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),

Bird Incorporated D/B/A Certainteed

is authorized to discharge from the facility located at

1077 Pleasant Street
Norwood, Massachusetts 02062

to receiving water named Neponset River (NEPO - 73)

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

This permit shall become effective sixty days from the date of signature.

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

This permit supersedes the permit issued on September 30, 1997.

This permit consists of 8 pages in Part I including effluent limitations, monitoring requirements, Attachment A and 35 pages in Part II including General Conditions and Definitions.

Signed this 20th day of September, 2005

/s/ SIGNATURE ON FILE

Linda M. Murphy, Director
Office of Ecosystem Protection
Environmental Protection Agency
Boston, MA

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

Part I

A.1. During the period beginning the effective date and lasting through expiration, the permittee is authorized to discharge from **outfall serial number 001** treated contact cooling water to the Neponset River. Such discharges shall be limited and monitored as specified below.

EFFLUENT CHARACTERISTIC	EFFLUENT LIMITS			MONITORING REQUIREMENTS	
PARAMETER	**AVERAGE MONTHLY**	**AVERAGE WEEKLY**	**MAXIMUM DAILY**	**MEASUREMENT FREQUENCY**	**SAMPLE [3,4] TYPE**
FLOW [2]	0.04 mgd	*********	Report	Weekly	Meter
TEMPERATURE	83° F	*********	90° F	Weekly	Grab
TOTAL SUSPENDED SOLIDS	40 mg/l	*********	70 mg/l	Monthly	24-Hour Composite[4]
pH RANGE[1]	See Permit Page 6 of 8 Paragraph I.A.1.b.			Weekly	Grab
OIL AND GREASE	*********	*********	15 mg/l	Monthly	Grab
ALUMINUM	Report	*********	Report	Monthly	Grab
WHOLE EFFLUENT TOXICITY See Footnotes 5, 6 and 7	Acute $LC_{50} \geq 100\%$			2/Year	24-Hour Composite[4]

Sampling for effluent parameters shall be conducted after treatment at the concrete settling pools, before the effluent mixes with any other waste stream or enters the Neponset River.

Part I

A.2. During the period beginning the effective date and lasting through expiration, the permittee is authorized to discharge from **outfall serial number 002** treated cleaning, dust control, and noncontact cooling water to the Neponset River. Such discharges shall be limited and monitored as specified below.

EFFLUENT CHARACTERISTIC	EFFLUENT LIMITS			MONITORING REQUIREMENTS	
PARAMETER	**AVERAGE MONTHLY**	**AVERAGE WEEKLY**	**MAXIMUM DAILY**	**MEASUREMENT FREQUENCY**	**SAMPLE [3,4] TYPE**
FLOW[2]	Report, gallons	********	Report, gallons	Monthly	Estimate
TSS	20 mg/l	*********	30 mg/l	Monthly	Grab
pH RANGE[1]	6.5 - 8.3 s u. See Permit Page 6 of 8 Paragraph I.A.1.b.			Monthly	Grab

Sampling for effluent parameters shall be conducted at the bottom of the concrete weir before the effluent mixes with any other waste stream or the Neponset River.

PART I

A.3. During the period beginning the effective date and lasting through expiration, the permittee is authorized to discharge from outfall serial number 003 and outfall serial number 004 treated storm water to the Neponset River. Such discharge shall be limited and monitored as specified below.

EFFLUENT CHARACTERISTIC	EFFLUENT LIMITS			MONITORING REQUIREMENTS	
PARAMETER	**AVERAGE MONTHLY**	**AVERAGE WEEKLY**	**MAXIMUM DAILY**	**MEASUREMENT FREQUENCY**	**SAMPLE [3,4] TYPE**
FLOW[2]	Report, gallons	********	Report, gallons	Monthly*	Estimate
TSS	10 mg/l	*********	15 mg/l	Monthly*	Grab
pH RANGE[1]	See Permit Page 6 of 8 Paragraph I.A.1.b.			Monthly*	Grab
OIL AND GREASE	**********	**********	15 mg/l	Monthly*	Grab

Sampling for effluent parameters shall be conducted at the discharge from the oil/water separators, before mixing with any other waste stream or before it is discharged into the Neponset River.

* Sampling for outfalls 003 and 004 shall be conducted in accordance with footnote 4 of this permit.

Footnotes:

1. Required for State Certification.

2. For outfall 001 report weekly flow readings using a meter or like device Also, weekly temperature readings for this discharge shall be taken at noon time.

   For outfalls 002, 003 and 004, the flow shall be estimated for all the discharge event(s) on **each month**, in accordance with the procedure for collecting and testing requirements indicated in footnote 4 below. Flow associated with pollutant sampling (i.e. when permit-required pollutant sampling is conducted, the permittee shall report the total flow pumped to the oil/water separator (Outfall# 003 and # 004) during that discharge event). If only one discharge event is sampled per month, the permittee shall report the total flow in both the average and maximum columns of the pre-printed discharge monitoring report form. If more than one sampling event is conducted per month, the permittee shall report the average of the total flows in the average column and the highest of the total flows in the maximum column. Estimates shall be based on pumping rate and duration. Write "No Discharge" in the average column of the DMR sheets if there was no discharge to be reported for the month in question

   The permittee shall also keep records of average and maximum daily storm flows for each month and submit the information to the Agencies on request.

3. All required effluent samples shall be collected at the point specified in Pages 1-4 of this permit. Any change in sampling location must be reviewed and approved in writing by EPA and MADEP. All samples shall be tested using the analytical methods found in 40 CFR §136, or alternative methods approved by EPA in accordance with the procedures in 40 CFR §136. Composite samples shall be 24 hour composites taken during one working day, unless specified as a grab sample in 40 CFR §136.

4. Storm water runoff samples will be collected and analyzed in accordance with 40 CFR Part 136 and EPA's NPDES Storm Water Sampling Guidance Document, EPA 833-B-92-001, July, 1992. All such samples shall be collected from the discharge resulting from a significant storm event that is greater than 0.1 inches in magnitude and that occurs at least 72 hours from the previously measurable (grater than 0.1 inches of rainfall) storm event. The grab sample shall be taken during the first thirty minutes of the discharge; if this is not feasible, it may be taken within the first to third hour of discharge and noted.

5. The permittee shall conduct acute toxicity tests two times per year on outfall serial number 001 in accordance with the table of compliance indicated below. The tests must be performed in accordance with test procedures and protocols specified in **Attachment A** of this permit.

Test Dates Second Week in	**Submit Results By:**	**Test Species**	**Acute Limit LC_{50}**	**Chronic Limit C-NOEC**
May August	June30th September 30th	Ceriodaphnia dubia (Daphnid)	≥ 100%	Not required

6. The LC_{50} is the concentration of effluent which causes mortality to 50% of the test organisms. Therefore, a 100% limit means that a sample of 100% effluent (no dilution) shall cause no more than a 50% mortality rate.

7. 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 the Toxicity Testing Procedures and Protocol, Section IV., DILUTION WATER in order to obtain permission to use an alternate dilution water. In lieu of individual approvals for alternate dilution water required in Attachment A, 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 A. 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 A.

Part I.A.4. (Applicable to all outfalls)

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

b. The pH of the effluent shall not be less than 6.5 standard units (su) and no greater than 8.3 su. at any time.

c. The discharge shall not cause objectionable discoloration of the receiving waters.

d. The effluent shall contain neither a visible oil sheen, foam, nor floating solids at any time.

Part I.A.5. Toxics Control

a. The permittee shall not discharge any pollutant or combination of pollutants in toxic amounts.

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

Part I.A.6. Numerical Effluent Limitations for Toxicants

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

B. UNAUTHORIZED DISCHARGES

The permittee is authorized to discharge only from the outfalls listed in Part I.A.1.-3. of this permit, and only in accordance with terms and conditions of this permit. Discharges of wastewater from any other point sources, are not authorized by this permit and shall be reported in accordance with Section D.1.e. (1) of the General Requirements of this permit (Twenty-four hour reporting).

C. STORM WATER POLLUTION PREVENTION PLAN (SWPPP)

The permittee shall develop and implement a Storm Water Pollution Prevention Plan (SWPPP). **The SWPPP for this facility shall be prepared, and except as provided elsewhere in this permit, shall provide for compliance with the terms of the permit and the plan, no later than 90 days after the effective date of the permit.** The SWPPP shall identify potential sources of pollution which may reasonably be expected to affect the quality of storm water discharges associated with industrial activity from the facility. In addition, the plan shall describe and ensure the implementation of practices which are to be used to reduce the pollutants in storm water discharges associated with industrial activity at the facility and to assure compliance with the terms and conditions of this permit.

D. MONITORING AND REPORTING

1. Reporting

Monitoring results obtained during each calendar month shall be summarized and reported on Discharge Monitoring Report Form(s)**postmarked no later than the 15th day of the following**

month.

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:

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

The State Agency is:

Massachusetts Department of Environmental Protection
Northeast Regional Office-Bureau of Waste Prevention
1 Winter Street
Boston, Massachusetts 02108

Signed and dated Discharge Monitoring Report Forms and toxicity test reports required by this permit shall also be submitted to the State at:

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

E. STATE PERMIT CONDITIONS

This discharge permit is issued jointly by the U. S. Environmental Protection Agency (EPA) and the Massachusetts Department of Environmental Protection (DEP) 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 MA DEP pursuant to M.G.L. Chap.21, §43.

Each agency shall have the independent right to enforce the terms and conditions of this permit. Any modification, suspension or revocation of this permit shall be effective only with respect to the agency taking such action, and shall not affect the validity or status of this permit as issued by the other agency, unless and until each agency has concurred in writing with such modification, suspension or revocation. In the event any portion of this permit is declared, invalid, illegal or otherwise issued in violation of state law such permit shall remain in full force and effect under federal law as an NPDES Permit issued by the U.S. Environmental Protection Agency. In the event this permit is declared invalid, illegal or otherwise issued in violation of federal law, this permit shall remain in full force and effect under state law as a permit issued by the Commonwealth of Massachusetts.

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

FACT SHEET

DRAFT NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT TO DISCHARGE TO WATERS OF THE UNITED STATES.

NPDES PERMIT NO. : MA 0003531

NAME AND ADDRESS OF APPLICANT:

Bird Incorporated D/B/A CertainTeed Corporation
1077 Pleasant Street
Norwood, Massachusetts 02062

NAME AND ADDRESS OF FACILITY WHERE DISCHARGE OCCURS:

Bird Incorporated D/B/A CertainTeed Corporation
1077 Pleasant Street
Norwood, Massachusetts 02062

RECEIVING WATER: Neponset River

CLASSIFICATION: B (NEPO - 73)

I. Proposed Action, Type of Facility, and Discharge Location

The above named applicant has requested that the U.S. Environmental Protection Agency (EPA) reissue its NPDES permit to discharge into the designated receiving waters. The facility is engaged in the manufacture of fiber glass/asphalt roofing materials. The wastewater from this facility is discharged to the Neponset River and is comprised of process water, contact and non-contact cooling water, and storm water runoff.

II. Description of Discharge

Maps showing the location of the facility and the outfall location are attached as Figures 1 & 2.

III. Limitations and Conditions

The effluent limitations and monitoring requirements are found in the draft NPDES permit.

IV. Permit Basis & Explanation of Effluent Limitation Derivation

A. General Requirements

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

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

EPA is required to consider technology-based requirements, water quality-based requirements and all limitations and requirements in the current existing permit, when developing permit limits. These requirements are described in the following paragraphs.

A1. TECHNOLOGY-BASED REQUIREMENTS

40 CFR Part 125, Subpart A sets the criteria and standards that EPA must use to determine which technology-based requirements under Section 301(b) of the CWA and/or requirements established on a case-by-case basis under section 402 (a) (1) of the CWA, should be included in the permit. The Clean Water Act requires that all discharges, at a minimum, must meet effluent limitations based on the technological capability of the discharges to control pollutants in their discharge.

Technology based treatment requirements represent the minimum level of control that must be imposed under Sections 402 and 301(b) of the CWA (see 40 CFR §125 Subpart A). For existing sources, technology-based requirements according to best practicable control technology currently available (BPT) are applied for conventional, non-conventional, and toxic pollutants. More stringent technology-based requirements are applied through best conventional control technology (BCT) for conventional pollutants; and best available technology economically achievable (BAT) for toxic and non-conventional pollutants.

New source performance standards (NSPS) are applied to new sources, to control conventional, non-conventional, and toxic pollutants. EPA has not promulgated National Effluent Guide lines for storm water discharged from fiber glass/asphalt roofing materials. In the absence of published technology-based effluent guidelines, the Agency is authorized under Section 402 (a) 1 of the CWA to establish effluent limitations on a case-by-case basis using best professional judgement (BPJ). See 40 CFR §§125.3(c)(2) and (c)(3).

The factors to be considered in developing BAT limits are set forth at 40 CFR. §§125.3(c)(2) (i,ii) and 125.3 (d)(3) (i-vi), and include among other things, the age of existing facilities, engineering issues, process changes, non-water quality related environmental impacts and the cost of achieving required effluent pollutants reductions.

A2. WATER QUALITY-BASED REQUIREMENTS

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

Water quality standards consist of 3 parts: (1) beneficial designated uses for a water body or a segment of water body; (2) numeric and/or narrative water quality criteria sufficient to protect the assigned designated use(s); and (3) anti-degradation requirements to ensure that once a use is attained it will not be degraded. The Massachusetts Water Quality Standards, found at 314 CMR 4.00, include these elements. The State will limit or prohibit discharges of pollutants to surface waters to assure that surface water quality standards of the receiving waters are protected, and maintained or attained. These standards also include requirements for the regulation and control of toxic constituents and require that EPA criteria, established pursuant to Section304(a) of the CWA, shall be used unless a site specific criteria is established.

The permit must limit any pollutant or pollutant parameter (conventional, non-conventional, toxic and whole effluent toxicity) that is or may be discharged at a level that causes or, has the "reasonable potential" to cause, or contribute to an excursion above any water quality standard (see 40 CFR § 122.44 (d). An excursion occurs if the projected or actual in-stream concentration exceeds an applicable water quality criterion. In determining "reasonable potential", EPA considers: (1) existing controls on point and non- point sources of pollution; (2) pollutant concentration and variability in the effluent and receiving water as determined from the permit's reissuance application, discharge monitoring reports (DMRs), and State and Federal Water Quality Reports; (3) sensitivity of the indicator species used in toxicity testing; (4) known water quality impacts of processes on waste waters; and (5) where appropriate, dilution of the effluent in the receiving water.

A3. STATE CERTIFICATION REQUIREMENTS

Under Section 401 of the CWA, EPA is required to obtain certification from the state in which the discharge is located which determines that all water quality standards, in accordance with Section 301(b) (1)(C) of the CWA, will be satisfied. Regulations governing state certification are set forth in 40 CFR § 124.53 and §124.55. EPA regulations pertaining to permit limits based upon water quality standards and state requirements are contained in 40 CFR §122.44 (d).

B. WATER QUALITY STANDARDS AND DESIGNATED USES

The Neponset River has been designated as Class B waters by the Massachusetts Department of Environmental Protection (MADEP). The Massachusetts Surface Water Quality Standards, 314 Code of Massachusetts Regulations ("CMR") 4.05(3) (b) state that Class B waters have the following designated uses: *These waters are designated as habitat for fish, other aquatic life and wildlife and for primary and secondary contact recreation. Where designated they shall be as a source of public water supply with appropriate treatment. They 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.*

Section 303 (d) of the CWA requires states to identify those water bodies that are not expected to meet water quality standards after the implementation of technology based controls and , as

such require the development of total maximum daily loads (TMDL). The 1998, 303 (d) report states that the Neponset River (Bird Pond), near the site, Segment MA 73002, Walpole, is not attaining water quality standards because of *Priority organics*.

C. Facility Information

Bird Incorporated D/B/A CertainTeed Company is a manufacturer of asphalt roofing products with operations which include the use of prefabricated raw materials (fiberglass rolls, heated asphalt, talc powder, latex paint) and municipal water supplied by the Massachusetts Water Resources Authority.

D. Proposed Permit Effluent Limitations and Conditions

The draft NPDES permit for Bird Inc. authorizes the discharge of process water and treated storm water, subject to effluent limitations which are within applicable water quality standards, and requires development and implementation of a storm water pollution prevention plan for additional protection of the environment. The effluent parameters in the draft permit are discussed in more detail below. The sections are divided according to the effluent characteristic being regulated.

Discharge # 001:

The flow from discharge 001 consists of treated contact cooling water from the roofing fabrication process. The roofing fabrication process consists of applying heated asphalt and limestone dust to fiberglass sheets, followed by application of pigmented rock granules to the exposure surface, and latex paint for nailing guides. Contact cooling water is used to keep the fiberglass sheets from sticking to equipment and to cool the final manufactured product.

The treatment process consists of sedimentation in two rectangular concrete sedimentation tanks. The sediment, consisting primarily of granules and limestone dust, is mechanically removed on a periodic basis. The facility has the capability to recycle a portion of the settled water for re-use as cooling water.

<u>Flow</u>

The existing permit authorizes the discharge of 40,000 gallons per day (GPD) of contact cooling through outfall # 001. DMR data submitted over the last 21 months is shown on Attachment C, and shows that the monthly average discharge has ranged from 11,514 to 32,591 GPD. The monthly average flow limit of 40,000 GPD is retained in the draft permit.

<u>pH</u>

The pH limits are based on the Massachusetts Surface Water Quality Standards, 314 Code of Massachusetts Regulations ("CMR") 4.05(4)(b). These standards require the pH of the effluent discharge to Class B waters be in the range of 6.5 to 8.3 standard units. DMR data submitted over the last 21 months is shown on Attachment C, and shows that the pH has ranged from 6.5 to 7.8 standard units

Total Suspended Solids

The current permit contains a monthly limit of 40 mg/l and a maximum daily limit of 70 mg/l. These limits were based on Best Professional Judgement. The limits have been retained in the draft permit.
DMR data submitted over the last 21 months is shown on Attachment C, and shows that the monthly average TSS has ranged from <5 to 61 mg/l, and the daily maximum has ranged from <5 to 61 mg/l. For most months, only one TSS sample was taken (as allowed by the permit), so the values for monthly average and maximum daily are the same.

Temperature

The current limit is based on the State's (B) water quality criteria (314CMR 4.05(3)(b)(2), which states:

a. *Shall not exceed 68°F (20°C) in cold water fisheries nor 83°F (28.3°C) in warm water fisheries and the rise in temperature due to the discharge shall not exceed 3°F (1.7°C) in rivers and stream 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 of the month); in lakes and ponds the rise shall not exceed 3°F (1.7°C) in the epilimnion based on the monthly average and maximum daily temperature; and*

b. *natural seasonal and daily variations shall be maintained. There shall not be changes from background conditions that would impair any use assigned to this class. Including site specific limits to protect normal species diversity, successful migration, reproductive functions or growth of aquatic organisms.*

The existing average monthly temperature limit has been maintained to meet the State's in-stream temperature standards. The maximum daily limit of *90°F (32.3° C)* has also been maintained. A delta (▵)T analysis using a maximum temperature(90°F) at end of pipe and 7Q10 stream flow, predicts a change of water temperature after mixing zone of 2.96°F. The increase in temperature (▵)T was found to be within the state's mixing zone requirements.

Explanation:

▵T = Change in receiving water temperature
Qe = Effluent flow rate
Qr = Receiving water flow rate
Te = Temperature of effluent
Tr = Temperature of receiving water

$$\Delta Tr = \frac{Qe}{Qr}(Te - Tr) \; ; \; Tr = \frac{1.547 \text{ cfs}}{3.66 \text{ cfs}}(90°F - 83°F); \; Tr = 2.96°F$$

DMR data submitted over the last 21 months is shown on Attachment C, the average and maximum temperature range shown is from 33 to 72 degrees Fahrenheit. The average and maximum daily temperatures are the same because only one sample per month was taken, as

allowed by the permit.

Aluminum

Reported high aluminum levels in the permit application was viewed by EPA as having reasonable potential to cause harm to the aquatic life of the receiving stream. A reporting requirement was added to the proposed permit to monitor this pollutant on a monthly basis.

Toxicity testing requirements

Toxicity testing requirements are based on State certification requirements under Section 401(a)(1) of the CWA, as described in 40 CFR 124.53 and 124.55. The LC50 = >100% limit will be repeated based on anti-backsliding requirements.

Monitoring data submitted over the last 7 quarters showed that all tests achieved the permit limit Based on the data, the monitoring frequency and the species in the draft permit has been reduced to two times per year and one specie respectively.

Discharge #002:

The application (Form 2C) lists: cleaning, cooling, dust control, and non contact cooling water from the Granule Processing Plant (GPP) as the operations which contribute to the effluent discharged through Outfall # 2 to the Neponset River.

Treatment of the process water consists of sedimentation in a detention basin. The total flow discharged to the sedimentation pond is less than 100,000 gallons per day (Information in Section II B.1 of the application indicates that total flow is about 90,000 GPD, information in Section V A 1.f. indicates that flow is about 100,000 gpd, and information in Figure 5 indicates that flow is about 35,000 gpd.). In any event, the company reports that no significant discharges from the sedimentation basin have been observed over the past 21 months, due to groundwater infiltration and evaporation.

TSS and pH

Monthly average total suspended solids limits of 20 mg/l and maximum daily limits of 30 mg/l are in the current permit and are included in the draft permit. These limits are maintained in the permit as required by antibacksliding regulations and will ensure that the discharge does not violate state water quality standards pertaining to solids (see 314 Code of Massachusetts Regulations (CMR) 4.05(3)(b)5.)

The pH limit are based on the Massachusetts Surface Water Quality Standards,314 CMR 4.05(4)(b). These standards require the pH of Class B waters be in the range of 6.5 to 8.3 standard units.

Discharges #003 and # 004:

These discharges consist of storm water runoff from two tank farms, each treated by an oil/water separator. The permit application estimates the discharge flow through these outfalls is about

55,500 gallons per year for outfall # 003, and 114,300 gallons per year for outfall # 004. These estimates are based on meteorological data and the approximate area within the containment area of each tank farm.

The farms described in the application contain tanks storing heating oil in Farm 1(Old Tank Farm), from which storm water discharges through outfall #003 and tanks storing asphalt for asphalt conditioning operations in Farm 2 (Blowstill Tank Farm), from which storm water discharges to outfall #004. Each tank farm is surrounded by a surface berm and is fitted with drainage piping that collects storm water and other contaminants into oil/water separators. The treated storm water is pumped through the oil/water separator into the facility's storm drain system which ultimately discharges into the Neponset River. Oil and grease, total suspended solids and pH have been regulated as indicated below:

Flow, Oil and grease, Total Suspended Solids and pH

These discharges are intermittent and occur only during precipitation events. The current permit requires that flow be reported, but contains no flow limits. Effluent data submitted by the permittee represents the total estimated flow from each outfall during each quarter based on total rainfall volume and the area draining to each oil/water separator. The permittee also reports the total flow for the month with the highest total flow during each quarter. DMR data submitted over the last 21 months is shown on Attachment C, and shows that the average monthly flow from outfall 003 was about 5,900 gallons, and the maximum month flow was about 9,800 gallons. The monthly average flow for outfall 004 was about 12,000 gallons and the maximum monthly flow was about 20,000 gallons. The draft permit requires continued flow monitoring, but has specified a different method than is currently used for measuring and reporting flow. Specifically, the draft permit requires that flow be reported only for the discharge events associated with the sampling of the outfall, and that the pumping rate and duration be used to estimate the flow, rather than the rainfall data. This method should produce flow data more representative of the actual discharge and will provide information to determine if effluent quality is a function of flow.

The maximum daily limit for oil and grease for both discharges is based on The Massachusetts Surface Water Quality Standards. These standards under 314 Code of Massachusetts Regulations ("CMR") 4.05(3)(b)(7), state: *These waters shall be free from oil, grease and petrochemicals that produce a visible film in the surface of the water, to impart an oil test in the water or an oily or other undesirable taste to the edible portions of aquatic life, coat the banks or bottom of the water course, or are deleterious or became toxic to aquatic life.* A concentration of 15 mg/L is recognized as the concentration at which many oils produce a visible sheen and /or cause un undesirable taste in edible fish (EPA Water Quality Criteria 1972). DMR data submitted over the last 21 months is shown on Attachment C, and shows that oil and grease results for outfall 003 have ranged from <5 to 9 mg/l. Results for outfall 004 have ranged from <5 to 34 mg/l.

Total suspended solids for both discharges are regulated to control the solids from the tank farm area during storm run-off events. The average monthly limit for TSS (10 mg/l) and the maximum daily limit (20 mg/l) have been repeated based on anti-backsliding regulations. DMR data submitted over the last 21 months is shown on Attachment C, and shows that TSS for outfall 003 have ranged from <5 to 12 mg/l. Results for outfall 004 have ranged from <5 to 11 mg/l.

The pH limit are based on the Massachusetts Surface Water Quality Standards,314 Code of Massachusetts Regulations ("CMR") 4.05(4)(b). These standards require the pH of Class B waters be in the range of 6.5 to 8.3 standard units. DMR data submitted over the last 21 months is shown on Attachment C, and shows that pH for outfall 003 have ranged from 6.42 to 7.0 SU. Results for outfall 004 have ranged from 6.0 to 7.8 SU.

Storm Water Pollution Prevention Plan:

Pursuant to Section 304(e) of the CWA and 40 C.F.R. §125.103(b), Best Management Practices (BMPs) may be expressly incorporated into a permit on a case-by-case bases where necessary to carry out Section 402(a)(1) of the CWA.

This facility engages in activities which could result in the storm water discharge of pollutants to waters of the United States. These operations include at least one of the following from which there is or could be site runoff: material storage, in-facility transfer, material processing, material handling, or loading and unloading.

The permit requires this facility to update and maintain its Storm Water Pollution Prevention Plan (SWPPP), which will include BMPs appropriate for this specific facility to control storm water discharges from these and other activities which could contribute pollutants to waters of the United States through storm water.

The SWPPP becomes an enforceable element of the permit upon the effective date of the permit.

V. State Certification Requirements

The staff of the Massachusetts Department of Environmental Protection has reviewed the draft permit. EPA has requested permit certification by the state pursuant to 40 CFR 124.53 and expects that the draft permit will be certified.

VI. Public Comment Period, Public Hearing, and Procedures for Final Decision

All persons, including applicants, who believe any condition of the draft permit is inappropriate must raise all issues and submit all available arguments and all supporting material for their arguments in full by the close of the public comment period, to the U.S. EPA, Massachusetts Office of Ecosystem Protection(CMA), One Congress Street, Suite 1100, Boston, Massachusetts 02114-2023. Any person, prior to such date, may submit a request in writing to EPA and the state 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.

VII. EPA Contact

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:

Victor Alvarez
Massachusetts Office of Ecosystem Protection - CMA
One Congress Street, Suite 1100
Boston, Massachusetts 02114 -2023
Telephone: (617) 918-1572

03/19/04 — Date

Linda M. Murphy, Director
Office of Ecosystem Protection
U.S. Environmental Protection Agency

ATTACHMENT B

COMPANY NAME: Bird Incorporated D/B/A Certainteed
NPDES PERMIT NUMBER MA 0003531
RECEIVING WATER: Neponset River

RIVER PROFILE:
HARDNESS : 70 mg/l ($CaCO_3$)
7Q10 FLOW (cfs): 3.66

PLANT FLOW (OUTFALL 001): monthly average permitted flow = 0.04 MGD = 0.062 cfs
maximum daily flow (from dmrs) = 0.109MGD = 0.168 cfs

Dilution Factor- The ratio of receiving water plus effluent flow to effluent flow at critical conditions.

CHRONIC DILUTION: 3.66 + 0.062/ .062 = 60
ACUTE DILUTION: 3.66 + 0.168/ 0.168 = 23: 1

EPA and MADEP Toxicity Strategy Category:
State Strategy: 20.1 - 100.1 = Medium low risk
Sampling Events/ year 4*
Toxicity Tests: Acute
No. of Species: 2*
Permit limits: LC50 = 100%

* Sampling events and number of species reduced to 2 and to 1 respectively, due to 100% compliance with toxicity requirements in the previous permit life.

ATTACHMENT C

MA0003531 BIRD, INC. D/B/A CERTAINTEED

OUTFALL 001, ROOFING MANUFACTURING OPERATIONS

WET -LC50, CERIODAPHNIA

	MO MIN
PERMIT LIMIT	100%
03/31/02	>100
06/30/02	>100
09/30/02	>100
12/31/02	>100
03/31/03	>100
06/30/03	>100
09/30/03	>100

WET - LC50, PIMEPHALES

	MO MIN
PERMIT LIMIT	100%
03/31/02	>100
06/30/02	>100
09/30/02	>100
12/31/02	>100
03/31/03	>100
06/30/03	>100
09/30/03	>100

TEMPERATURE, DEG. FAHRENHEIT

	MO AVE	DAILY MAX
PERMIT LIMIT	83	90
01/31/02	42	42
02/28/02	39.9	39.9
03/31/02	48	48
04/30/02	40	40
05/31/02	40	40
06/30/02	62	62
07/31/02	71	71
08/31/02	72	72
09/30/02	62	62
10/31/02	60	60
11/30/02	43	43
12/31/02	36	36
01/31/03	36	36
02/28/03	35	35
03/31/03	33	33
04/30/03	47.7	47.7
05/31/03	59	59
06/30/03	55	55
07/31/03	68	68

08/31/03	68	68
09/30/03	68	68

FLOW, GPD

	MO AVG	DAILY MX
PERMIT LIMIT	40000	
01/31/02	11573	26105
02/28/02	16631	28948
03/31/02	17533	27327
04/30/02	27032	72556
05/31/02	25325	79737
06/30/02	23770	58643
07/31/02	31259	108759
08/31/02	27404	56624
09/30/02	23351	44805
10/31/02	16329	33062
11/30/02	18869	46974
12/31/02	12055	27227
01/31/03	11514	35081
02/28/03	19934	33735
03/31/03	26987	44581
04/30/03	21976	46376
05/31/03	27028	47872
06/30/03	16616	22440
07/31/03	17079	41888
08/31/03	23776	39644
09/30/03	32591	50116

SOLIDS, TOTAL SUSPENDED, MG/L

	MO AVG	DAILY MX
PERMIT LIMIT	40	70
01/31/02	<5	<5
02/28/02	<5	<5
03/31/02	13	13
04/30/02	15	15
05/31/02	37	37
06/30/02	22	22
07/31/02	32	32
08/31/02	61	61
09/30/02	28.5	43
10/31/02	23	23
11/30/02	17	17
12/31/02	7	7
01/31/03	<5	<5
02/28/03	15	15
03/31/03	33	33
04/30/03	8	8
05/31/03	13	13
06/30/03	29	45
07/31/03	7	7
08/31/03	5	5

09/30/03	28	28

pH , SU

	MIN	MAX
PERMIT LIMITS	6.5	8.3
01/31/02	6.5	6.5
02/28/02	6.5	6.5
03/31/02	6.5	6.5
04/30/02	8.0	8.0
05/31/02	7.0	7.0
06/30/02	6.9	6.9
07/31/02	7.0	7.0
08/31/02	7.8	7.8
09/30/02	7.10	7.10
10/31/02	7.0	7.0
11/30/02	7.1	7.1
12/31/02	7.10	7.10
01/31/03	7.10	7.10
02/28/03	7.0	7.0
03/31/03	6.9	6.9
04/30/03	7.0	7.0
05/31/03	6.7	6.7
06/30/03	7.10	7.30
07/31/03	7.0	7.0
08/31/03	7.01	7.01
09/30/03	7.0	7.0

OUTFALL 002, DETENTION POND

FLOW, GPD

	MO AVG	DAILY MX
03/31/02	NO DISCHARGE	
06/30/02	NO DISCHARGE	
09/30/02	NO DISCHARGE	
12/31/02	120*	360*
03/31/03	NO DISCHARGE	
06/30/03	NO DISCHARGE	
09/30/03	NO DISCHARGE	

* ONE DISCHARGE OF 360 GALLONS DURING THE QUARTER OR 120 GALLONS PER MONTH

SOLIDS, TOTAL SUSPENDED, MG/L

	MO AVG	DAILY MX
PERMIT LIMIT	20	30
03/31/02	NO DISCHARGE	
06/30/02	NO DISCHARGE	
09/30/02	NO DISCHARGE	
12/31/02	20	20
03/31/03	NO DISCHARGE	

06/30/03	NO DISCHARGE
09/30/03	NO DISCHARGE

pH, SU

	MINIMUM	MAXIMUM
PERMIT LIMIT	6.5	8.3
03/31/02	NO DISCHARGE	
06/30/02	NO DISCHARGE	
12/31/02	6.8	6.8
03/31/03	NO DISCHARGE	
06/30/03	NO DISCHARGE	
09/30/03	NO DISCHARGE	

<u>OUTFALL 003, OIL/WATER SEPARATOR</u>

FLOW, GALLONS

	TOTAL QUARTERLY	MAX MONTH
03/31/02	13887	4263
06/30/02	15879	7383
09/30/02	14297	5098
12/31/02	23335	6855
03/31/03	16714	6504
06/30/03	21094	9141
09/30/03	19072	9844

pH, SU

	MINIMUM	MAXIMUM
PERMIT LIMIT	6.5	8.3
03/31/02	6.5	6.5
06/30/02	7.0	7.0
09/30/02	7.0	7.0
12/31/02	6.8	6.8
03/31/03	6.42	6.42
06/30/03	6.5	6.5
09/30/03	6.9	6.9

SOLIDS, TOTAL SUSPENDED, MG/L

	MO AVE	DAILY MAX
PERMIT LIMITS	10	20
03/31/02	<5	<5
06/30/02	12	12
09/30/02	9	9
12/31/02	<5	<5
03/31/03	8	8
06/30/03	<5	<5
09/30/03	<5	<5

OIL & GREASE, MG/L

	DAILY MAX
PERMIT LIMIT	15
03/31/02	8
06/30/02	<5
09/30/02	9
12/31/02	<5
03/31/03	<5
06/30/03	<5
09/30/03	9

OUTFALL 004, OIL/WATER SEPARATOR

FLOW, GPD

	TOTAL QUARTERLY	MAX MONTH
03/31/02	28577	8772
06/30/02	32677	15193
09/30/02	29421	10490
12/31/02	48020	14108
03/31/03	34395	13384
06/30/03	43408	18810
09/30/03	39248	20257

pH, SU

	MINIMUM	MAXIMUM
PERMIT LIMIT	6.5	8.3
03/31/02	6.0	6.0
06/30/02	7.0	7.0
09/30/02	7.0	7.0
12/31/02	7.80	7.80
03/31/03	6.1	6.1
06/30/03	6.5	6.5
09/30/03	7.1	7.1

SOLIDS, TOTAL SUSPENDED, MG/L

	MO AVG	DAILY MX
PERMIT LIMIT	10	20
03/31/02	10	10
06/30/02	<5	<5
09/30/02	5	5
12/31/02	<5	<5
03/31/03	11	11
06/30/03	<5	<5
09/30/03	9	11

OIL & GREASE, MG/L

	DAILY MX
PERMIT LIMIT	15

03/31/02	<5
06/30/02	<5
09/30/02	<5
12/31/02	<5
03/31/03	<5
06/30/03	<5
09/30/03	34

RESPONSE TO PUBLIC COMMENTS

DRAFT NPDES PERMIT NO. MA 0003531 FOR BIRD INCORPORATED D/B/A/ CERTAINTEED LOCATED AT 1077 PLEASANT STREET, NORWOOD, MASSACHUSETTS, 02062

On April 19, 2004, the U.S. Environmental Protection Agency ("EPA") and the Massachusetts Department of Environmental Protection ("MADEP") released for public notice and comment a draft National Pollutant Discharge Elimination System ("NPDES") permit for Bird Incorporated D/B/A/ CertainTeed, a Massachusetts facility. The public comment period for this draft permit expired May 18, 2004. This is a response to comments received during the comment period from the Riverways Program, MA Department of Fisheries, Wildlife and Environmental Law Enforcement.

COMMENT 1:

As the Fact Sheet states, the Massachusetts water quality standards prohibit an increase in ambient water temperature of greater than 2.8° C in warm water Class B rivers and streams. The draft permit does not require any instream temperature monitoring, a necessary piece of data to determine if there is likelihood for an increase in ambient temperature from the effluent discharge. The permit did provide a calculation for worst case conditions at the 7Q10 flow but this may not be the only situation where the effluent could cause an exceedance of 2.8°C maximum. There is the potential in cooler months for the effluent to be enough above the ambient water temperature to resulted in a larger than acceptable change. The fact sheet did not provide information on the size of the treatment tanks, the range of holding time of the flows, and the design of the tanks so it is not possible to determine if the effluent has time to cool to close to ambient air temperature or avoid being heated by the sun. It may not be the worse flow conditions that result in the greatest change in ambient receiving water temperatures due to the effluent discharge and fluxes have the potential to be deleterious to sensitive aquatic organisms.

RESPONSE 1:

The agencies believe that the permit limits are protective of the delta T criteria during all seasons. In order to determine whether the limitation is protective during the winter months, a calculation of the in-stream delta T was performed using the worse case summer dilution of 27:1 (it would be higher in the winter period), the worse case summer temperature of 95°F (it would be lowest in the winter) and an in-stream temperature of 32°F. The delta T under those conditions was calculated to be only 2.4 degrees F.

Regarding the need for in-stream temperature sampling, the agencies have generally not required in-stream sampling (on discharges of this nature) in circumstances where the limitations calculations give adequate assurance that the limits are protective. Therefore, the agencies have not included any in-stream sampling requirements in the final permit.

COMMENT 2:

The infrequency of the flow monitoring, only once per month, is also problematic along with the lack of criteria associated on when to sample for temperature- early morning temperature readings could result in a significant different reading than a reading taken at 1:00 PM on a sunny summer day if the treatment tanks are not covered or shaded and the depth of the effluent is relatively shallow. The permit should provide guidance on the sampling for temperature that would likely result in the most conservative (highest) temperature reading of the effluent. The frequency of the monitoring should also be increased so the variability in the effluent temperatures can be better capture and assessed as to the potential affect on receiving water. Temperature is an easy and inexpensive parameter to measure and daily reading would be protective of the resource.

RESPONSE 2:

Discharge records (1998- 2002) for pH and temperature monitoring, taken at various times of the day (5:30AM -8:50 PM) indicate no permit violations for temperature, and only three violations for pH. The data is based on monthly testing events. The agencies agree with the need for an increase in monitoring to obtain better information on the variability of effluent temperature. Therefore, the agencies have increased the flow and temperature monitoring frequency from monthly to weekly, and is requiring that flow be gaged instead of estimated.

COMMENT 3:

The calculation for the 7Q10 temperature variation provided in the Fact Sheet is not well explained.

a. *The Qe used is 1.547 cfs. Where this number come from? The dilution calculation in Attachment B contains different numbers for the effluent acute and chronic flows but the variability between the temperature and dilution calculations flows are not explained.*

b. *Also, the methodology used or source of the Tr, temperature of the receiving stream is not cited or explained. How was it determined that the 7Q10 receiving water ambient temperature is 83° F?*

c. *A related question is what is the source of the 7Q10 number used in both this calculation and in determining the dilution ratio? This facility has 4 outfalls, shouldn't the combined flows of at least 001 and 002(contact and noncontact cooling waters) be used to determined the dilution ratio? Figure #2 in the Fact Sheet shows these two outfalls to be less than 200 feet apart and it seems unlikely the first discharge would be totally assimilated before the second effluent discharge enters the receiving water so there is reason to consider these two as a combined flow when determining the dilution.*

RESPONSE 3a, 3b, 3c:

The change in stream temperature caused by the discharge was calculated using the following equation:

$$\Delta Tr = \frac{Qe}{Qr}(Te - Tr) \; ; \; Tr = \frac{1.547 \text{ cfs}}{3.66 \text{ cfs}}(90°F - 83°F); \; Tr = 2.96°F$$

where,

ΔT = Change in receiving water temperature; Qe = Effluent flow rate; Qr = Receiving water flow rate; Te = Temperature of effluent: Tr = Temperature of receiving water

a. 1.547 is a factor used to convert MGD to CFS. In the ΔT analysis, the effluent flow rate (Qe) was estimated at1 MGD based on the discharge history of critical low flow periods and, 1 MGD is equal to 1.547 cfs.

   In the Attachment B, the estimated effluent flow rate was based on historic permit data while the acute and chronic flow (Qr) were taken from a Neponset River gaging station in Canton, MA near the Bird's facility.

b. The Te and Tr were assumed at 90° F and 83° F, in retrospect, the temperatures selected are higher than its corresponding value by 18° F and 10° F respectively. The Tr for that section of the Neponset River was reported in the State Water Quality Assessment (1999-2001) to be less than 83° F.

c. The 7Q10 flow (3.66 cfs) values are from a USGS gaging station at Canton MA.

   With regards to the dilution ratio the flow used is primarily from Outfall 001. The flows from Outfall #2 are very small and infrequent (120gallons per month 2 to3 times per year); these are too small and not frequent enough to significantly affect a change in the dilution factor.

COMMENT 4:

a. The frequency of TSS and flow monitoring required of outfall 001and to a lesser extent 002 and the lack of criteria for when to monitor is inadequate to characterize the effluent flows accurately to allow reasonable assessment to be made about the potential of the discharges to degrade the receiving waters. This is well illustrated by the variability seen in the DMR provided in Attachment C. The range of 0.0115 to 0.1087 MGD effluent discharged clearly shows there is enough variability to warrant increase flow reporting.

b. Also, the Fact Sheet did not detail how the flows through this outfall were estimated so it is not possible to determine if the method used to estimate the flow are accurate enough

for the purpose of protecting the water quality of the Neponset River. The timing of the flow monitoring is also a question with some pertinence. Does the operator try to capture the maximum flow of the month? Choose a set of day each month to estimate flow? Estimate flow for an instant in time or over a specific time period such an hour, a work day or a 24 hour period? The permit should be specific about the entire flow monitoring methodology beyond specifying a monitoring location.

RESPONSE 4a, & 4b:

a. See response to comment 2 on the flow and temperature requirements. EPA has also required that temperature measurements be taken weekly at noon time.

b. Outfall 002 discharges on an infrequent basis as previously mentioned due to ground filtration and evaporation. EPA does not typically specify how flow is to be estimated, however, the permit is requiring this outfall be closely monitored during storm events and to report results on a monthly basis rather than on a quarterly basis.

COMMENT 5:

Outfall 002 discharges, treated "cleaning, dust control and noncontact cooling water". More specificity would be appreciated about the nature of ' treated cleaning'. Does treated cleaning mean the residuals from chemicals used for machine cleaning and /or maintenance? The 002 effluent should have a toxicity requirement if there are any chemicals with the potential to be found in the effluent stream.

RESPONSE 5:

According to company officials, the word "cleaning" used in the permit application, means hosing of equipment, using potable water, without the use of abrasives or cleaning agents. The flow from Outfall 002 is from non- contact cooling water, storm water, and sprinkler water from the "Granule Plant" and not from the making of asphalt shingles, which is a different component of the manufacturing process.

COMMENT 6:

The effluent from 001 had concentrations of aluminum of sufficient levels to require on going monitoring. Given 002 has residuals from dust control, presumable from the asphalt shingles and other manufacturing processes, might 002 also have elevated aluminum levels? Has 002 ever been tested for metals, priority organics, (the receiving water is impaired by priority organics) or other toxic chemicals associated with the testing undertaken during toxicity testing such LC50? Some testing may be warranted is the source of the priority organics impairing downstream waters can not be determined.

RESPONSE 6:

Aluminum is a constituent of the ingredients (talk powder) used in the manufacturing process therefore, it is required that the effluent from Outfall 001 be monitored for this pollutant. The residual dust from the asphalt shingles does not reach areas discharging through Outfall 002. Outfall 002 dust is mainly from the rock crushing operations located in an opposite direction to the production area. As indicated previously, discharge 002 is the resultant of dust control and rain water. The agencies believe there is no need for additional metal monitoring or toxicity testing requirements.

COMMENT 7:

The Fact Sheet states the application for the permit renewal listed a range of flows associated with outfall 002 from 35,000 to 100,000 gpd. This inconsistence is not explained. This raises questions about the adequacy of quarterly flow monitoring for outfall 002. How well does the detention basin work during spring high water and ground water situations? Are the basins receiving any rain or run off? These conditions might mean there is a large discharge under certain conditions when infiltration is hampered and this is not being capture in the infrequent monitoring. As mentioned already, there is a lack of details as to the requirements of how and when low measurements will be made for 002.

RESPONSE 7:

The permit application information did not reflect how flow from outfall 002 actually occurs. The flows in the application are much higher than those flows reported in the DMRs. The fact that the flows from outfall 002 are intermittent (very infrequent) and insignificant to have a measurable impact in the flow volume or flow characteristics of the Neponset River is a benefit.

COMMENT 8:

Outfall 003 and 004 receive runoff from tank farms but it is unclear if they receive runoff from other areas of the property including materials storage areas, waste storage bins or piles or truck loadings and unloading facilities. Aerial photographs available through MASS GIS show a a very few mark spots on the site that may be waste piles judging by their irregular shape. If there are waste piles of asphalt shingles or source materials, are these discharges receiving treatment?

RESPONSE 8:

The tank farms areas housing the oil water separators are enclosed by a cement berm which does not allow storm rain or any effluent from other parts of the property to mingle with these discharges while at the farms. The Company stores on-site (parking lots) cradles containing individually packed shingles wrapped in a water proof paper. No other piles of shingles were found inside the perimeter of the site during our site inspection.

The waste shingle piles need to be assessed by the permittee to ensure that the drainage from those piles does not contribute to pollutants levels in the Neponset River. The Storm Water Pollution Prevention Plan required by this permit should address the control of any runoff from that site.

The pile of shingles need to be in compliance with state solid waste regulations and/or state wetland regulations and are of themselves outside the jurisdiction of this NPDES permit.

COMMENT 9:

a. Figure 2 of the Fact Sheet appears to show outfall 003 and 004 discharging to an area adjacent to the river but not directly into the river. We assume this is merely a reflection of the limitations of the mapping program used and the storm outfall(s) do discharge into the river. The Fact Sheet does not indicate the volume of storm water the treatment system are able to accommodate.

b. Outfall 004 has a significant exceedances of its oil and grease limit which may indicate the treatment system is inadequately sized or not maintained adequately. Given the Neponset River is listed as impaired for priority organics a downstream reach, the adequacy of the treatment system the ability of the monitoring requirements to thoroughly capture the nature to the effluent from these facilities is important. The sampling requirements in the draft permit do not detail when the sampling should occur during a storm event. Every effort should be made to capture the first flush from the storm event and this should be reflected in the permit.

RESPONSE 9a, 9b:

a. The discharges emanating from the oil/water separator covered by outfall 003 flow first onto a paved channel between the tank farm containment area and the glass mat warehouse (FB-69). The water then runs north in this channel for approximately 36 feet and then northwest across a paved lot for approximately 90 feet to a storm water catch basin. It commingles with other storm water lines and discharges on the river bank. The discharge is located on the northwest side of the roofing facility.

   The treated discharges from the oil/water separator at the asphalt tank farm (outfall 004) flows first onto a paved lot, which is located on the east side of the still yard. The water runs approximately 20 feet east and then enters a storm water catch basin. From the catch basin it commingles with other storm water lines and then discharges onto the river bank. The discharge is located on the northeast side of the roofing facility.

b. The DMRs reported one effluent concentration exceedance of 40 mg/l; the rest of the reported data consistently reported less that the permit limit (15mg/l). The final permit will require additional monitoring to obtain in the future an accurate assessment of how much oil and grease has been discharged.

COMMENT 10:

Outfall 002-004 have quite conservative TSS concentration limits while outfall 001 has double or more allowable TSS concentrations. The difference is not explained but it may be a reflection of the difference in volume discharged. Given the variability in the flows from outfall 001 we would like to suggest a total maximum daily loading based on a flow of 0.04 mgd (23 lbs daily max and 13 lbs monthly average) should be considered to be protective of the receiving water given flows often exceed the monthly average flow limit by significant amounts.

RESPONSE 10:

Outfall 001 discharges are the resultant of the manufacturing process where residual dust (sand particles) and talc powder generates larger volumes of TSS more so for this outfall than for Outfall 002. The limit for TSS is consistent with the current permit and in keeping with anti-backsliding provisions.

Outfall 002 as well as 003 and 004 are storm discharges and as such are expected to contain less TSS, therefore, a lower TSS permit limit is required. EPA believes that the limits are protective. Even at peak discharge flow and 7Q10 conditions, in-stream concentrations would be less than 10 mg/l TSS with a discharge of 70 mg/l TSS.

COMMENT 11:

The draft permit adjusts the flow monitoring for outfall 003 and 004 to require flow volumes for the sampled storm and not an average or daily maximum for all the storms during the quarter. This storm specific flow information is indeed valuable and would allow some estimate of loadings from a given storm but the total discharge from these two outfalls during the quarter is also valuable. We suggest both flow figures be required: the storm specific flow and the average and maximum daily flow from all the storms that resulted in flows during the quarter.

RESPONSE 11:

The agencies have agreed to require in the permit a summary of (average and maximum daily) storm flows and have the information submitted to the agencies on request. See footnote # 2 in the final permit.