of the Draft Permit is inappropriate must raise all issues and submit all available arguments and all supporting material for their arguments in full by the close of the public comment period, to George Papadopoulos, U.S. EPA, Office of Ecosystem Protection, Industrial Permits Section, Mailcode OEP 06-1, 5 Post Office Square, Suite 100, Boston, Massachusetts 02109-3912. Any person, prior to such date, may submit a request in writing for a public hearing to consider the Draft Permit to EPA and the State Agency. 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 C.F.R. §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.

12.0 EPA & MASSDEP CONTACTS

Additional information concerning the draft permit may be obtained between the hours of 9:00 a.m. and 5:00 p.m., Monday through Friday, excluding holidays, from the EPA and MassDEP contacts below:

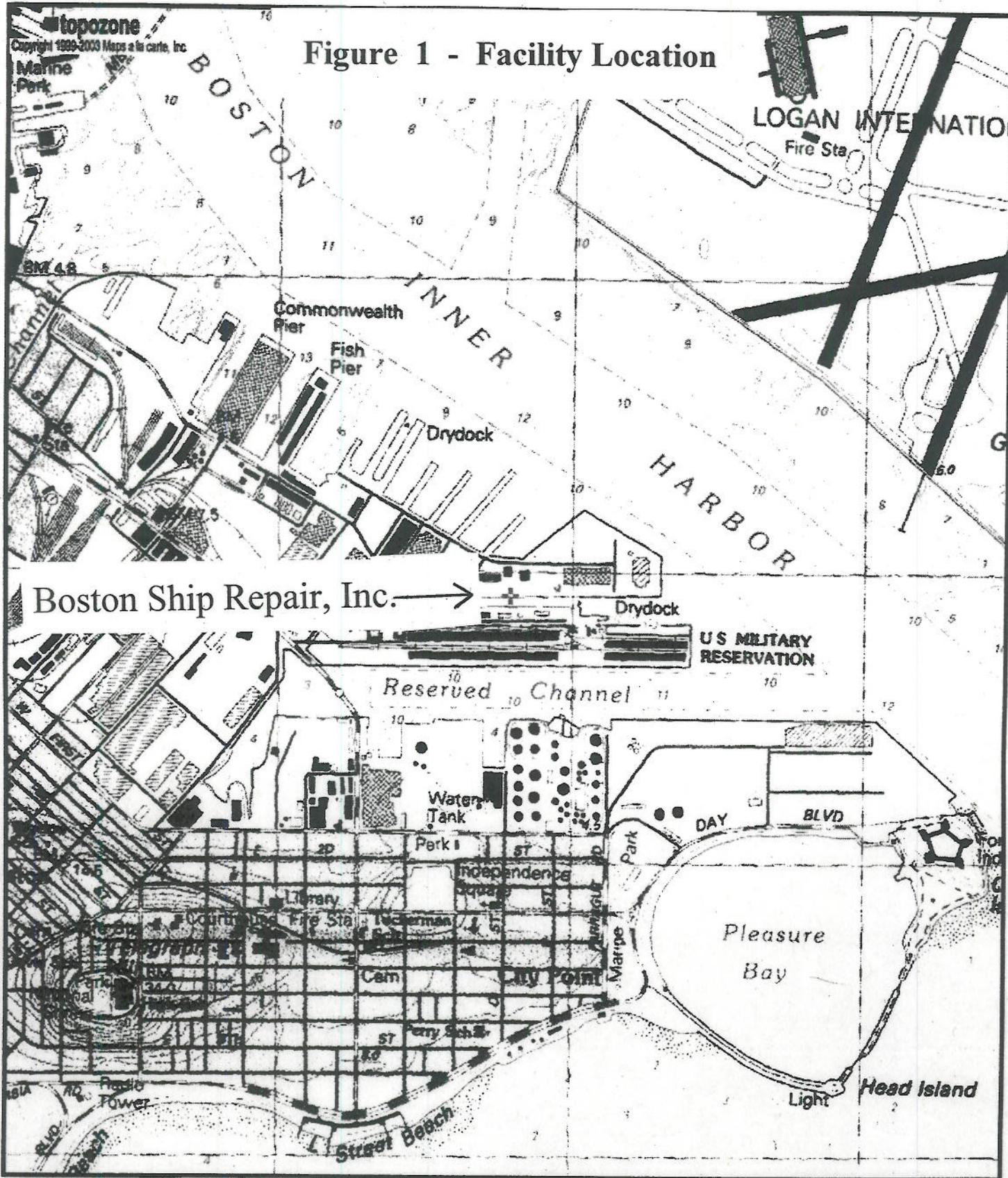
George Papadopoulos, Industrial Permits Section
5 Post Office Square - Suite 100 - Mailcode OEP 06-1
Boston, MA 02109-3912
papadopoulos.george@epa.gov
Telephone: (617) 918-1579 FAX: (617) 918-1505

Cathy Vakalopoulos, Massachusetts Department of Environmental Protection
Surface Water Discharge Permit Program
1 Winter Street, Boston, Massachusetts 02108
catherine.vakalopoulos@state.ma.us
Telephone: (617) 348-4026; FAX: (617) 292-5696

August 26, 2013
Date

Ken Moraff, Acting Director
Office of Ecosystem Protection
U.S. Environmental Protection Agency

Figure 1 - Facility Location



Boston Ship Repair, Inc. →

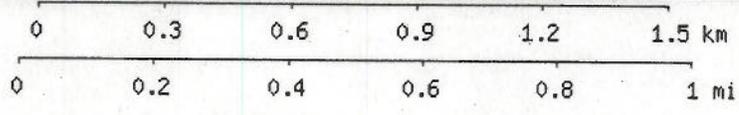
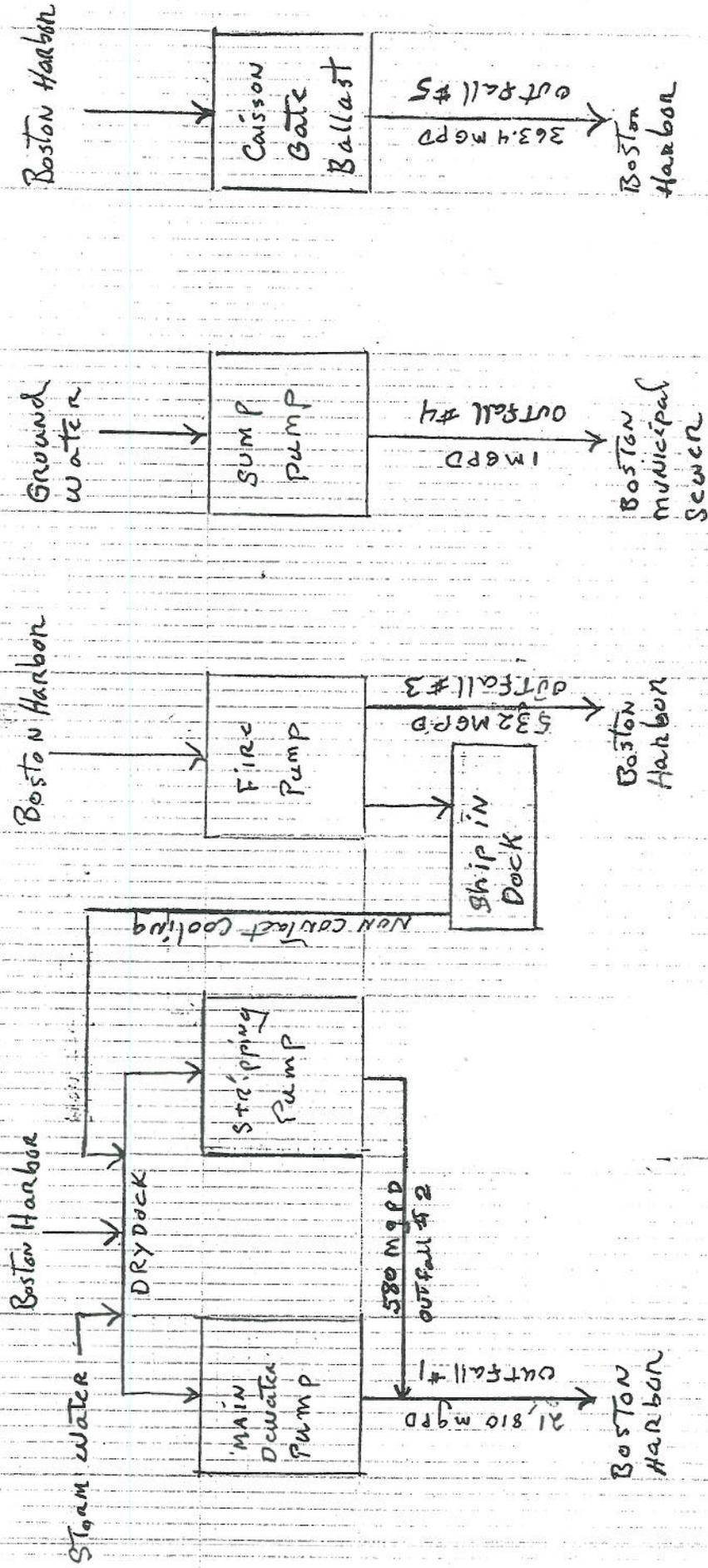


Figure 3 - Water Flow Diagram



Attachment A

Discharge Monitoring Data

BOSTON SHIP REPAIR - MA0040142						
Monitoring Period	Outfall 001 Flow, MGD	Outfall 002 Flow, MGD	Outfall 002 TSS, mg/l	Outfall 002 TSS, mg/l	Outfall 003 Flow, MGD	Outfall 005 Flow, MGD
	Daily Maximum	Daily Maximum	Monthly Average	Daily Maximum	Daily Maximum	Daily Maximum
Jan-09	40.98	1.842	8.65	12	0.864	363.4
Feb-09	0	0	0	0	0.864	363.4
Mar-09	31.03	1.79	8.425	11	0.864	363.4
Apr-09	0	0.507	13.5	15	0.864	0
May-09	0	0.527	28.8	44	0.864	0
Jun-09	10.27	0.521	38	56	0.864	0
Jul-09	26.73	0	0	0	0	363.4
Aug-09	17.76	0	0	0	0	0
Sep-09	20.65	0.768	35.5	121	0.864	363.4
Oct-09	32.36	1.997	30	30	0.864	363.4
Nov-09	17.38	1.755	4.53	8.5	0.364	363.4
Dec-09	0	0.536	11.3	23.6	0	0
Jan-10	0	1.648	4.82	8.8	0	0
Feb-10	0	0.492	5.38	13.4	0	0
Mar-10	19.7	0.739	2.72	3.6	0.864	363.4
Apr-10	29.07	1.013	16.8	34.5	0.864	0
May-10	33.99	0.318	3.7	4.4	0.864	0
Jun-10	25.41	0.839	11.5	13.3	0.864	363.4
Jul-10	0	0.622	6.25	10.5	0.864	0
Aug-10	47.61	0.594	4.1	4.9	0.864	363.4
Sep-10	0	0.318	4.7	11.4	0	0
Oct-10	128.51	1.985	8.6	16.7	0.864	363.4
Nov-10	80.25	0.826	25.7	63.4	0.864	363.4
Dec-10	69.55	1.23	20.3	20.3	0.864	363.4
Jan-11	29.4	2.998	0	0	0.864	363.4
Feb-11	102.55	2.746	14.15	31.2	0.864	363.4
Mar-11	54	1.025	9.4	19.4	0.864	363.4
Apr-11	0	0.782	3.65	6.3	0.869	0
May-11	42.8	1.738	7.2	14.6	0.864	363.4
Jun-11	0	0.66	5.03	9.8	0.864	363.4
Jul-11	0	0.478	3	4.3	0.864	0
Aug-11	45.5	1.46	4.2	6.4	0.864	363.4
Sep-11	0	1.91	10.7	11.2	0.864	0

NPDES Permit No. MA0040142

Oct-11	16.32	1.27	12.7	21	0.864	363.4
Nov-11	0	0.97	12	20	0.864	0
Dec-11	18.37	0.88	24	32	0.864	363.4
Jan-12	77.6	1.361	14.85	23	0.864	0
Feb-12	53.5	0.492	9.3	20.3	0.864	363.4
Mar-12	0	9.8	13.01	30.8	0.864	0
Apr-12	0	0.362	20.31	71	0.864	0
May-12	27.64	0	0	0	0.864	363.4
Jun-12	0	0	0	0	0	363.4
Jul-12	80.25	1.56	10	17	0.864	363.4
Aug-12	90.95	1.29	15.56	44	0.864	363.4
Sep-12	0	1.1	34	116	0.864	0
Oct-12	170.6	13	7	14	0.864	363.4
Nov-12	54.1	4.3	28	37	0.864	363.4
Dec-12	0	6.8	13.5	23	0.86	0
2007 Permit Limits	Report	Report	Report	Report	Report	Report
Minimum	0	0	0	0	0	0
Maximum	170.6	13	35.5	121	0.869	363.4
Average	42.7	1.76	12.8	25.0	0.83	328
Permit Violations	NA	NA	NA	NA	NA	NA
Measurements	35	44	43	43	41	32

NA = not applicable

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

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

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

DATE OF NOTICE: September 10, 2013

PERMIT NUMBER: **MA0040142**

PUBLIC NOTICE NUMBER: MA-022-13

NAME AND MAILING ADDRESS OF PERMITTEE:

**Boston Ship Repair, LLC
32A Drydock Avenue
Boston, MA 02210**

NAME AND ADDRESS OF THE FACILITY WHERE DISCHARGE OCCURS:

**Boston Ship Repair, LLC
32A Drydock Avenue
Boston, MA 02210**

RECEIVING WATER: **Boston Inner Harbor**
{USGS Hydrologic Code #01090001 – Boston Inner Harbor (70-02)}

PREPARATION OF THE DRAFT PERMIT:

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

INFORMATION ABOUT THE DRAFT PERMIT:

A fact sheet or a statement of basis (describing the type of facility; type and quantities of wastes; a brief summary of the basis for the draft permit conditions; and significant factual, legal and policy questions considered in preparing this draft permit) and the draft permit may be obtained at no cost at: http://www.epa.gov/region1/npdes/draft_permits_listing_ma.html or by writing or calling EPA's contact person named below:

George Papadopoulos, US EPA
5 Post Office Square
Suite 100 (OEP 06-1)
Boston, MA 02109-3912
Telephone: (617) 918-1579

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

PUBLIC COMMENT AND REQUEST FOR PUBLIC HEARING:

All persons, including applicants, who believe any condition of this draft permit is inappropriate, must raise all issues and submit all available arguments and all supporting material for their arguments in full by **October 9, 2013**, to the U.S. EPA, George Papadopoulos, 5 Post Office Square, Suite 100, Mailcode OEP 06-1, Boston, Massachusetts 02109-3912. Any person, prior to such date, may submit a request in writing to EPA and the MassDEP for a public hearing to consider this draft permit. Such requests shall state the nature of the issues proposed to be raised in the hearing. A public hearing may be held after at least forty five days public notice whenever the Regional Administrator finds that response to this notice indicates significant public interest. In reaching a final decision on this draft permit the Regional Administrator will respond to all significant comments and make the responses available to the public at EPA's Boston office.

FINAL PERMIT DECISION AND APPEALS:

Following the close of the comment period, and after a public hearing, if such hearing is held, the Regional Administrator will issue a final permit decision and forward a copy of the final decision to the applicant and each person who has submitted written comments or requested notice. Within 30 days following the notice of the final permit decision any interested person may submit petition to the Environmental Appeals Board to reconsider or contest the final decision.

David Ferris, Director
MASACHUSETTS WASTE WATER
PROGRAM
MASSACHUSETTS DEPARTMENT OF
ENVIRONMENTAL PROTECTION

Ken Moraff, Acting Director
OFFICE OF ECOSYSTEM PROTECTION
ENVIRONMENTAL PROTECTION
AGENCY

NPDES PART II STANDARD CONDITIONS
(January, 2007)

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PART II. A. GENERAL REQUIREMENTS

1. Duty to Comply

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

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

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

2. Permit Actions

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

3. Duty to Provide Information

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

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4. Reopener Clause

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

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

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

5. Oil and Hazardous Substance Liability

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

6. Property Rights

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

7. Confidentiality of Information

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

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8. Duty to Reapply

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

9. State Authorities

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

10. Other Laws

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

PART II. B. OPERATION AND MAINTENANCE OF POLLUTION CONTROLS

1. Proper Operation and Maintenance

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

2. Need to Halt or Reduce Not a Defense

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

3. Duty to Mitigate

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

4. Bypass

a. Definitions

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

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

b. Bypass not exceeding limitations

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

c. Notice

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

d. Prohibition of bypass

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

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

5. Upset

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

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

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

PART II. C. MONITORING REQUIREMENTS

1. Monitoring and Records

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

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

2. Inspection and Entry

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

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

PART II. D. REPORTING REQUIREMENTS

1. Reporting Requirements

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

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

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

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

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- f. Compliance Schedules. Reports of compliance or noncompliance with, any progress reports on, interim and final requirements contained in any compliance schedule of this permit shall be submitted no later than 14 days following each schedule date.
 - g. Other noncompliance. The permittee shall report all instances of noncompliance not reported under Paragraphs D.1.d., D.1.e., and D.1.f. of this section, at the time monitoring reports are submitted. The reports shall contain the information listed in Paragraph D.1.e. of this section.
 - h. Other information. Where the permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to the Regional Administrator, it shall promptly submit such facts or information.
2. Signatory Requirement
- a. All applications, reports, or information submitted to the Regional Administrator shall be signed and certified. (See 40 CFR §122.22)
 - b. The CWA provides that any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this permit, including monitoring reports or reports of compliance or noncompliance shall, upon conviction, be punished by a fine of not more than \$10,000 per violation, or by imprisonment for not more than 2 years per violation, or by both.
3. Availability of Reports.

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

PART II. E. DEFINITIONS AND ABBREVIATIONS

1. Definitions for Individual NPDES Permits including Storm Water Requirements

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

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

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

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

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

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

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

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

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

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

Construction Activities - The following definitions apply to construction activities:

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

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

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

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

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

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

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

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

Discharge of a pollutant means:

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

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

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

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

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

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

EPA means the United States “Environmental Protection Agency”.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

NPDES means “National Pollutant Discharge Elimination System”.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Waters of the United States means:

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Feed crops are crops produced primarily for consumption by animals.

Fiber crops are crops such as flax and cotton.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Range land is open land with indigenous vegetation.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

3. Commonly Used Abbreviations

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

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

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