

Response to Public Comments

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, #MA0003531. The response to comments explains and supports the EPA determinations that form the basis of the final permit. From May 30, 2014 to July 12, 2014, the United States Environmental Protection Agency ("EPA") and the Massachusetts Department of Environmental Protection ("MassDEP") (together, the "Agencies") solicited public comments on a draft NPDES permit, #MA0003531, developed pursuant to an individual permit application from Certainteed Corporation, a division of Saint-Gobain ("Certainteed") for the re-issuance of a National Pollutant Discharge Elimination System ("NPDES") permit to discharge treated cooling water from Outfall 001, treated non-contact cooling water, process water, boiler condensate, boiler blowdown, and stormwater from Outfall 002, and treated stormwater from Outfalls 003 and 004 to the Neponset River (Segment MA73-01) in Norwood, Massachusetts.

After a review of the comments received, EPA and MassDEP have made a final decision to issue this permit authorizing these discharges. The Final Permit is substantially identical to the Draft Permit that was available for public comment.

Although EPA's decision-making process has benefitted from the comments and additional information submitted, the information and arguments presented did not raise any substantial new questions concerning the permit. EPA did, however, make minor changes in response to comments which are listed below. The analyses underlying these changes are explained in the responses to individual comments that follow and are reflected in the Final Permit. Comments are paraphrased.

Copies of the Final Permit may be obtained by writing or calling EPA's NPDES Industrial Permits Section (OEP 06-1), Office of Ecosystem Protection, 5 Post Office Square, Suite 100, Boston, MA 02109-3912; Telephone: (617) 918-1989.

Summary of Changes in the Final Permit

1. Cover Page

Deletion: The permit effective date sentence which stated, "If no comments are received, this permit shall become effective upon signature," has been removed, as public comments were received.

2. Part I.A.

Addition: Specification regarding the authorized effluent discharge location has been added to Part I.A.2. The corresponding sampling location specified in the sample requirement for Outfall 002 (footnote 1) has been corrected as a result.

Correction: The flow rate limit for Outfall 004 in Part I.A.4. has been corrected. The flow rate limit is 100 gallons per minute (gpm).

Change: The sample requirement for flow in Part I.A.1. (footnote 4) has been changed to specify that continuous monitoring is defined as collection of one data point per hour.

Addition: Total flow, which is required to be recorded using a flow meter for Outfall 001, Outfall 003, and Outfall 004 has been added to the table in Part I.A.1., I.A.3. and I.A.4.

Change: The sample requirements for total suspended solids and total phosphorus have been changed from composite to grab samples, at the specified frequency when a discharge occurs. The portion of footnote 3 pertaining to composite samples has been removed as a result.

Change: The parameters antimony, iron, manganese, chromium, calcium, magnesium and phosphorus have been moved in the tables for Part I.A.1 and I.A.2. to WHOLE EFFLUENT TOXICITY and WHOLE EFFLUENT TOXICITY TEST, RECEIVING WATER CHEMICAL ANALYSIS. The applicable corresponding footnotes, footnote 16 and 17, have been combined as a result.

Correction: Part I.A. footnote 4 “The Permittee shall document total flow recorded by the flow meters for Outfalls 001, 002 and 003 and provide such information to EPA and MassDEP upon request” has been corrected to “The Permittee shall report total flow recorded by the flow meters for Outfalls 001, 003 and 004.” The requirement to provide such information to EPA and MassDEP upon request has been removed.

Correction: Footnote 16 has been corrected to include total recoverable aluminum in the list of parameters required for 100% effluent and receiving water control samples.

3. Part I.B.

Addition: A prohibition has been added to the discharge location for Outfall 002.

4. Part I.E.

Change: The MassDEP address provided in Part I.E.1.b.i. has been changed to MassDEP in Boston and the MassDEP address provided in Part I.E.1.c.iii. has been changed to MassDEP’s new address in Worcester.

Corrections

Several typographical corrections were made to the Final Permit that include spelling or grammar correction, adjustment in line spacing, adjustment in sentence spacing, and adjustment in numbering format. No further rationale is warranted.

Public Comments

Comments submitted by Patrick Widman, Plant Manager, Certainteed:

Comment A1:

Part I.A.1. Table 1 indicates that flow rate monitoring at this outfall has been changed from weekly to continuous. Footnote #4 states that flow rate data should be collected once a week on the same day and time each week. The frequency of continuous flow rate monitoring is not defined. We request that “continuous monitoring” be defined as one data point per hour.

Response to Comment A1:

EPA has made the requested change in the final permit.

Comment A2:

Part I.A.2., Table 2 includes monthly sampling requirements for pH and Total Suspended Solids. Outfall 002 occurs after a control device with a significant dwell time and recharging substantially to groundwater without discharging. There has not been a discharge at this outfall since 2012. Based on the operations and maintenance of the area that has the ability to discharge to this outfall, there may never be another discharge. Accordingly, we request the sampling frequency be changed to “when a discharge occurs.”

Response to Comment A2:

The draft permit required monthly sampling when a discharge occurs. EPA believes this is consistent with the change requested, but further defines a frequency for sample collection in the event of a discharge. As such, the sampling requirement as included in the permit requires one sample during a month in which one or more discharges occurs. In a month where a discharge does not occur, no sample is required. Therefore, final permit frequency has not been changed.

However, EPA has provided additional clarification in Part I.A.2. to better define discharges and samples for Outfall 002. The discharge point to the Neponset River is not the required sampling location for this outfall, as the facility effluent has already co-mingled with non-facility effluent at the discharge point to the Neponset River (Outfall 002). Such samples are not representative of the nature and quality of the effluent generated at the facility.

In addition, the treatment system, that is, the detention pond located adjacent to the north side of Pleasant Street, contains multiple structures by which water in the pond could exit the pond. The discharge point and sampling location allowed in the permit is the cylindrical overflow structure located near, but not along the east edge of the pond.

Routine discharges of effluent by way of any other structure, particularly the concrete emergency overflow slab located at the east edge of the pond, are not authorized by this permit. Routine discharges are not considered emergency conditions. Emergency conditions would, at a minimum exceed the design storm (the storm during which the retention time is expected to be exceeded by the input volume) of the detention pond, noted in comments dated December 5, 1996 from David A. LaBelle to Victor Alvarez, as a 100 year storm. As the concrete emergency overflow slab is situated at an elevation approximately 4 feet higher than the cylindrical concrete overflow structure and the 100 year design storm for the detention pond is expected to occur relatively infrequently, routine discharges are expected to occur only through the cylindrical concrete overflow structure. Storm events that exceed the 100 year 24-hour design storm would be expected to require use of the concrete emergency overflow slab. Water exiting the detention pond by any other means excepting infiltration, evaporation, or dewatering during maintenance activities, would indicate the detention pond is not functioning as designed such that maintenance is required.

Therefore, the final permit also includes clarification that, with specific exceptions defined in Part II. Standard Conditions, discharges from Outfall 002 via the emergency overflow slab are prohibited. This prohibition is included in Part I.B. of the final permit.

Comment A3:

Part I.A.2, Table 2 includes a requirement to collect a composite sample for Total Suspended Solids. Due to the limited discharge duration at this outfall we request that this sample requirement be changed to a grab sample and only when a discharge occurs.

Response to Comment A3:

EPA has made the requested change in the final permit. While composite samples are generally more representative of the variability in water quality of stormwater, given the expected frequency and duration of discharge, and the relatively long retention time of stormwater in the detention basin, EPA agrees that a grab sample is appropriate so long as the sample is collected within the specified timeframe. The sole remaining composite sample for total phosphorus, has been changed for consistency and simplicity.

Comment A4:

There is a typo in footnote #4 which indicates that flow in this outfall is metered. This statement contradicts the sampling requirements in Table 2 and the last sentence of footnote #4 which states that the flow rate for this outfall shall be an estimate.

Response to Comment A4:

The typographical error in Part I.A. footnote 4 was the inclusion of total flow requirements using a flow meter for Outfall 002 rather than Outfall 004. Outfall 002 does not require a flow meter and the flow rate requirement remains an estimate. To further

clarify the total flow and flow rate requirements, EPA has corrected footnote 4 and has added the total flow requirements to the tables for the applicable outfalls. As the Permittee is already required to record total flow, to provide greater clarity, specificity and eliminate duplicity, rather than separately requiring submission of total flow data upon request, the final permit requires that these data be included with the Discharge Monitoring Reports. Therefore, “The Permittee shall document total flow recorded by the flow meters for Outfalls 001, 002 and 003 and provide such information to EPA and MassDEP upon request” has been corrected to “The Permittee shall report total flow recorded by the flow meters for Outfalls 001, 003 and 004.”

Comment A5:

The draft NPDES permit contains an average monthly limit of 20 mg/L and a maximum daily limit of 30 mg/L for TSS at Outfall 002. However, Outfall 001 has an average monthly limit of 40 mg/L and a maximum daily limit of 70 mg/L. In addition, there has not been a discharge from Outfall 002 since 2012. CertainTeed has performed maintenance in the area that leads to Outfall 002 further reducing the likelihood of any discharges. We find no design data or historical record that supports these lower limits. We believe the original limits to have been established in error. Further the derived BPT and BAT for Outfall 001 support a higher TSS limit. We request the TSS limit for Outfall 001 be changed to be equal to Outfall 001.

Response to Comment A5:

EPA believes the commenter has requested to change the TSS limit for *Outfall 002* to be equal to Outfall 001. The average monthly limit of 20 mg/L and a maximum daily limit of 30 mg/L for total suspended solids at Outfall 002 remain unchanged. However, EPA has provided additional clarification in Part I.A.2. regarding sampling, described in Response to Comment A2, above.

With regard to the frequency of discharge and completion of maintenance, EPA is aware of the limited frequency of discharge and the maintenance performed on the treatment system for Outfall 002. Since January 1, 2012, the facility has reported TSS discharges on only three occasions. Operation and maintenance of the treatment systems at the facility are and continue to be required by the NPDES permit (see Part I.A.13. and Part II.B.1.). Proper operation and maintenance controlling the effluent such that discharges meet the limitations in the permit, regardless of the frequency of occurrence, does not translate to allowing increased pollutant load through less stringent numeric effluent limitations. Similarly, a reduced frequency of discharge does not equate to less stringent effluent limitations.

Further, the Neponset River is impaired for conditions attributed to TSS and related parameters (i.e., turbidity). According to historical MassDEP water quality assessments (Neponset River Watershed 1994 Resource Assessment Report), and noted in correspondence between the facility and the agencies in the administrative record, TSS discharges from Outfall 002 were at one time a noted source of the impairment. TSS

control was also part of enforcement action taken against the permittee at the time. Through administrative order, settlement and the limitations in NPDES permits, the TSS levels at Outfall 002 have been significantly reduced and are no longer noted in the most recent water quality assessment report for the Neponset River. The 1997 Fact Sheet states that TSS and pH “are regulated based on Massachusetts state certification requirements” (page 5). Specifically, Massachusetts’ water quality standards contain anti-degradation requirements. The effluent limitations have contributed to improved water quality conditions in the Neponset River. If, in subsequent NPDES permits, EPA allowed the discharge of TSS which would cause further degradation or degrade the level of quality already achieved, Massachusetts’ anti-degradation requirements, and therefore the requirements for state certification, are not met. Finally, anti-backsliding requirements do not allow less stringent limitations in re-issued NPDES permits, unless certain specific exceptions are met. EPA finds no exception to the anti-backsliding requirements. As such, any less stringent limitations at Outfall 002 for total suspended solids would violate these regulations.

As noted in the draft permit fact sheet, the support determinations employed by MassDEP during the Neponset River Resource Assessment and Boston Harbor Hydrologic and Water Quality Investigation, TSS levels greater than 80 mg/L have reasonable potential to cause or contribute to an excursion above the narrative WQC for Class B waters. This support determination in greater detail notes that TSS levels below 25 mg/L are “acceptable”; levels between 25 and 80 mg/L are “cause for concern”; and levels greater than 80 mg/L are “definite problems” for interests protected under Class B waters in the MA SWQS. The combination of multiple outfalls contributing TSS loads to the Neponset River, discharged at or below their current limitations, would not be expected to violate Massachusetts’ water quality standards relative to these benchmarks. However, increasing TSS pollutant load to the extent requested (up to a daily maximum of 70 mg/L at four outfalls) at maximum discharge volumes would be expected to exceed these benchmarks and therefore violate Massachusetts’ water quality standards.

With regard to the basis for the existing limitations at Outfall 002, the commenter is incorrect that no design data or historical record supports the limitations and that the existing limitations were established in error. The previous facility owner and operator, Bird Incorporated, was required to submit to EPA a facilities plan for stormwater treatment system improvement and a report proposing interim operational improvements in accordance with Administrative Order Docket No. 93-38 dated September 28, 1993. The detention pond associated with Outfall 002 was designed, approved and installed as a result of this order. Comments dated December 5, 1996 from David A. LaBelle to Victor Alvarez in response to issuance of the draft permit (finalized in 1997), note that discharges to Outfall 002 occur “during a significant storm event (100 yr.) therefore monitoring would be limited to those rare events.” The 2005 permit fact sheet further states that the TSS “limits are maintained in the permit as required by antibacksliding regulations” and ensure that “the discharge will not violate state water quality standards pertaining to solids (see 314 Code of Massachusetts Regulations (CMR) 4.05(3)(b)5.)” (see non-numbered page 6).

As reemphasized in the fact sheet accompanying the draft permit, these limitations are technology-based effluent limitations that have been established using best professional judgment. When establishing TBELs using BPJ, a permit writer considers, among other factors, the type of effluent and the treatment applied, including expected concentrations of total suspended solids in effluent consisting of mostly stormwater runoff prior to treatment, and the removal efficiency a particular type of treatment achieves. The effluent limitations for Outfall 002 are based on the existing treatment technology on site. EPA has not required modification of the existing treatment system or installation of additional treatment in the reissued permit.

The treatment technology applied to TSS at Outfall 002 consists of retention and infiltration. In MassDEP's Stormwater Policy Handbook (1997), as cross-referencing Schueler (1996) and EPA (1993), an infiltration basin is capable of achieving a design removal rate of 80% of the annual TSS load entering the treatment system. For stormwater associated with industrial activity for the industrial sector applicable to the granule processing plant, EPA's multi-sector general permit requires control of total suspended solids through best management practices, including a stormwater pollution prevention plan, that achieves a benchmark value (above which monitoring and adjustments to BMPs are triggered). This benchmark value, 100 mg/L, is therefore expected to be the maximum long term average at the facility. An 80% removal efficiency through application of additional treatment in the infiltration basin results in the reduction of TSS equal to the monthly average limit included in the permit, 20 mg/L according to the following:

$$(\text{removal rate } \%) \times (\text{annual TSS load entering the BMP})$$

The daily maximum limit is permitted slightly above this value, assuming that the monthly average limit can still be met with small variability in daily maximum values.

Therefore, the TSS limits at Outfall 002 for stormwater and potential *de minimis* quantities of non-contact process water, boiler condensate and boiler blowdown from operations within the mineral mining industrial category (SIC code 3295) have not been changed, as requested, to be equal to the TSS limits at Outfall 001 for contact process water from operations within the asphalt roofing industrial category (SIC code 2952).

Comment A6:

Part I.A.3, Table 3 requires composite samples for Total Suspended Solids and Phosphorus. We request that all sampling requirements for this outfall be changed to grab samples "when a discharge occurs." This outfall is a manually initiated discharge.

Response to Comment A6:

EPA has made the requested change in the final permit. While composite samples are generally more representative of the variability in water quality of stormwater, given the batch nature of the discharge, and the ability to store stormwater in the oil/water

separator, EPA agrees that grab samples are appropriate so long as the samples are collected within the specified timeframe.

Comment A7:

Part I.A.3, Table 3 requires that flow rate be measured with a meter. The pump for this outfall is designed for a maximum flow rate of 20 gpm. We request that the requirement to add a meter to this outfall be removed.

Response to Comment A7:

The draft permit fact sheet states that the Permittee is required to “report the number of discharge events for Outfall 003 and 004, and employ the use of a flow meter to record the total flow and flow rate through the OWSs to control the intake and discharge of stormwater through the OWSs such that the design flow capacity is not exceeded”. EPA notes that while the requirements to report the number of discharge events, employ the use of a flow meter to record the flow rate, and report the flow rate were included in the draft permit, the requirement to report the total flow was inadvertently omitted. EPA has added total flow to Part I.A.3.

While the maximum design flow rate of the treatment system will not exceed the daily maximum flow rate limit so long as the system is operated properly, recording and reporting total flow using a totalizer or similar device is needed to better quantify the actual quantity of effluent discharged from Outfall 003. This information further enables EPA to better quantify the loading of pollutants to the Neponset River. As TSS is specifically linked to multiple impairments in the Neponset River, EPA maintains that accurate quantification is necessary to ensure the effluent limitations meet water quality standards. Therefore, EPA has included additional clarification in the final permit regarding the flow meter requirement.

Comment A8:

The draft NPDES permit contains a maximum daily limit of 20 mg/L for TSS at Outfall 003. However, Outfall 001 has a maximum daily limit of 70 mg/L. We find no design data or historical record that supports these lower limits. We believe the original limits to have been established in error. Further the derived BPT and BAT for Outfall 001 support a higher TSS limit. We request the TSS limit for Outfall 001 be changed to be equal to Outfall 001.

Response to Comment A8:

EPA believes the commenter has requested to change the TSS limit for *Outfall 003* to be equal to Outfall 001. The maximum daily limit of *15 mg/L* for total suspended solids at Outfall 003 remains unchanged. These limits were first established in the 1997 permit reissuance. As with TSS limits established for Outfall 002, the permit record notes that the technology-based limits were established using best professional judgment. These

limitations added additional technological controls on TSS, the source of existing impairment in the Neponset River, where controls were previously absent. Similarly, were EPA to increase the allowable TSS load to the Neponset, the existing impairments related to TSS would be expected to degrade. Further, as the 2005 and draft permit fact sheet state, the limits have been maintained based on anti-backsliding regulations (see non-numbered page 7 of the fact sheet 2005 fact sheet). The rationale supporting the basis for best professional judgment and meeting anti-degradation and anti-backsliding requirements are detailed in Response to Comment A5.

EPA further notes that no significant, continuous source of solids in the enclosed, paved tank farm area which contributes to Outfall 003 is apparent. For comparison, bulk petroleum storage facilities permitted by EPA Region 1, which similarly store petroleum products and largely apply the same treatment (i.e., stormwater pollution prevention plan and oil/water separation) achieve effluent limitations of 15 mg/L for monthly average TSS and 30 mg/L for daily maximum TSS for largely pervious drainage areas. In other words, where sediment load is expected to be significantly higher where stormwater comes into direct contact with exposed sediment, the effluent limitations achieved by identical treatment technology, sized appropriately for the stormwater runoff volumes generated, are within the same order of magnitude as those imposed upon this facility. The Permittee is similarly expected to achieve solids reduction through implementation of its Stormwater Pollution Prevention Plan. Furthermore, the effluent quality currently achieved by the facility using existing treatment generally meets the existing limitations. Since January 1, 2012, the facility has exceeded the daily maximum limit on only one occasion and has not exceeded the monthly average limit.

Therefore, the TSS limits at Outfall 003 for stormwater associated with industrial activity have not been changed, as requested, to be equal to the TSS limits at Outfall 001 for contact process water from operations within the asphalt roofing industrial category (SIC code 2952).

Comment A9:

Part I.A.4, Table 4 requires composite samples for Total Suspended Solids and Phosphorus. We request that all sampling requirements for this outfall be changed to grab samples “when a discharge occurs.” This outfall is a manually initiated discharge.

Response to Comment A9:

See Response to Comment A6, as the comment is substantially identical.

Comment A10:

Part I.A.4, Table 4 requires that flow rate be measured with a meter. The pump for this outfall is designed for a maximum flow rate of 100 gpm. We request that the requirement to add a meter to this outfall be removed.

Response to Comment A10:

See Response to Comment A7, as the comment is substantially identical.

Comment A11:

Part I.A.4, Table 4 shows the maximum daily flow rate as 20 gpm. We believe this is a typographical error and should be changed to 100 gpm as the pump and oil/water separator are designed for a maximum flow rate of 100 gpm and Section 7.3.1 of the Fact Sheet correctly states the treatment capacity of the oil/water separator for Outfall 004 as 100 gpm. We request that the flow rate requirement be changed to 100 gpm.

Response to Comment A11:

EPA agrees that the daily maximum flow rate limit of 20 gallons per minute (“gpm”) for Outfall 004 is a typographical error. EPA has changed the final permit to reflect a daily maximum flow rate limit of 100 gpm for Outfall 004.

Comment A12:

The draft NPDES permit contains a maximum daily limit of 20 mg/L for TSS at Outfall 004. However, Outfall 001 has a maximum daily limit of 70 mg/L. We find no design data or historical record that supports these lower limits. We believe the original limits to have been established in error. Further the derived BPT and BAT for Outfall 001 support a higher TSS limit. We request the TSS limit for Outfall 001 be changed to be equal to Outfall 001.

Response to Comment A12:

EPA believes the commenter has requested to change the TSS limit for *Outfall 004* to be equal to Outfall 001. The maximum daily limit of 15 mg/L for total suspended solids at Outfall 004 remains unchanged. Since January 1, 2012, the facility has exceeded the daily maximum limit on only two occasions and the monthly average limit on one occasion. Otherwise, see Response to Comment A8, as the comment and rationale applicable to EPA’s response for Outfall 004 TSS limitations are substantially identical to that of Outfall 003.

Comment A13:

There are discrepancies between the sampling requirements in the tables and in the footnotes. Footnote #17 includes WET test sampling requirement for antimony, iron, manganese, chromium, calcium, magnesium and phosphorus. These sampling requirements are not included in Tables 1 and 2 in Part I A of the draft permit. Additionally, aluminum sampling is listed in tables 1 and 2 in Part I A, but is not listed in footnotes #16 or #17. Please provide clarification on these sampling requirements.

Response to Comment A13:

Antimony, iron, manganese, chromium, calcium, magnesium and phosphorus were listed in the tables in Part I.A.1. and I.A.2. following the parameters listed under WHOLE EFFLUENT TOXICITY TEST, RECEIVING WATER CHEMICAL ANALYSIS, page 3 of 20 and 5 of 20, respectively. The sampling of these parameters is required *in conjunction with* WET testing and was therefore listed separately from the parameters required for WET testing as listed in *Attachment A: Freshwater Acute Toxicity Test Procedure and Protocol (2011)*. However, because sampling for these parameters is required of both the 100% effluent and receiving water control collected for WET testing, EPA has incorporated antimony, iron, manganese, chromium, calcium, magnesium and phosphorus into the list of parameters under WHOLE EFFLUENT TOXICITY and WHOLE EFFLUENT TOXICITY TEST, RECEIVING WATER CHEMICAL ANALYSIS in Parts I.A.1. and I.A.2. to improve clarity. Part I.A. footnote 17 has been incorporated into Part I.A. footnote 16 as a result.

EPA apologizes for the omission of total recoverable aluminum from the list of parameters specified in Part I.A. footnote 16. However, the minimum level for analysis was specified in Part I.A. footnote 8. EPA has added total recoverable aluminum to Part I.A. footnote 16 for consistency. Part I.A. footnote 8 remains unchanged.