

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 Sand and Gravel Company
169 Portland Street
Boston, MA 02114**

is authorized to discharge from the facility located at

**500 Front Street
Charlestown, MA 02129**

to receiving water named Millers River which drains to the Charles River, and subsequently drains to Boston Harbor,

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

This permit shall become effective on the date of signature.

This permit and the authorization to discharge expire at midnight, five (5) years from the last day of the month preceding the effective date.

This permit supersedes the last permit issued on December 14, 2001.

This permit consists of 12 pages in Part I including effluent limitations and monitoring requirements, Attachment 1 – Freshwater Chronic Test Procedure and Protocol, and 25 pages in Part II including General Conditions and Definitions.

Signed this 28th day of September, 2007

/S/ SIGNATURE ON FILE

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

Glenn Haas, Director
Division of Watershed Management
Department of Environmental Protection
Commonwealth of Massachusetts
Boston, MA

PART I

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

1. During the period beginning with the effective date and lasting through expiration, the permittee is authorized to discharge treated effluent from **Outfall Serial Number 001** to the Millers River. This discharge consists of a combination of storm water runoff, road sweeping water, boiler blowdown water, and truck wash-off and wash-out water. Such discharge shall: 1) be limited and monitored by the permittee as specified below; and 2) not cause a violation of the State Surface Water Quality Standards of the receiving water.

<u>EFFLUENT CHARACTERISTIC</u>	<u>MONITORING REQUIREMENTS</u>			
PARAMETER	<u>AVERAGE MONTHLY</u>	<u>MAXIMUM DAILY</u>	<u>SAMPLING FREQUENCY</u>	<u>SAMPLE TYPE</u> ¹
Flow (GPD) ³	Report	Report	Continuous	Recorder
Total Suspended Solids (TSS) (mg/L)	20	45	1/week ²	Grab
pH (SU) ⁴	6.0 – 8.5		Monthly ²	Grab
Turbidity (NTU)	25	Report	1/week ²	Grab
Sulfates, Total (mg/L)	250	Report	Monthly ²	Grab
Copper (ug/L)	---	Report	Monthly ²	Grab
Chromium (VI) (ug/L)	---	Report	Monthly ²	Grab
Aluminum (ug/L)	---	Report	Monthly ²	Grab
Hardness (mg/L as CaCO ₃) ⁵	---	Report	Monthly ²	Grab
Hardness of Receiving Water (mg/L as CaCO ₃) ⁵	---	Report	Monthly ²	Grab

Whole Effluent Toxicity (WET)			
Acute LC ₅₀ (%) ^{7,8}	Report	Annually ²	Composite ⁶
Chronic C-NOEC (%) ^{7,8}	Report	Annually ²	Composite ⁶
Hardness (mg/L) ⁹	Report	Annually ²	Composite ⁶
Alkalinity (mg/L) ⁹	Report	Annually ²	Composite ⁶
pH (SU) ⁹	Report	Annually ²	Composite ⁶
Specific Conductance (µmhos/cm) ⁹	Report	Annually ²	Composite ⁶
Total Solids (mg/L) ⁹	Report	Annually ²	Composite ⁶
Ammonia (mg/L) ⁹	Report	Annually ²	Composite ⁶
Total Organic Carbon (mg/L) ⁹	Report	Annually ²	Composite ⁶
Total Residual Chlorine (mg/L) ⁹	Report	Annually ²	Composite ⁶
Dissolved Oxygen (mg/L) ⁹	Report	Annually ²	Composite ⁶
Total Cadmium (mg/L) ⁹	Report	Annually ²	Composite ⁶
Total Chromium (mg/L) ⁹	Report	Annually ²	Composite ⁶
Total Lead (mg/L) ⁹	Report	Annually ²	Composite ⁶
Total Copper (mg/L) ⁹	Report	Annually ²	Composite ⁶
Total Zinc (mg/L) ⁹	Report	Annually ²	Composite ⁶
Total Nickel (mg/L) ⁹	Report	Annually ²	Composite ⁶
Total Aluminum (mg/L) ⁹	Report	Annually ²	Composite ⁶
Total Magnesium (mg/L) ⁹	Report	Annually ²	Composite ⁶
Total Calcium (mg/L) ⁹	Report	Annually ²	Composite ⁶

(Part I.A.1 continued)

Footnotes:

1. Samples taken in compliance with the monitoring requirements specified above, with the exception of flow, shall be taken at the following location: after treatment through Lagoon 9 and prior to discharge to the Millers River. Flow shall be taken from the flow meter between Lagoon 8 and 9, to be representative of the flow through Outfall 001.
2. Sampling frequency of 1/week is defined as the sampling of one (1) discharge event in one calendar week, when discharge occurs. Sampling frequency of monthly is defined as the sampling of one (1) discharge event in each calendar month, when discharge occurs. Sampling frequency of annually is defined as the sampling of one (1) discharge event in each calendar year, when discharge occurs.
3. The average monthly flow rate shall be calculated as an average of the daily flow rates taken during each month.
4. The pH of the effluent shall not be less than 6.0 or greater than 8.5 standard units, unless these values are exceeded as a result of natural causes (which may be determined by comparison to the upstream pH). The pH of the effluent shall not be more than 0.5 units outside of the naturally occurring range.
5. The hardness of both the receiving water and effluent shall be analyzed and reported separately on the DMR.
6. A composite sample is a sample consisting of grab samples collected at hourly intervals (two minimum) during a normal discharge.
7. The permittee shall conduct annual chronic (and modified acute) toxicity tests. Two of the first five tests shall be performed during boiler blowdown discharge. The chronic test may be used to calculate the acute LC₅₀ at the 48 hour exposure interval. The permittee shall test the daphnid, Ceriodaphnia dubia, and fathead minnow, Pimephales promelas. The test results shall be submitted by the last day of the full month following completion of the test. The tests must be performed in accordance with test procedures and protocols specified in Attachment 1 of this permit.
8. If toxicity test(s) using receiving water as diluent show the receiving water to be toxic or unreliable, the permittee shall follow procedures outlines in Section IV (Dilution Water) of Attachment 1 in order to obtain permission to use an alternate dilution water. In lieu of individual approvals for alternate dilution water required in Attachment 1, EPA-New England has developed a Self-Implementing Alternative Dilution Water Guidance document (called "Guidance Document") which may be used to obtain automatic approval of an alternate dilution water, including the appropriate species for use with that water. If this Guidance Document is revoked, the permittee shall revert to obtaining approval as outlined

in Attachment 1. The “Guidance Document” has been sent to all permittees with their annual set of DMRs and Revised Updated Instructions for Completing EPA’s Pre-Printed NPDES Discharge Monitoring Report (DMR) Form 3320-1 and is not intended as a direct attachment to this permit. Any modification or revocation to this “Guidance Document” will be transmitted to the permittees as part of the annual DMR instruction package. However, at any time, the permittee may choose to contact EPA-New England directly using the approach outlined in Attachment 1.

9. For each Whole Effluent Toxicity (WET) test the permittee shall report on the appropriate Discharge Monitoring Report (DMR), the concentrations of the Hardness, Total Ammonia Nitrogen as Nitrogen, Alkalinity, pH, Specific Conductance, Total Solids, Total Organic Carbon, Total Residual Chlorine, Dissolved Oxygen, Total Recoverable Aluminum, Cadmium, Chromium, Copper, Lead, Nickel, Zinc, Magnesium, and Calcium found in the 100 percent effluent sample. The permittee should note that all chemical parameter results must still be reported in the appropriate toxicity report.

2. During the period beginning with the effective date and lasting through expiration, the permittee is authorized to discharge treated effluent from **Internal Outfall Serial Number 002**. This discharge consists of boiler blowdown water. Such discharge shall: 1) be limited and monitored by the permittee as specified below; and 2) not cause a violation of the State Surface Water Quality Standards of the receiving water.

EFFLUENT CHARACTERISTIC	MONITORING REQUIREMENTS			
PARAMETER	<u>AVERAGE MONTHLY</u>	<u>MAXIMUM DAILY</u>	<u>SAMPLING FREQUENCY</u>	<u>SAMPLE TYPE</u> ¹
Oil & Grease (O&G)	Report	Report	Quarterly ²	Grab

(Part I.A.2 continued)

Footnotes:

1. Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location: after discharge from the boiler and prior to commingling with any other waste stream.
2. Sampling frequency of quarterly is defined as the sampling of one (1) discharge event in each quarter, when discharge occurs. Quarters are defined as the interval of time between the months of: January through March, inclusive; April through June, inclusive; July through September, inclusive; and October through December, inclusive.

Part I.A. (Continued)

3. The discharge shall not cause objectionable discoloration of the receiving waters.
4. The effluent shall contain no visible oil sheen, foam, nor floating solids at any time.
5. Use of chlorine is not permitted.
6. The permittee shall submit the results to EPA of any additional testing done to that required herein, if it is conducted in accordance with EPA approved methods consistent with the provisions of 40 CFR §122.41(l)(4)(ii).
7. The permittee is authorized to discharge only in accordance with the terms and conditions of this permit and only from the outfall listed in Part I.A.1. of this permit. Discharges of wastewater from any other point sources are not authorized and shall be reported in accordance with Section D.1.e(1) of the General Requirements of this permit (Twenty-four hour reporting).
8. 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 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 µg/l);
 - (2) Two hundred micrograms per liter (200 µg/l) for acrolein and acrylonitrile; five hundred micrograms per liter (500 µg/l) for 2,4-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 C.F.R.§122.21(g)(7); or
 - (4) Any other notification level established by the Director in accordance with 40 C.F.R.§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 µg/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 C.F.R.§122.21(g)(7).

(4) Any other notification level established by the Director in accordance with 40 C.F.R.§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.

9. 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.
- c. EPA or MassDEP may use the results of chemical analyses conducted pursuant to this permit, as well as national water quality criteria developed pursuant to 304(a)(a) 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.

B. STORM WATER POLLUTION PREVENTION PLAN (SWPPP)

1. The permittee shall maintain, update and implement a Storm Water Pollution Prevention Plan (SWPPP) to reduce the discharge of pollutants to the receiving waters identified in this permit. The permittee shall update and amend the SWPPP when necessary to account for any changes effecting the SWPPP including, but limited to whenever the following occur: 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 reportable quantities of hazardous substances or oil; or the SWPPP appears to be ineffective in achieving the general objectives of controlling pollutants in storm water discharges associated with industrial activity.
2. An updated and amended SWPPP shall be completed and signed by the permittee within 90 days after the effective date of this permit. Each amended SWPPP shall be certified by the permittee. The certification shall be signed in accordance with the requirements identified in 40 CFR §122.22, and a copy of the current certification shall be sent each year to EPA

and MassDEP within thirty (30) days of the annual anniversary of the effective date of the final permit. The certification should document that the previous year's inspections and maintenance activities were conducted, results were recorded, records were maintained, and that the facility is in compliance with the SWPPP. The permittee shall keep a copy of the most recent SWPPP and certification at the facility and shall make it available for inspection by EPA and MassDEP.

3. The permittee shall assure that the SWPPP is consistent with the requirements outlined in Part 4 of EPA's NPDES Storm Water Multi-Sector General Permit for Industrial Activities, issued by EPA on October 30, 2000 (See 65 FR 64812-64815). The SWPPP shall refer to all of the outfalls, the priority pollutants, the conventional pollutants and the monitoring requirements at each outfall. Additionally, the SWPPP shall include the best management practices (BMPs) appropriate for this specific facility to control storm water discharges from activities that could contribute pollutants to waters of the United States through storm water. Specifically the SWPPP shall contain the elements listed below.
 - a. Pollution Prevention Team
 - b. Site Description
 - c. Receiving Waters and Wetlands
 - d. Summary of Potential Pollutant Sources
 - e. Spills and Leaks
 - f. Sampling Data
 - g. Storm Water Controls
4. The permittee shall develop and implement a study to identify the source of copper, chromium, and aluminum in the discharge from the facility. Based on this study, the permittee shall develop and implement BMPs, developed pursuant to the SWPPP, in order to reduce the amount of these metals in the discharge from the facility. The study, any sampling results, and the results of implementing BMPs shall be submitted to EPA with the permittee's next NPDES permit application.

C. REOPENER CLAUSES

1. This permit shall be modified, or alternately, revoked and reissued, to comply with any applicable standard or limitation promulgated or approved under sections 301(b)(2)(C) and (D), 304(b)(2), and 307(a)(2) of the Clean Water Act, if the effluent standard or limitation so issued or approved:
 - a. Contains different conditions or is otherwise more stringent than any effluent limitation in the permit; or
 - b. Controls any pollutants not limited in the permit.

D. MONITORING AND REPORTING

Monitoring results obtained during the previous month shall be summarized for each month and reported on separate Discharge Monitoring Report Form(s) postmarked no later than the 15th day of the month following the effective date of the permit.

Signed and dated originals of these, and all other reports required herein, shall be submitted to EPA at the following address:

Environmental Protection Agency, Region 1
Water Technical Unit (SEW)
P.O. Box 8127
Boston, Massachusetts 02114

Signed and dated Discharge Monitoring Report Form(s) and all other reports required by this permit shall also be submitted to the State at the following addresses:

Massachusetts Department of Environmental Protection
Northeast Regional Office
Bureau of Waste Prevention
205B Lowell Street
Wilmington, Massachusetts 01887

and

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

E. STATE PERMIT CONDITIONS

1. This discharge permit is issued jointly by the EPA and the MassDEP under Federal and State law, respectively. As such, all the terms and conditions of this permit are hereby incorporated into and constitute a discharge permit issued by the Commissioner of the MassDEP pursuant to M.G.L. Chap. 21, §43.
2. 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 a 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.