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)

Callanan Industries, Inc.
1245 Kings Road, P.O. Box 15097
Albany, NY 12212

is authorized to discharge from the facility located at

Pittsfield Sand and Gravel
1530 East Street
Pittsfield, MA 01201

to receiving water named

Housatonic River

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 60 days after signature if comments are received. If no comments are received, this permit shall become effective following 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 consists of 11 pages in Part I including effluent limitations, monitoring requirements, Attachment 1 – Freshwater Chronic Toxicity Test Procedure and Protocol, Attachment 2 – Freshwater Acute Toxicity Test Procedure and Protocol, and 25 pages in Part II including General Conditions and Definitions.

Signed this 17th day of NOVEMBER, 2009

/S/ SIGNATURE ON FILE

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

Glenn Haas, Director
Division of Watershed Management
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 of the permit and lasting through expiration, the permittee is authorized to discharge treated product dewatering, silt dewatering, and stormwater runoff through **Outfall Serial Number 001** to the Housatonic River. 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	Units	Discharge Limitation		Monitoring Requirements [1,2]	
		Average Monthly	Maximum Daily	Measurement Frequency[3]	Sample Type
Flow	GPD	Report	Report	1/Month	Estimate[4]
pH[5]	SU	6.5 – 8.3		1/Month	Grab
Total Suspended Solids (TSS)	mg/L	25	45	1/Month	Composite[6]
Oil and Grease (O&G)	mg/L	---	15	1/Month	Grab
Turbidity	NTU	---	25	1/Month	Grab

Whole Effluent Toxicity (WET) [7,8,11]					
Acute LC_{50}	%	---	Report	Annually	Composite[6]
Chronic CNOEC	%	---	Report	Annually	Composite[6]
Hardness	mg/L	---	Report	Annually	Composite[6]
Total Residual Chlorine	mg/L	---	Report	Annually	Composite[6]
Alkalinity	mg/L	---	Report	Annually	Composite[6]
pH	SU	---	Report	Annually	Composite[6]
Specific Conductance	µmhos/cm	---	Report	Annually	Composite[6]
Total Solids	mg/L	---	Report	Annually	Composite[6]
Total Dissolved Solids	mg/L	---	Report	Annually	Composite[6]
Ammonia	mg/L	---	Report	Annually	Composite[6]
Total Organic Carbon	mg/L	---	Report	Annually	Composite[6]
Total Cadmium	mg/L	---	Report	Annually	Composite[6]
Total Lead	mg/L	---	Report	Annually	Composite[6]
Total Copper	mg/L	---	Report	Annually	Composite[6]
Total Zinc	mg/L	---	Report	Annually	Composite[6]
Total Nickel	mg/L	---	Report	Annually	Composite[6]
Total Aluminum	mg/L	---	Report	Annually	Composite[6]

See pages 6-8 for explanation of footnotes.

PART 1

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

2. During the period beginning on the effective date of the permit and lasting through expiration, the permittee is authorized to discharge retention pond overflow consisting of stormwater runoff, product wash water, and silt dewatering through **Outfall Serial Number 002** to the Housatonic River. 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	Units	Discharge Limitation		Monitoring Requirements [1,2]	
		Average Monthly	Maximum Daily	Measurement Frequency[3]	Sample Type
Flow	GPD	Report	Report	1/Month	Estimate[4]
Total Discharge Events	number	Report Total		1/Month	Count
pH[5]	SU	6.5 – 8.3		1/Month	Grab
Total Suspended Solids (TSS)	mg/L	25	45	1/Month	Grab
Oil and Grease (O&G)	mg/L	---	15	1/Month	Grab
Turbidity	NTU	---	25	1/Month	Grab

Whole Effluent Toxicity (WET) [9,10,11]					
Acute LC_{50}	%	---	Report	Annually	Grab
Hardness	mg/L	---	Report	Annually	Grab
Total Residual Chlorine	mg/L	---	Report	Annually	Grab
Alkalinity	mg/L	---	Report	Annually	Grab
pH	SU	---	Report	Annually	Grab
Specific Conductance	µmhos/cm	---	Report	Annually	Grab
Total Solids	mg/L	---	Report	Annually	Grab
Total Dissolved Solids	mg/L	---	Report	Annually	Grab
Ammonia	mg/L	---	Report	Annually	Grab
Total Organic Carbon	mg/L	---	Report	Annually	Grab
Total Cadmium	mg/L	---	Report	Annually	Grab
Total Lead	mg/L	---	Report	Annually	Grab
Total Copper	mg/L	---	Report	Annually	Grab
Total Zinc	mg/L	---	Report	Annually	Grab
Total Nickel	mg/L	---	Report	Annually	Grab
Total Aluminum	mg/L	---	Report	Annually	Grab

See pages 6-8 for explanation of footnotes.

Footnotes:

1. Samples taken in compliance with the monitoring requirements specified above shall be taken at a point representative of the discharge through the outfall, prior to mixing with the receiving waters. All samples shall be tested in accordance with the procedures in 40 CFR 136, unless specified elsewhere in the permit.

2. Samples shall be taken during the first thirty minutes of the discharge. If collection of grab sample(s) during the first thirty minutes is impracticable, grab sample(s) can be taken as soon after that as possible, and the permittee shall submit with the monitoring report a description of why the collection of the grab sample(s) during the first thirty minutes was impracticable. A "no discharge" report shall be submitted for those sampling periods in which there is no discharge.

3. Sampling frequency of 1/month 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. 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).

4. Flow shall be estimated on a daily basis at the discharge point located at the end of the pipe, prior to discharging into the receiving water.

5. The pH of the effluent shall not be less than 6.5 SU, nor greater than 8.3 SU at any time, unless these values are exceeded due to natural causes. The pH shall be no more than 0.5 units outside the natural background range. To demonstrate that pH values of the effluent are outside the permitted pH range due to natural causes, the permittee must show that pH measurements of the source water and the effluent are the same. Documentation of such conditions must be submitted by the permittee with the discharge monitoring reports.

6. A composite sample is a sample consisting of grab samples (two minimum) collected at hourly intervals during a normal discharge, combined proportionally to flow.

7. The permittee shall conduct annual chronic (and modified acute) toxicity tests. The permittee shall test the daphnid, Ceriodaphnia dubia, and the fathead minnow, Pimephales promelas. Toxicity test samples shall be collected during the month of July, during wet weather. The test results shall be submitted by the last day of the month following the completion of the test, August 31st. In the event there is no discharge the month of July, the permittee shall sample as soon as practicable thereafter, and submit the test results by the last day of the month following completion of the test. The tests must be performed in accordance with test procedures and protocols specified in Attachment 1 of the permit. The

permittee may request a reduction in the WET testing requirements at the time of permit reissuance.

8. If toxicity test(s) using receiving water as diluent show the receiving water to be toxic or unreliable, the permittee shall follow procedures outlined 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. The permittee shall conduct annual acute toxicity tests. The permittee shall test the daphnid, Ceriodaphnia dubia, and the fathead minnow, Pimephales promelas. Toxicity test samples shall be collected during the month of July, during wet weather. The test results shall be submitted by the last day of the month following the completion of the test, August 31st. In the event there is no discharge the month of July, the permittee shall sample as soon as practicable thereafter, and submit the test results by the last day of the month following completion of the test. The tests must be performed in accordance with test procedures and protocols specified in Attachment 2 of the permit. After submitting two years and a minimum of two consecutive sets of WET test results, all of which demonstrate no toxicity, the permittee may request a reduction in the acute WET testing requirements for Outfall 002. The permittee is required to continue testing at the frequency specified in the permit until notice is received by certified mail from EPA that the WET testing requirement for Outfall 002 has been changed.

10. If toxicity test(s) using receiving water as diluent show the receiving water to be toxic or unreliable, the permittee shall follow procedures outlined in Section IV (Dilution Water) of Attachment 2 in order to obtain permission to use an alternate dilution water. In lieu of individual approvals for alternate dilution water required in Attachment 2, 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 2. 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 2.

11. For each Whole Effluent Toxicity (WET) test the permittee shall report on the appropriate Discharge Monitoring Report (DMR), the concentrations of the Hardness, Total Residual Chlorine, Alkalinity, pH, Specific Conductance, Total Solids, Total Dissolved Solids, Ammonia, Total Organic Carbon, Total Cadmium, Total Lead, Total Copper, Total Zinc, Total Nickel, and Total Aluminum found in the 100 percent effluent sample. Metals shall be reported as total recoverable concentrations. The permittee should note that all chemical parameter results must still be reported in the appropriate toxicity report. The permittee shall also document the outfall sampling locations and dilution water sampling location by providing either the USGS coordinates and/or a map of these locations.

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (cont'd)

3. The discharge shall not cause a violation of the water quality standards of the receiving waters.

4. The discharge shall not cause objectionable color, odor, or turbidity to the receiving waters.

5. The discharge shall not contain a visible oil sheen, foam, or floating solids as any time.

6. The effluent shall not contain materials in concentrations or in combinations which are hazardous or toxic to aquatic life or which would impair the uses designated by the classification of the receiving waters.

7. If the permit is modified or reissued, it shall be revised to reflect all currently applicable requirements of the CWA.

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 acrylonitrite; 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.

B. 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.

C. MONITORING AND REPORTING

Monitoring results obtained during the previous month shall be summarized for each month and reported on separate discharge monitoring report (DMR) forms 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 the Director and the State at the following addresses:

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

The State Agency is:

Massachusetts Department of Environmental Protection – Western Region
Bureau of Waste Prevention
436 Dwight Street
Springfield, MA 01103

In addition, copies of all Discharge Monitoring Reports shall be submitted to the following address:

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

D. 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.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION I
ONE CONGRESS STREET- SUITE 1100 (CIP)
BOSTON, MASSACHUSETTS 02114 - 2023

FACT SHEET

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

NPDES PERMIT # MA0040312

NAME AND ADDRESS OF APPLICANT:

Callanan Industries, Inc.
1245 Kings Road, P.O. Box 15097
Albany, NY 12212

NAME AND ADDRESS OF FACILITY WHERE DISCHARGE OCCURS:

Pittsfield Sand and Gravel
1530 East Street
Pittsfield, MA 01201

RECEIVING WATERS: Housatonic River

CLASSIFICATION: B (Warm Water)

SIC CODES: 1442 (Sand and Gravel Operations)

TABLE OF CONTENTS

I. PROPOSED ACTION

The above named applicant has applied to the U.S. Environmental Protection Agency (EPA) and the Massachusetts Department of Environmental Protection (MassDEP) for the issuance of a National Pollutant Discharge Elimination System (NPDES) permit to discharge process water into the designated receiving water. Under the ownership of Kroboth Industries, the facility originally applied for a NPDES permit for stormwater and process water discharges on January 30, 1989. In 2004, the facility created an impoundment to capture the stormwater and process water flows for recycle, and claimed to have eliminated discharges to the surface water. Therefore, the original permit application was terminated on July 19, 2004. The facility was purchased by Callanan Industries in 2008, and investigations led to the discovery of surface water discharges. Therefore, Callanan Industries submitted an application for a NPDES permit on December 29, 2008.

Callanan Industries submitted an NOI for coverage under EPA's Multi-Sector General Permit for Stormwater Discharges Associated with Industrial Activity (MSGP), Sector J – Non-Metallic Mineral Mining and Dressing, on April 20, 2009. Authorization under the MSGP became effective on May 21, 2009. Therefore the stormwater discharge from Pittsfield Sand and Gravel is currently (and shall continue to be) covered under MAR05D350.

II. TYPE OF FACILITY

Pittsfield Sand and Gravel, a Division of Callanan Industries, Inc., is located at 1530 East Street in Pittsfield, Massachusetts. Pittsfield Sand and Gravel manufactures various grades of sand and gravel for construction and building operations. The facility has several rock crushers, screening processes, and wash operations to separate out the different grades of product.

III. SUMMARY OF MONITORING DATA

Data submitted for Outfalls 001 and 002 as part of the permit application was reviewed and used in the development of the draft National Pollutant Discharge Elimination System (NPDES) permit (draft permit). See Attachment B for a summary of the NPDES Form 2C data submitted with NPDES Permit Application No. MA0040312, dated December 30, 2008.

IV. PERMIT BASIS AND EXPLANATION OF EFFLUENT LIMIT DERIVATIONS

The effluent limitations, monitoring requirements, and any implementation schedule, if required, may be found in Part 1 (Effluent Limitations and Monitoring Requirements) of the Draft Permit. The permit application is part of the administrative file (Permit No. MA0040312).

A. General Requirements

The Clean Water Act (CWA) prohibits the discharge of pollutants to waters of the United States without a 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. The draft permit was developed in accordance with various statutory and regulatory requirements established pursuant to the CWA and applicable State regulations. During development, EPA considered the most recent technology-based treatment requirements, water quality-based requirements, and all limitations and requirements in the current/existing permit. The regulations governing the EPA NPDES permit program are generally found at 40 CFR Parts 122, 124, 125, and 136. The general conditions of the draft permit are based on 40 CFR §122.41 and consist primarily of management requirements common to all permits. The effluent monitoring requirements have been established to yield data representative of the discharge under authority of Section 308(a) of the CWA in accordance with 40 CFR §122.41(j), §122.44(i), and §122.48.

1. Technology-Based Requirements

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

Technology-based treatment requirements represent the minimum level of control that must be imposed under Sections 301(b) and 402 of the CWA (see 40 CFR §125 Subpart A) to meet best practicable control technology currently available (BPT) for conventional pollutants and some metals, best conventional control technology (BCT) for conventional pollutants, and best available technology economically achievable (BAT) for toxic and non-conventional pollutants. In general, technology-based effluent guidelines for non-POTW facilities must be 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 cannot be authorized by a NPDES permit.

EPA has promulgated technology-based National Effluent Limitation Guidelines (ELGs) for Mineral Mining and Processing Point Source Category. Specifically, both the Crushed Stone and Construction Sand and Gravel ELGs limit the pH range to 6.0-9.0 SU.

The 2008 Multi-Sector General Permit for storm water discharges from industrial sources was reviewed to determine technology-based limitations for SIC code 1442 (Construction Sand and Gravel). Sector J of the MSGP (Non-Metallic Mineral Mining and Dressing), Subsector J1 (Sand and Gravel Mining), includes benchmark monitoring concentrations of 100 mg/L for Total Suspended Solids and 0.68 mg/L for Nitrate plus Nitrite Nitrogen. Discharge of stormwater from the facility is currently, and shall continue to be, covered under the MSGP.

2. Water Quality-Based Requirements

Water quality-based criteria 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 (See Section 301(b) (1)(C) of the CWA). Water quality-based criteria consist of three (3) parts: 1) beneficial designated uses for a water body or a segment of a water body; 2) numeric and/or narrative water quality criteria sufficient to protect the assigned designated use(s) of the water body; and 3) anti-degradation requirements to ensure that once a use is attained it will not be degraded. The Massachusetts State Water Quality Standards, found at 314 CMR 4.00, include these elements. The State Water Quality Regulations limit or prohibit discharges of pollutants to surface waters and thereby assure that the surface water quality standards of the receiving water are protected, maintained, and/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, be used unless site-specific criteria are established. EPA regulations pertaining to permit limits based upon water quality standards and state requirements are contained in 40 CFR §122.44(d).

Section 101(a)(3) of the CWA specifically prohibits the discharge of toxic pollutants in toxic amounts. The Commonwealth of Massachusetts (State) has a similar narrative criterion in their water quality regulations that prohibits such discharges [See Massachusetts Title 314 CMR 4.05(5)(e)]. The effluent limits established in the Draft Permit assure that the surface water quality standards of the receiving water are protected, maintained, and/or attained.

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

The East Branch of the Housatonic River (Segment MA21-02; Outlet of Center Pond, Dalton to confluence with the Housatonic River, Pittsfield) is listed in the Massachusetts Year 2008

Integrated List of Waters (December 2008) under 303(d) List of Impaired Waters as a Category 5 water impaired for fecal coliform and PCB in fish tissue.

3. Anti-Backsliding

EPA's anti-backsliding provision as identified in Section 402(o) of the Clean Water Act and at 40 CFR §122.44(l) prohibits the relaxation of permit limits, standards, and conditions unless the circumstances on which the previous permit was based have materially and substantially changed since the time the permit was issued. Anti-backsliding provisions apply to effluent limits based on technology, water quality, BPJ and State Certification requirements. Relief from anti-backsliding provisions can only be granted under one of the defined exceptions [See 40 CFR §122.44(l)(i)].

4. Anti-Degradation

The Massachusetts Anti-Degradation Policy is found at Title 314 CMR 4.04. All existing uses of the East Branch of the Housatonic River must be protected. The East Branch of the Housatonic River (Outlet of Center Pond, Dalton to confluence with the Housatonic River, Pittsfield) is listed as Class B, warm water, under the Massachusetts Surface Water Quality Standards. Title 314 Code of Massachusetts Regulations (CMR) 4.05(3)(b) states that Class B waters "are designated as a habitat for fish, other aquatic life, and wildlife, including for their reproduction, migration, growth and other critical functions, and for primary and secondary contact recreation…Class B waters shall be suitable for irrigation and other agricultural uses and for compatible industrial cooling and process uses. These waters shall have consistently good aesthetic value."

The discharge and processes at the facility are designed and conducted to minimize adverse impacts on water quality, including implementation of source reduction practices by recycling the majority of wash water onsite. The discharge from the facility is not expected to impair existing water, nor is it expected to result in a level of water quality less than Class B. Therefore, the public notice for this draft permit also serves as the public notice for this anti-degradation determination.

B. Description of the Facility

Pittsfield Sand and Gravel operates an average of 6-8 months per year. Rock is received onsite, crushed to various grades of product, and sold. No quarrying or blasting occurs onsite. The facility has several rock crushers, screening processes, and wash operations to separate the different grades of product. Dewatering from final product (stored in piles) flows to a settling pond adjacent to Outfall 001. Stormwater runoff from the northeast portion of the site also flows to the settling pond. There is also the potential for discharge of silt dewatering to the settling pond. The commingled water in the settling pond flows through a rock weir and discharges through Outfall 001, on the site's eastern boundary, to the Housatonic River.

Product wash water is collected in a concrete bermed area where flocculent (Ashland Drewfloc

2270 Polymer) is added prior to pumping to a series of three retention ponds. The average flocculent addition rate is 5 – 10 ppm, and the maximum is 30 ppm, before the flocculent loses efficiency. Storm water, truck rinse water, and potentially silt dewatering also flow to the retention ponds. The commingled water flows through the retention ponds, where settling occurs, and is recycled back through the process as wash water. The facility recycles the majority of the wash water. The capacity of Pond 1 is 476,700 gallons, Pond 2 is 598,500 gallons, and Pond 3 is 381,500 gallons (see Site Plan, Attachment A).

Following periods of heavy rain, the retention ponds overflow intermittently through Outfall 002. The overflow exits Pond 2 through a rock weir and flows to a low lying area to the south of the site, adjacent to the Housatonic River. The permittee has traced the flow from Outfall 002 through the low lying area to the Housatonic River.

The ponds are dredged every two to four weeks. During dredging, approximately half of the water in the ponds must be refilled with water in order to have sufficient wash water for production. The facility uses water from the city and from the Housatonic for this purpose. When averaged to a daily rate, the facility could withdraw approximately 57,300 gallons/day. The silt which is removed from the settling ponds during dredging is temporarily staged on site until removal via trucks. The silt is sold for use as a constituent component in quarry and gravel pit reclamation materials. Water that emanates from the staged pond fines evaporates, infiltrates, or may be discharged through one of the two outfalls during rainy periods, as mentioned above.

One diesel underground storage tank (UST) is located under the parking lot just inside the entrance from East Street.

C. Description of Discharge

The discharge from Outfall 001 consists of product dewatering, silt dewatering, and stormwater runoff from the northeast portion of the site (basin 01). The discharge from Outfall 002 consists of intermittent overflow from the retention ponds consisting of product wash water, silt dewatering, and stormwater runoff from the majority of the site (basin 02).

D. Discharge Location

The discharges flow through rock weirs at both Outfalls 001 and 002, which are periodically replaced to remove sediment (about 2-3 times per year). Outfall 001 discharges on the eastern boundary of the site, directly to the Housatonic River. Outfall 002 discharges to a low lying area to the south of the site adjacent to the Housatonic River, for final discharge to the Housatonic River (see Outfall Locations, Attachment C).

E. Proposed Permit Effluent Limitations and Conditions

1. Outfall 001

a. Flow

Outfall 001 continuously discharges at a rate of about 1 gallon per minute. The draft permit shall require monthly reporting of the flow through Outfall 001, based on estimation.

b. pH

The Massachusetts Surface Water Quality Standards, 314 Code of Massachusetts Regulations ("CMR"), Inland Water, Class B at 4.05 (3)(b)3 require that the pH of Class B waters be in the range of 6.5 to 8.3 standard units and no more than 0.5 units outside the background range. There shall no change from background conditions that would impair any use assigned to this Class.

Additionally, the ELGs for Mineral Mining and Processing Point Source Category, for both Crushed Stone and Construction Sand and Gravel, are 6.0 – 9.0 SU for pH. Therefore, the draft permit shall require a pH effluent limitation range of 6.5 – 8.3 SU, unless exceeded due to natural causes, based on the more stringent State Water Quality Standards. The permit shall also require that the pH of the effluent be no more than 0.5 units outside the natural background range. Monitoring data for the discharge through Outfall 001 shows pH of 8.92 SU. The permittee believes the high pH may be the result of the use of potable water as a source (pH ranging from 7.0 – 8.2 SU), the use of Housatonic River water as a source (pH ranging from 7.2 – 8.3 SU), or the presence of alkaline substances such as limestone in the rock that is crushed.

c. Total Suspended Solids (TSS)

Massachusetts has a narrative water quality standard for solids that states, "[t]hese waters shall be free from floating, suspended and settleable solids in concentrations and combinations that would impair any use assigned to this Class, that would cause aesthetically objectionable conditions, or that would impair the benthic biota or degrade the chemical composition of the bottom."

Additionally, TSS concentrations of 25 mg/L as an average monthly limit and 45 mg/L as a maximum daily limit have been required in the past for similar individual NPDES permits in Massachusetts as technology-based effluent limits, based on BPJ. In order to minimize the TSS concentration in the discharge, an average monthly limit of 25 mg/L and a maximum daily limit of 45 mg/L have been included in the draft permit, sampled at a frequency of 1/month. Monitoring data for the discharge through Outfall 001 shows a TSS concentration of < 5.0 mg/L.

d. Oil and Grease (O&G)

According to Massachusetts Water Quality Standards (314 CMR 4.05(3)(b)(7)), Class B inland water bodies shall be free from oil, grease and petrochemicals that produce a visible film on the surface of the water, impart an oily taste to the water or an oily or other undesirable taste to the edible portion of aquatic life, coat the banks or bottom of the water course, or are deleterious or become toxic to aquatic life. A concentration of oil and grease of 15 mg/L is recognized as the

level at which many oils produce a visible sheen and/or cause an undesirable taste in fish.[1] Therefore, the draft permit shall require a maximum daily effluent limit for oil and grease of 15 mg/L, monitored at a frequency of 1/month. No previous O&G monitoring results have been reported for Outfall 001.

e. Turbidity

Due to the nature of operation, which involves the treatment of fine solids washed from the rock, there is reasonable potential for turbidity in the discharge. In order to minimize this turbidity, a maximum daily limit of 25 NTU is included in the draft permit, sampled at a frequency of 1/month. This turbidity limit has been included for similar discharges in Massachusetts.

f. Aluminum

The previous permit application for the site submitted by the previous facility owners on January 30, 1989 (Permit Application No. 0032158) indicated elevated levels of aluminum in the discharge from the facility of 3.07 mg/L. This is in exceedence of National Recommended Water Quality Criteria for aluminum of 0.750 mg/L CMC and 0.087 mg/L CCC. The high level of aluminum in the discharge may have resulted from the use of aluminum sulfate as a flocculent onsite. This flocculent is no longer used at the facility; however, the draft permit shall require reporting of total aluminum on an annual basis, as part of the reporting requirements for the WET test (see below).

g. Whole Effluent Toxicity (WET) Testing

Under Section 301(b)(1)(C) of the CWA, discharges are subject to effluent limitations based on water quality standards. The Massachusetts Surface Water Quality Standards include the following narrative statement and requires that EPA criteria established pursuant to Section 304(a)(1) of the CWA be used as guidance for interpretation of the following narrative criteria: All surface waters shall be free from pollutants in concentrations or combinations that are toxic to humans, aquatic life or wildlife.

National studies conducted by the EPA have demonstrated that point sources contribute toxic constituents. These constituents include metals, chlorinated solvents, aromatic hydrocarbons and others. The Region typically includes toxicity testing requirements where a combination of toxic constituents may be toxic to humans, aquatic life, or wildlife. Section 101(a)(3) of the CWA specifically prohibits the discharge of toxic pollutants in toxic amounts.

Based on the potential for toxicity resulting from this point source discharge, as well the potential for toxicity resulting from the use of flocculent, in accordance with EPA national and regional policy, and in accordance with MassDEP policy, the draft permit includes acute and chronic toxicity monitoring requirements. (See Policy for the Development of Water Quality-Based

1 USEPA. 1976. *The Red Book – Quality Criteria for Water*. July 1976.

Permit Limitations for Toxic Pollutants,50 Fed. Reg. 30,784 (July 24, 1985); EPA's Technical Support Document for Water Quality-Based Toxics Control" on September, 1991; and MassDEP's Implementation Policy for the Control of Toxic Pollutants in Surface Waters (February 23, 1990).

The draft permit requires that the permittee conduct annual freshwater chronic (and modified acute) WET tests for the Outfalls 001. The chronic test may be used to calculate the acute LC_{50} at the 48 hour exposure interval. The permittee shall test the daphnid, Ceriodaphnia dubia, and fathead minnow, Pimephales promelas. Toxicity test samples shall be collected during the month of July. The test results shall be submitted by the last day of the month following the completion of the test (August 31st). The tests must be performed in accordance with test procedures and protocols specified in Attachment 1 of the permit. The permitee may request a reduction in the WET testing requirements at the time of permit reissuance.

2. Outfall 002

a. Flow

Outfall 002 discharges a daily maximum of 16,000 gallons per day and a monthly average of 5,500 gallons per day (these discharge flow rates are conservative since a discharge only occurs from excessive rainfall amounts), intermittently, about three times per year. The draft permit shall require monthly reporting of the flow through Outfall 002, based on estimation. The permitee shall also report the total number of discharge events per month through Outfall 002.

b. pH

The Massachusetts Surface Water Quality Standards, 314 Code of Massachusetts Regulations ("CMR"), Inland Water, Class B at 4.05 (3)(b)3 require that the pH of Class B waters be in the range of 6.5 to 8.3 standard units and no more than 0.5 units outside the background range. There shall no change from background conditions that would impair any use assigned to this Class.

Additionally, the ELGs for Mineral Mining and Processing Point Source Category, for both Crushed Stone and Construction Sand and Gravel, are 6.0 – 9.0 SU for pH. Therefore, the draft permit shall require a pH effluent limitation range of 6.5 – 8.3 SU, unless exceeded due to natural causes, based on the more stringent State Water Quality Standards. The permit shall also require that the pH of the effluent be no more than 0.5 units outside the natural background range. Monitoring data for the discharge through Outfall 002 shows pH of 8.68 SU.

c. Total Suspended Solids (TSS)

Massachusetts has a narrative water quality standard for solids that states, "[t]hese waters shall be free from floating, suspended and settleable solids in concentrations and combinations that would impair any use assigned to this Class, that would cause aesthetically objectionable conditions, or that would impair the benthic biota or degrade the chemical composition of the bottom."

Additionally, TSS concentrations of 25 mg/L as an average monthly limit and 45 mg/L as a maximum daily limit have been required in the past for similar individual NPDES permits in Massachusetts, based on BPJ. In order to minimize the TSS concentration in the discharge, an average monthly limit of 25 mg/L and a maximum daily limit of 45 mg/L have been included in the draft permit, sampled at a frequency of 1/month. Monitoring data for the discharge through Outfall 002 shows a TSS concentration of 35.0 mg/L.

d. Oil and Grease (O&G)

According to Massachusetts Water Quality Standards (314 CMR 4.05(3)(b)(7)), Class B inland water bodies shall be free from oil, grease and petrochemicals that produce a visible film on the surface of the water, impart an oily taste to the water or an oily or other undesirable taste to the edible portion of aquatic life, coat the banks or bottom of the water course, or are deleterious or become toxic to aquatic life. A concentration of oil and grease of 15 mg/L is recognized as the level at which many oils produce a visible sheen and/or cause an undesirable taste in fish.[2] Therefore, the draft permit shall require a maximum daily effluent limit for oil and grease of 15 mg/L, monitored at a frequency of 1/month.

e. Turbidity

Due to the nature of operation, which involves the treatment of fine solids washed from the rock, there is reasonable potential for turbidity in the discharge. In order to minimize this turbidity, a maximum daily limit of 25 NTU is included in the draft permit, sampled at a frequency of 1/month. This turbidity limit has been included for similar discharges in Massachusetts.

f. Aluminum

The previous permit application for the site submitted by the previous facility owners on January 30, 1989 (Permit Application No. 0032158) indicated elevated levels of aluminum in the discharge from the facility of 3.07 mg/L. This is in exceedence of National Recommended Water Quality Criteria for aluminum of 0.750 mg/L CMC and 0.087 mg/L CCC. The high level of aluminum in the discharge may have resulted from the use of aluminum sulfate as a flocculent onsite. This flocculent is no longer used at the facility; however, the draft permit shall require reporting of total aluminum on an annual basis, as part of the reporting requirements for the WET test (see below).

g. Whole Effluent Toxicity (WET) Testing

Under Section 301(b)(1)(C) of the CWA, discharges are subject to effluent limitations based on water quality standards. The Massachusetts Surface Water Quality Standards include the following narrative statement and requires that EPA criteria established pursuant to Section

2 USEPA. 1976. *The Red Book – Quality Criteria for Water*. July 1976.

304(a)(1) of the CWA be used as guidance for interpretation of the following narrative criteria: All surface waters shall be free from pollutants in concentrations or combinations that are toxic to humans, aquatic life or wildlife.

National studies conducted by the EPA have demonstrated that point sources contribute toxic constituents. These constituents include metals, chlorinated solvents, aromatic hydrocarbons and others. The Region typically includes toxicity testing requirements where a combination of toxic constituents may be toxic to humans, aquatic life, or wildlife. Section 101(a)(3) of the CWA specifically prohibits the discharge of toxic pollutants in toxic amounts.

Based on the potential for toxicity resulting from this point source discharge, as well the potential for toxicity resulting from the use of flocculent, in accordance with EPA national and regional policy, and in accordance with MassDEP policy, the draft permit includes acute toxicity monitoring requirements. (See Policy for the Development of Water Quality-Based Permit Limitations for Toxic Pollutants,50 Fed. Reg. 30,784 (July 24, 1985); EPA's Technical Support Document for Water Quality-Based Toxics Control" on September, 1991; and MassDEP's Implementation Policy for the Control of Toxic Pollutants in Surface Waters (February 23, 1990).

The draft permit requires that the permittee conduct annual freshwater acute WET tests for the Outfall 002 effluent. The permittee shall test the daphnid, Ceriodaphnia dubia, and fathead minnow, Pimephales promelas. Toxicity test samples shall be collected during the month of July. The test results shall be submitted by the last day of the month following the completion of the test (August 31st). The tests must be performed in accordance with test procedures and protocols specified in Attachment 2 of the permit. The permitee may request a reduction in the WET testing requirements at the time of permit reissuance.

EPA has required acute, rather than chronic (and modified acute), WET testing for the Outfall 002 effluent since it is an intermittent discharge, rather than a continuous discharge.

V. ENDANGERED SPECIES ACT

Section 7(a) of the Endangered Species Act of 1973, as amended (ESA) 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 United States Fish and Wildlife Service (USFWS) typically administer Section 7 consultations for bird, terrestrial, and freshwater aquatic species.

EPA has reviewed the federal endangered or threatened species of fish and wildlife to see if any such listed species might potentially be impacted by the re-issuance of this NPDES permit. The available ESA information indicates that the bog turtle is listed in Berkshire County as a federally

threatened species, however only in the towns of Egremont and Sheffield (about 20-30 miles south of Pittsfield). Therefore, based on the normal distribution of these species, it is highly unlikely that they would be present in the vicinity of this discharge. Furthermore, the 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. During the public comment period, EPA has provided a copy of the draft permit and fact sheet to NMFS and USFWS.

VI. ESSENTIAL FISH HABITAT

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

Essential fish habitat is only designated for species for which federal fisheries management plans exist (16 U.S.C. § 1855(b)(1)(A)). EFH designations for New England were approved by the U.S. Department of Commerce on March 3, 1999.

A review of available EFH information indicates that the Housatonic River is not designated EFH for any federally managed species. Therefore, consultation with NMFS is not required. If adverse effects are detected as a result of this permit action, NMFS will be notified and an EFH consultation will promptly be initiated. During the public comment period, EPA has provided a copy of the draft permit and fact sheet to NMFS.

VII. STATE CERTIFICATION REQUIREMENTS

EPA may not issue a permit unless the MassDEP certifies that the effluent limitations contained in the permit are stringent enough to assure that the discharge will not cause the receiving water to violate State Surface Water Quality Standards or unless state certification is waived. The staff of the MassDEP has reviewed the draft permit and advised EPA that the limitations are adequate to protect water quality. EPA has requested permit certification by the State pursuant to 40 CFR §124.53 and expects that the draft permit will be certified.

VIII. ADMINISTRATIVE RECORD, PUBLIC COMMENT PERIOD, HEARING REQUESTS, 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 the U.S. EPA, Office of

Ecosystem Protection Attn: Nicole Kowalski, 1 Congress Street, Suite 1100 (CIP), Boston, Massachusetts 02114-2023 or via email to kowalski.nicole@epa.gov. The comments should reference the name and permit number of the facility for which they are being provided.

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

Following the close of the comment period, and after a public hearing, if such hearing is held, 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 thirty (30) days following the notice of final permit decision, permits may be appealed to the Environmental Appeals Board in the manner described at 40 CFR § 124.19.

IX. 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:

Nicole Kowalski, EPA New England – Region 1
1 Congress Street, Suit 1100 (CIP)
Boston, Massachusetts 02114-2023
Telephone: (617) 918-1746 FAX: (617) 918-0746
email: kowalski.nicole@epa.gov

Paul Hogan, Massachusetts Department of Environmental Protection
Division of Watershed Management, Surface Water Discharge Permit Program
627 Main Street, 2nd Floor
Worcester, Massachusetts 01608
Telephone: (508) 767-2796 FAX: (508) 791-4131
email: paul.hogan@state.ma.us

_____
Date

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

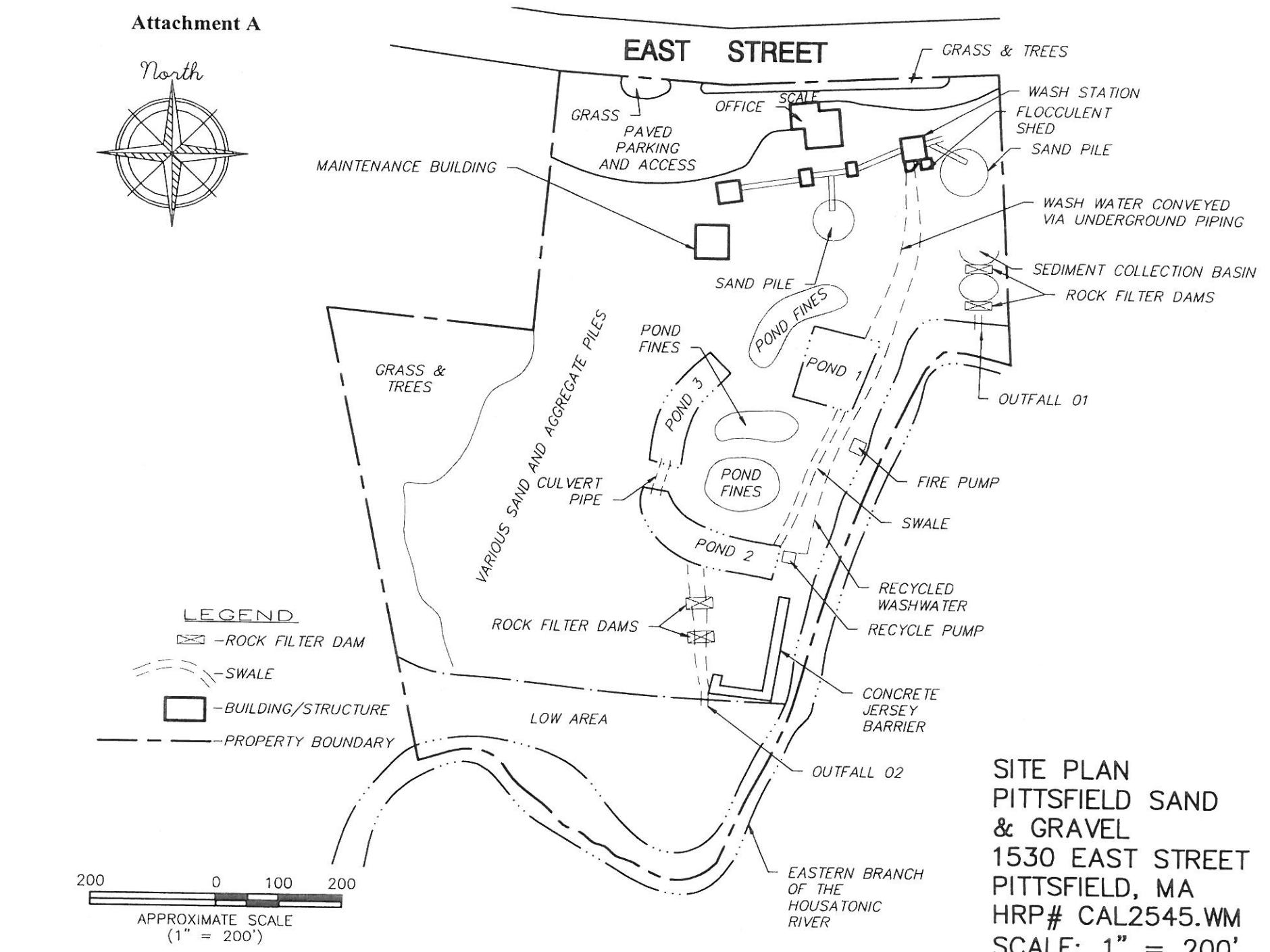
X. ATTACHMENTS

A. Site Plan

B. Summary of NPDES Form 2C Data

C. Outfall Locations

Attachment A



SITE PLAN
PITTSFIELD SAND
& GRAVEL
1530 EAST STREET
PITTSFIELD, MA
HRP# CAL2545.WM
SCALE: 1" = 200'

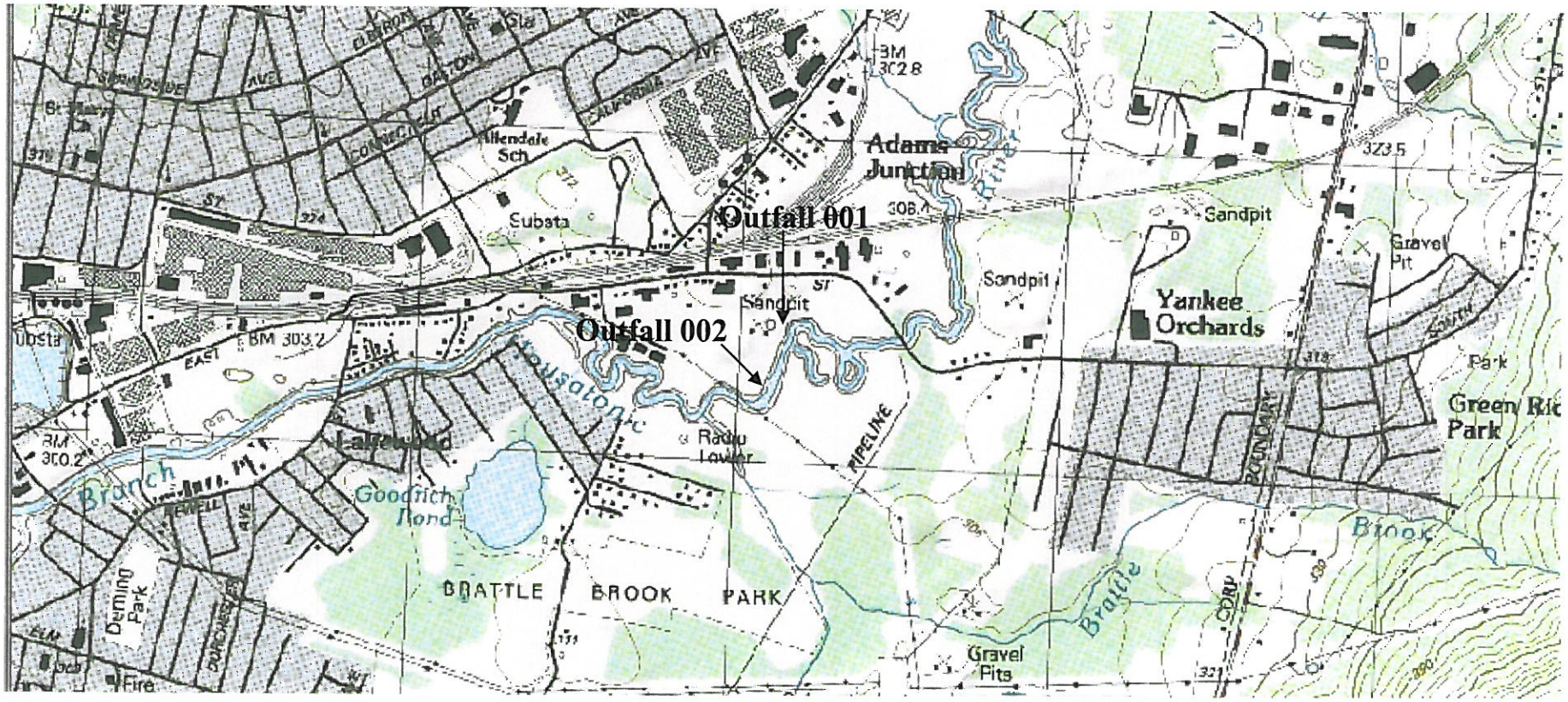
S:\Data\C\CALIN - CALLANAN INDUSTRIES\1245 KINGS ROAD\MASS Sites\EAST STREET, PITTSFIELD, MA\CAL2

Attachment B

Summary of NPDES Form 2C Data
(NPDES Permit No. MA0040312 Application, dated December 30, 2008)

Parameter	Outfall 001	Outfall 002
BOD (mg/L)	<3.00	<3.00
COD (mg/L)	15.7	13.2
TOC (mg/L)	3.18	10.8
TSS (mg/L)	<5.0	35.0
Ammonia (as N) (mg/L)	<0.200	<0.200
Flow (GPM)	1	1
Temperature (°C)	21	21
pH (SU)	8.92	8.68

Attachment C
Pittsfield Sand and Gravel
Outfall Locations



Response to Comments on Draft National Pollutant Discharge Elimination System (NPDES) Permit No. MA0040312 - Callanan Industries, Inc. - Pittsfield Sand and Gravel

Introduction:

In accordance with the provisions of 40 C.F.R. §124.17, this document presents EPA's responses to comments received on the Draft NPDES Permit (MA0040312). The responses to comments explain and support the EPA determinations that form the basis of the Final Permit. The Callanan Industries Inc., Pittsfield Sand and Gravel, Draft Permit public comment period began September 16, 2009 and ended October 15, 2009. Comments on the draft permit were received from HRP Associates, Inc., on behalf of Callanan Industries, and from Housatonic Valley Association (HVA).

The Final Permit is almost identical to the Draft Permit that was available for public comment. Although EPA's knowledge of the facility has benefited from the various comments and additional information submitted, the information and arguments presented did not raise any substantial new questions concerning the permit. EPA did, however, make certain changes and clarifications in response to comments. These changes are listed below.

Changes to Permit:

1. Part I.A.2, Footnote 9 has been revised from "The permittee may request a reduction in the WET testing requirements at the time of permit reissuance," to "After submitting two years and a minimum of two consecutive sets of WET test results, all of which demonstrate no toxicity, the permittee may request a reduction in the acute WET testing requirements for Outfall 002. The permittee is required to continue testing at the frequency specified in the permit until notice is received by certified mail from EPA that the WET testing requirement for Outfall 002 has been changed."

2. Part I.A.1-2, Footnote 11 has been revised to include, "The permittee shall also document the outfall sampling locations and dilution water sampling location by providing either the USGS coordinates and/or a map of these locations."

Comments from HRP Associates, Inc., on behalf of Callanan Industries:

Comment 1:
Part I.A.1, page 2 states that monthly discharge monitoring of both Outfalls 001 and 002 must be performed. Since the facility only operates it's [sic] sand washing process between February and November, it is requested that the permit language be revised, to include:

"The permittee is only required to perform sampling during each month, when the sand washing process is performed. Each year the permittee will transmit a letter to the USEPA noting that it has ceased production for the year, and its intended startup date, the following year. No sampling is required during the any [sic] month when the sand washing process is not operated."

Response to Comment 1:
Sampling is required at Outfalls 001 and 002 for each month that there is a discharge from the outfall. This applies even when the facility is not operating its sand washing process. In the event that there is no discharge from the Outfall during the month, the permittee shall report the appropriate "No Data Indicator Code" (NODI) on the DMR. The appropriate NODI code can be found in the *NPDES Permit Program Instructions for the Discharge Monitoring Report Forms (DMRs) Report Year 2009*, available online at: http://www.epa.gov/region1/enforcementandassistance/dmr2009.pdf.

Comment 2:
Part I.A.2, page 4 of the permit states that monthly discharge monitoring of Outfall 002 must be performed. Since, discharges from this outfall, only occur during periods of heavy rain, if the facility's retention ponds are overflowing, it is requested that the permit language be revised, to include:

"The permittee is only required to perform monthly sampling from this outfall, when a discharge has been noted. If no discharge is noted for a particular month, then the permittee shall include a letter stating as such."

Response to Comment 2:
In the event that there is no discharge from the Outfall during the month, the permittee shall report the appropriate "No Data Indicator Code" (NODI) on the DMR. The appropriate NODI code can be found in the *NPDES Permit Program Instructions For the Discharge Monitoring Report Forms (DMRs) Report Year 2009*, available online at: http://www.epa.gov/region1/enforcementandassistance/dmr2009.pdf.

Comment 3:
The permit notes (Part I.A.2 footnotes, page 6) that there is a variance for exceedences of the pH samples if they do not meet the 6.5 SU to 8.3 SU, or are 0.5 SU outside the natural background range of the Housatonic River. It is understood based on the sampling results found in Appendix B, of the Housatonic River Watershed: 2002 Water Quality Assessment Report, that the natural pH of the river is 7.7 to 8.3 SU.

Therefore it is requested that the USEPA state the natural background range of the river in the permit. In addition, if the facility demonstrates that an elevated pH are [sic] outside the range noted above, and found to be caused by natural causes (i.e. samples of source water and effluent have the same pH), it is requested that the facility no longer report pH during their monthly samples.

Response to Comment 3:
The permit states in footnote 5, to Parts I.A.1 and I.A.2, that:

> The pH of the effluent shall not be less than 6.5 SU, nor greater than 8.3 SU at any time, unless these values are exceeded due to natural causes. The pH shall be no more than 0.5 units outside the natural background range. To demonstrate that pH values of the effluent are outside the permitted pH range due to natural causes, the permittee must show that pH measurements of the source water and the effluent are the same. Documentation of such conditions must be submitted by the permittee with the discharge monitoring reports.

Therefore the above comment which states, "that there is a variance for exceedences of the pH samples if they do not meet the 6.5 SU to 8.3 SU, or are 0.5 SU outside the natural background range of the Housatonic River," is incorrect. The pH effluent limitation in the draft permit is based on the Massachusetts Surface Water Quality Standards, 314 Code of Massachusetts Regulations ("CMR"), Inland Water, Class B at 4.05 (3)(b)(3) which state that the pH of Class B waters be in the range of 6.5 to 8.3 standard units **and** no more than 0.5 units outside the background range.

The permittee states that the natural pH of the river is 7.7 – 8.3 SU, according to sampling data outlined in Appendix B of the 2002 Water Quality Assessment Report for the Housatonic. The fact sheet states that the natural pH of the river is 7.2 – 8.3 SU. This was taken from the Housatonic River Basin 1997/1998 Water Quality Assessment Report. The Fact Sheet is a final document and cannot be revised; however, this response to comments shall serve to record the most recently measured and documented natural background pH range of the Housatonic in the vicinity of this discharge as 7.7 – 8.3 SU.

In regards to demonstration of exceedences of the permitted pH range due to natural causes, the permittee must show that pH measurements of the source water and the effluent are the same. Therefore, if the pH exceeds the range of 6.5 – 8.3 SU, the permittee must take an actual sample of the source water for comparison to the pH measurement of the effluent if attempting to show the exceedence is due to natural causes. The permittee shall document the conditions on the DMR. However, if the natural pH of the river is 7.7 to 8.3 SU, as the permittee states, then there should be no exceedences of the pH limit as a result of the natural conditions of the source water, as it is within the permitted pH range.

As stated in EPA's Gold Book, "pH has a direct effect on organisms as well as an indirect effect on the toxicity of certain other pollutants in the water."[1] The pH effluent limitation in the draft permit is based on the Massachusetts Surface Water

[1] Water Quality Critieria for Water 1986 (The Gold Book). (EPA 440/5-86-001, May 1886)

Quality Standards, and shall be retained in the final permit so that the pH water quality standard of the receiving water is protected.

Comment 4:
The permit requires Whole Effluent Toxicity (WET) testing be performed annually for both Outfalls 001 and 002. The following WET test parameters are not contributed by the facility:

- Total Residual Chlorine;
- Ammonia;
- Total Organic Carbon;
- Total Cadmium;
- Total Lead;
- Total Copper;
- Total Zinc;
- Total Nickel;
- Total Aluminum

Therefore, it is requested that these be [sic] testing parameters removed from the as [sic] part of the annual WET tests.

Response to Comment 4:
Refer to Part VI, Chemical Analysis, of the Freshwater Chronic Toxicity Test Procedure and Protocol and Freshwater Acute Toxicity Test Procedure and Protocol. This chemical analysis is required as part of the standard WET testing procedure and protocol and therefore shall continue to be required in the permit, on an annual basis.

Furthermore, as stated in Part IV.E.1.f of the Fact Sheet,

> The previous permit application for the site submitted by the previous facility owners on January 30, 1989 (Permit Application No. 0032158) indicated elevated levels of aluminum in the discharge from the facility of 3.07 mg/L. This is in exceedence of National Recommended Water Quality Criteria for aluminum of 0.750 mg/L CMC and 0.087 mg/L CCC. The high level of aluminum in the discharge may have resulted from the use of aluminum sulfate as a flocculent onsite. This flocculent is no longer used at the facility; however, the draft permit shall require reporting of total aluminum on an annual basis, as part of the reporting requirements for the WET test.

Additionally, since WET testing is a new testing requirement for the discharges, the permittee shall also document the outfall sampling locations and dilution water sampling location by providing either the USGS coordinates and/or a map of the locations.

Comment 5
The permit requires Whole Effluent Toxicity (WET) testing be performed annually for both Outfalls 001 and 002. Part of the WET testing includes an annual an [sic] Acute

LC50 test (on Outfall 001 and 002), and an annual Chronic NOEC test (on Outfall 001 only). It is requested that this requirement be removed based on the test results previously submitted by the facility (attached). The results from this previous test identifies that at a concentration of 30 ppm or less, no flathead [sic] minnows (pimephales promelas) or daphnid (ceriodaphnia dubia), expired when placed in a sample of stormwater and flocculent water from a stormwater discharge at outfall 002 for 72-hours. The facility can not use more than 30 ppm flocculent otherwise the process does not work properly.

Response to Comment 5:
EPA is not convinced by the results of one sample taken from Outfall 002 that the discharges from the facility have no reasonable potential to cause toxicity. Based on the potential for toxicity resulting from this point source discharge, as well the potential for toxicity resulting from the use of flocculent, in accordance with EPA national and regional policy, and in accordance with MassDEP policy, the final permit shall continue to include acute and chronic toxicity monitoring requirements for Outfall 001 and acute toxicity monitoring requirements for Outfall 002.[2]

However, in the event of two consecutive acute WET test results for the discharge from Outfall 002 reporting no toxicity, the permittee may request removal of the acute WET testing requirement for Outfall 002. Part I.A.2, Footnote 9 has been revised from "The permittee may request a reduction in the WET testing requirements at the time of permit reissuance," to "After submitting two years and a minimum of two consecutive sets of WET test results, all of which demonstrate no toxicity, the permittee may request a reduction in the acute WET testing requirements for Outfall 002. The permittee is required to continue testing at the frequency specified in the permit until notice is received by certified mail from EPA that the WET testing requirement for Outfall 002 has been changed."

In regards to Outfall 001, the final permit shall require acute and chronic WET testing, as outlined in the draft permit, since no WET tests have been performed on this discharge.

Comments from Housatonic Valley Association (HVA)

Comment 6:
The permit appears to cover the monitoring of the appropriate parameters relevant to any discharge impacts to the river except for temperature and information relative to the chemical make-up of the gravel being processed at the site. Since the site in question is located along a sizable stretch of the East Branch of the Housatonic River, this operation has the possibility of considerable impact to the health of the river.

[2] As noted on pg. 11 of the Fact Sheet, "EPA has required acute, rather than chronic (and modified acute), WET testing for the Outfall 002 effluent since it is an intermittent discharge, rather than a continuous discharge."

The discharge into Outfall Serial Number 002 is from a discharge retention pond, and from stormwater runoff, product wash water and silt dewatering. This site in particular would seem to have a strong possibility of having higher temperature than is permitted in this area even with its' [sic] warm water designation.

Response to Comment 6:

Massachusetts Surface Water Quality Standards, 314 Code of Massachusetts Regulations ("CMR"), Inland Water, Class B at 4.05 (3)(b)(2) state that the Temperature shall not exceed 83°F (28.3°C) in warm water fisheries. The rise in temperature due to a discharge shall not exceed 3°F (1.7°0C) in rivers and streams designated as cold water fisheries nor 5°F (2.8°C) in rivers and streams designated as warm water fisheries (based on the minimum expected flow for the month).

All water quality data collected in the East Branch Housatonic River for the 2002 Water Quality Assessment Report for the Housatonic met temperature criteria. According to Appendix B of the 2002 Water Quality Assessment Report for the Housatonic, the temperature of the East Branch of the Housatonic River ranged from 8.3°C to 21.6°C (about 47°F to 71°F).

Review of the permit application shows that the temperature of the discharge from both Outfall 002 and Outfall 001 was 21ºC (69.8ºF). This sample was taken during the summer, therefore, EPA expects that this is a representative sample of warm weather discharge conditions. EPA does not expect that the processes at the facility (product wash water and silt dewatering) will add heat to the source water, or that the storm water will be uncharacteristically high in temperature as compared to the warm water receiving water. Therefore, EPA does not believe it is necessary to monitor the temperature of the discharges at this time.

Comment 7:

The other potential impact to address would be to monitor the type of chemical composition of the gravel being processed at the site. It would seem that in order to determine healthy aquatic limits to the chemical content of the surrounding river, it would be of significant value to establish maximum levels of the known chemical composition that is being processed.

Response to Comment 7:

EPA has required monitoring of all known, or believed to be present, pollutants in the discharge from the facility. Upon developing the permit, EPA reviewed technology based requirements applicable to this facility as well as NPDES permits for similar facilities. The main pollutants of concern from sand and gravel operations are total suspended solids (TSS) and turbidity. Nitrate nitrogen is also a pollutant of concern due to blasting agents used at facilities with quarries that blast rock. This facility, however, does not have a quarry onsite and therefore does not use any blasting agents.

The potential for toxicity associated with the presence of any unknown pollutants is addressed with the requirement for Whole Effluent Toxicity (WET) testing. National studies conducted by the EPA have demonstrated that point sources contribute toxic constituents, including metals, chlorinated solvents, aromatic hydrocarbons and others. The Region typically includes toxicity testing requirements where a combination of toxic constituents may be toxic to humans, aquatic life, or wildlife. The toxicity testing required in this permit will address the presence of any unknown constituents that may be present in the discharge.