UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region 1
5 Post Office Square, Suite 100
BOSTON, MA 02109-3912

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

JAN 12 2012

Mr. Patrick Widman, Plant Manager
Bird, Inc., d/b/a CertainTeed
1077 Pleasant Street
Norwood, MA 02062

Re: Information Request pursuant to Section 308 of the Clean Water Act
Individual NPDES Permit No. MA0003531
Bird, Inc. d/b/a CertainTeed facility, Norwood, MA

Dear Mr. Widman:

The Environmental Protection Agency New England Region I (EPA) and the Massachusetts Department of Environmental Protection (MassDEP) are developing a draft National Pollutant Discharge Elimination System (NPDES), Permit No. MA0003531 for Bird Inc. d/b/a CertainTeed ("CertainTeed"). This letter is issued under the Clean Water Act (CWA) § 308 to formally request additional information related to the draft NPDES permit development for your facility.

CWA § 308(a), 33 U.S.C. §1318(a), authorizes EPA to require the owner or operator of any point source to provide information as may reasonably be required to:

> . . . carry out the objectives of ... [the CWA], including but not limited to: (1) developing or assisting in the development of any effluent limitation, or other limitation, prohibition ... or standard of performance under [the CWA] ...; (2) determining whether any person is in violation of any such effluent limitation, or other limitation, prohibition or effluent standard, . . . or standard of performance; (3)any requirement established under this section; or (4) carrying out section . . . 1342 . . . of [the CWA] . . ..

CertainTeed's NPDES permit authorizes the facility to discharge pollutants into the Neponset River. The facility's current permit expired on November 30, 2010. Since CertainTeed's permit renewal application was deemed timely and complete by EPA, the permit has been administratively continued. The information requested herein will assist EPA in developing a

new individual draft permit.

Schedule for Information Collection and Submission

No later than 60 days following receipt of this request, please provide the following:

1. A statement attesting to the accuracy of the Facility Description prepared by EPA, including revisions, if necessary (see Attachment A).

2. A confirmation that there are no discharges to waters of the United States resulting from the operations at the Solaris Plant and a description of any best management practices used to prevent such discharges.

3. A confirmation that there are no discharges to waters of the United States of latex paint or wastewater containing latex paint resulting from use of latex paint at the roofing plant and a description of any best management practices used to prevent such discharges.

4. Descriptions of the activities that occur in the paved alley between the roofing plant and the blowstill tank farm, the paved area between the old tank farm and the employee parking area, and the paved area used for finished product storage at the west end of the facility parcel. In particular, describe the degree to which industrial materials or activities including material handling equipment or activities, industrial machinery, raw materials, and intermediate, finished or waste products, are exposed to, or protected to prevent exposure to rain, snow, snowmelt, and/or runoff. Material handling activities include the loading, unloading, transportation, conveyance or storage of any raw material, or intermediate, final or waste product.

5. A list of chemicals used at the facility that have the potential to contact or otherwise comingle with water discharged via any of the facility's outfalls. For each listed chemical include a copy of the manufacturer's material safety data sheet and a description of any best management practices used to prevent such discharges.

6. The maximum design flow of the oil/water separators and the holding capacity of the sump pumps currently used for treatment of effluent from outfalls 003 and 004.

7. The days and estimated flow, if any, that the facility discharged from the cooling tower emergency outfall during the period of December 1, 2005 through November 30, 2010.

8. Descriptions of the point and frequency of discharge of non-contact cooling water used in the closed cycle cooling at the roofing plant.

9. A copy of each laboratory analytical report for Whole Effluent Toxicity for outfall 001 during the period of December 1, 2005 through November 30, 2010 to supplement the LC_{50} values that were reported to EPA as a part of your current permit's monthly Discharge Monitoring Report requirement.

10. A diagram showing all storm drain and storm drain connections on the CertainTeed site. Representatives of CertainTeed mentioned to EPA during the site visit on November 30, 2011 that there were potential connections from the Solaris plant drainage surfaces to permitted outfalls. In addition, EPA and MassDEP noted storm drains on the site not depicted on the site plan provided in the permit application received May 26, 2010.

11. A description of the method(s) used for cleaning and disposal of the roofing plant drainage trough and the rectangular drainage pit contents and the frequency with which such maintenance occurs. Also, indicate the dimensions of the trough, and depth of the pit.

12. A description of the method(s) used for cleaning and disposal of the granule processing plant slurry tank contents and the frequency with which such maintenance occurs.

13. An evaluation of the detention pond associated with outfall 002. Please include the items noted below.
    a. A diagram showing the physical dimensions and construction specifications of the detention pond, with the depth to bottom, reference elevation used, storage capacity, and estimated retention time of the detention pond noted.
    b. A discussion of the original design parameters for the detention pond, including available design calculations for the tributary area, estimated run-off coefficients, estimated peak flow, and rainfall values for the design storm(s).
    c. The construction details and current condition of the cylindrical concrete overflow structure, rectangular concrete slab, and liner and stabilization materials present.
    d. A detailed description of the intended method of operation of the detention basin, including influent, discharge and sampling location descriptions, and anticipated frequency and route of discharge to the Neponset River.
    e. A description of any activities performed to maintain the detention pond including the maintenance schedule, depth of sediment accumulation which determines maintenance, and the types of maintenance completed.

14. A characterization of the detention pond discharge associated with outfall 002 based on sampling and analysis. Sample within the top 12" in the detention pond associated with outfall 002 at a location outside and adjacent to the cylindrical concrete overflow structure for the parameters and at the frequency noted below.
    a. Total metals analysis for antimony, arsenic, cadmium, chromium, copper, iron, lead, mercury, nickel, selenium, silver, and zinc, collected once per week for six weeks at the same time and on the same day each week.
    b. Total aluminum analysis collected once per week for six weeks at the same time and on the same day each week as the samples requested in a) above.
    c. Flow, TSS and pH collected once per week for six weeks at the same time and on the same day each week as the samples requested in a) above.
    d. Total Residual Chlorine analysis collected as a one-time sample taken at the same time as the first metals sample requested in a) above.

15. A characterization of the effluent from outfall 001 for the parameters sampled at the frequency noted below.
    a. Total metals analysis for antimony, arsenic, cadmium, chromium, copper, iron, lead, mercury, nickel, selenium, silver, and zinc, collected once per week for six weeks at the same time and on the same day each week. If the analyses are satisfied by providing analytical data requested in item 7. for outfall 001, additional analyses are not required.

With regard to the information that must be submitted under this letter, CertainTeed may assert a business confidentiality claim with respect to part or all of the information submitted to EPA in the manner described at 40 C.F.R. § 2.203(b). Information covered by such a claim will be disclosed by EPA only to the extent, and by means of the procedures, set forth in 40 C.F.R. Part 2, Subpart B. If no such claim accompanies the information when it is submitted to EPA, it may be made available to the public by EPA without further notice to CertainTeed. Please note that effluent data under 40 C.F.R. § 2.302 may not be regarded as confidential business information.

Please be aware that failure to comply with this information request could, depending on the circumstances, subject the facility to enforcement action pursuant to Section 309 of the CWA, 33 U.S.C. §1319. To the extent you have already submitted any of the requested information to EPA as part of another submission, it is sufficient for you simply to reference where in the other submission the pertinent information is provided.

Please submit information pursuant to this request by certified mail and address as follows:

Shauna Little, Physical Scientist
U.S. Environmental Protection Agency
5 Post Office Square
Suite 100, Mailcode OEP06-1
Boston, Massachusetts 02109-3912

EPA looks forward to working with you on your new permit. If you have any questions regarding this request, please contact Shauna Little of my staff at (617) 918-1989.

Sincerely,

Stephen S. Perkins, Director
Office of Ecosystem Protection

cc: Catherine Vakalopoulos, MassDEP
Mary Kluit, CertainTeed
Tom McShea, CertainTeed

ATTACHMENT A

Facility Information and Permitted Outfalls to be verified by Facility

1. Facility Information

   Bird Inc. d/b/a CertainTeed, located in Norwood, Massachusetts, is engaged in the manufacture and distribution of fiberglass/asphalt roofing materials. Raw materials used in the roofing plant include fiberglass rolls, asphalt, rock granules, rock dust filler, sand, Mylar tape, latex paint, and biocide coating. The facility produces its own ceramic coated granules at the granule processing plant and solar reflective granules at the Solaris plant. Raw materials used at the granule processing plant and Solaris plant to produce granules include quarry rock, kaolin clay, inorganic pigments, and mineral oil.

2. Permitted Outfalls

   a) The discharge from outfall 001 consists of contact cooling water from the roofing fabrication process at the roofing plant.

      Roofing materials are manufactured at the roofing plant by drawing fiberglass rolls over a series of steel rollers. The fiberglass rolls are heated, followed by application of heated asphalt from the blowstill tank farm that has been mixed with rock dust filler from the granule processing plant. Ceramic coated, pigmented rock granules are applied over the asphalt to the exposed side of the roofing material and pressed through rollers cooled by closed loop non contact cooling water. Mylar tape and a sand backcoating are then applied directly to the roofing material. Latex paint or biocide coating may also be applied to select roofing materials. Contact cooling water supplied by the Massachusetts Water Resource Authority ("MWRA") is used to prevent roofing materials from sticking to the equipment, and to cool the final manufactured product. This contact cooling water drains through a grated trough to a rectangular pit approximately 4 feet wide and 6 feet long. The pit discharges by gravity overflow through a subsurface pipe to the Neponset River via outfall 001. The closed loop non contact cooling water is cycled through four 6-foot fanned cooling towers. Make up water is supplied by the MWRA.

      The treatment process for contact cooling water consists of sedimentation in two rectangular concrete basins approximately 40 feet wide by 60 feet long by 12 feet deep. Each basin has a holding capacity of 215,000 gallons and a retention time of 5.3 days. The influent water travels down a channel between the basins and enters each basin at the end furthest from the outfall sampling location. Water passes through a turbidity curtain and beneath a surface skimmer in each basin. The overflow from each basin combines at the sampling location for outfall 001 and discharges via the outfall pipe to the Neponset River. The sediment, consisting primarily of granules and rock dust, is mechanically removed using a front end loader or similar equipment approximately once annually. The sediment removed

from the basins is disposed offsite. The facility recycles a portion of the treated contact cooling water for re-use as cooling water.

b) The discharge from outfall 002 consists of contact process water, non contact cooling water, and stormwater from the granule processing plant.

The granule plant supplies the roofing plant with pigmented rock granules and rock dust filler. The plant receives ¾ inch crushed stone from the Bird Quarry in Wrentham, Massachusetts. Crushed stone is processed through the plant via a conveyor system for drying, crushing, screening, pigmenting and firing. Finished granules are coated with mineral oil and transported via conveyor to thirty eight storage silos at the roofing plant. Contact process water is used for dust control, including seventeen sprinklers and a truck loading stall fitted with sprayers for stone dust wetting. This water comes in contact with stone dust in the air, on the ground, and on building surfaces. Non contact cooling water used to cool compressors in the plant and discharges intermittently when the equipment is in use. Stormwater discharges are intermittent and occur only during precipitation events. Contact process water, non contact cooling water, and stormwater from the granule processing plant drain to the facility's storm drain system to a detention pond, and to the Neponset River via outfall 002. Contact cooling water, closed loop pigment mixing water, boiler condensate, and boiler blowdown generated at the facility do not discharge to outfall 002.

Treatment of the contact process water, non contact cooling water and stormwater consists of sedimentation in the detention pond associated with outfall 002. The discharge waters enter the detention pond through a pipe at the end furthest from the sampling location and cylindrical concrete overflow structure. When the water level in the pond exceeds the elevation of the top of the overflow structure, it drains to a subsurface pipe to the outfall 002 drainage pipe. Water from the outfall 002 drainage pipe combines with stormwater from the municipal drainage system along Pleasant Street prior to discharging to the Neponset River. The facility reports that discharges to outfall 002 are infrequent due to groundwater infiltration and evaporation.

c) The discharge from outfall 003 consists of stormwater from the old tank farm.

The old tank farm is used to store heating oil in aboveground tanks. The tank farm is surrounded by a surface berm and is fitted with drainage piping that collects stormwater in a sump pit. An absorbent boom is used around the sump pit.

For treatment, the stormwater is pumped from the sump pit through an oil/water separator located in the tank farm. The treated stormwater discharges onto a 2-foot wide paved channel outside the tank farm berm, ultimately discharging to the Neponset River via the facility's storm drain system to outfall 003. The last storm drain in the catchbasin series contains an oil skimmer. Stormwater discharges are

intermittent and occur only during precipitation events. A manually operated sump pump is located in the sump pit.

d) The discharge from outfall 004 consists of stormwater from the blowstill tank farm.

The blowstill tank farm is used to store asphalt in 4 aboveground tanks. The asphalt is used for asphalt conditioning operations in the manufacture of asphalt roofing materials. The tank farm is surrounded by a concrete wall and is fitted with drainage piping that collects stormwater in a sump pit. An absorbent boom is used around the sump pit. A manually operated sump pump is located in the sump pit.

For treatment, the stormwater is pumped from the sump pit through an oil/water separator located in the tank farm. The treated stormwater discharges onto a paved area outside the tank farm wall, ultimately discharging to the Neponset River via the facility's storm drain system to outfall 004. The last storm drain in the catchbasin series contains an oil skimmer. Stormwater discharges are intermittent and occur only during precipitation events.

EXHIBIT 6
AR D.5

CertainTeed Corporation
Roofing Products Group
1077 Pleasant Street
Norwood, MA 02056
781-551-0656
781-769-0434 FAX

March 20, 2012

CERTIFIED MAIL – RETURN RECEIPT REQUESTED

Shauna Little, Physical Scientist
U.S. Environmental Protection Agency
5 Post Office Square
Suite 100, Mail code OEP06-1
Boston, Massachusetts 02109-3912

Re: Response to Section 308 of the Clean Water Act Information Request
Individual NPDES Permit No. MA0003531
Bird, Inc. d/b/a/ CertainTeed, Norwood, MA

Dear Ms. Little,

Attached please find our responses to Items 1 through 13 of your information request. An extension for Items 14 and 15 was requested by CertainTeed in our January 30, 2012 letter and granted by your office in your February 3, 2012 letter which is attached. Therefore the information requested pursuant to items 14 and 15 will be provided at a later date as specified. We consider and claim much of the information (e.g. Chemical lists, MSDSs) to contain confidential business information (CBI) that should be protected as such.

If you have any further questions regarding this response, please contact Mary Kluit of my staff at (781) 551-0656 (ext 137).

Sincerely,

Patrick E. Widman
Plant Manager
Norwood Shingle Plant

CC: Kevin Fogarty (via e-mail)
Lauren Alterman (via e-mail)

Item 1 -

The included document referred to as Attachment A accurately describes the facility located at 1077 Pleasant Street, Norwood, MA. A digital copy has been e-mailed to Shauna Little, Physical Scientist

Item 2 -

We are confirming that there are no "processes" discharging to water of the United States from the Solaris Plant. However there may be incidental loss of granules and dust collector fines during material transfers. We will sweep these areas as needed as a best management practices to limit release into storm water.

Item 3 -

We are confirming that there are no "designed in" discharges from the latex paint operation to Outfall 001. To ensure leaks will not enter this outfall we will be implementing the following best management practices;

- Adding a containment berm on the floor separating the latex paint process from the processes draining to Outfall 001.
- Only one drum will be located by the applicator. The feed drum will be relocated away from Outfall 001 trench and placed into a containment system.
- Placing the paint mix drum inside a leak proof outer drum.
- Isolating/separating the trench within the paint handling area from the trench handling Outfall 001

We expect all changes to be implemented by 6/1/2012.

Item 4 -

Descriptions of activities in the Paved alley between the roofing plant and blowstill tank farm, Paved area between the tank farm and employee parking area and Paved area used for finished product storage at the west end of the facility parcel are discussed in Table 1. **Continued on next page**

Item 4:

Table 1: Descriptions of the activities

Locations		Description of Activities	Exposure/protection
1.	Paved alley between the roofing plant and blowstill tank farm,	In this area several major dry raw materials are unloaded.	- All transfers in this area are uncovered.
		- Limestone deliveries during production (tons/day when in full production) - Sand deliveries (tons/day when in full production)	- Pneumatically pushed to storage silos from tanker trucks. - General housekeeping (sweeping) of yard is performed to reduce built up of material on pavement in off-loading areas.
		- Coated Granules (e.g. Copper (I) oxide*) off loading and on-loading (tons/month)	- on-loaded by gravity drop from silo into truck - Off loaded to covered conveyor elevator up to a storage silo. General housekeeping (sweeping) of yard is performed to reduce built up of material on pavement in off-loading areas.
2.	Paved area between the tank farm and employee parking area	This area is for unloading of all miscellaneous supplies and outgoing solid waste.	
		- Unloading asphalt products	- Offloading is done on an engineered concrete pad pitched toward the tank farm containment area. Material is delivered at an elevated temperature and is expected to solidify quickly if a spill would occur. There is a low risk of reaching surface water.
		- Wooden pallet unloading occurs	- Wooden pallets are placed under covered area once unloaded.
		- Waste roll-off/containers are filled from within our inside docks.	- All loading areas are located inside the building.
		- Fiber glass is delivered into these inside docks	- All unloading is conducted within a protected loading dock.
3.	Paved area used for finished product storage at the west end of the facility parcel.	This yard is a staging area for pallets of plastic wrapped finished shingles. Our fork trucks then load flatbed trucks in this yard. - Propane only fork trucks - Finished shingles with plastic wraps	- No exposure from our products or our fork trucks.

* Copper (I) oxide: 3 – 5%

Item 5 –

List of chemicals used at the facility that have the potential to contact or otherwise comingle with the water discharged via any of the facility's outfalls are included in Attachment B. Assuming you did not want us to include small quantity maintenance chemicals we limited it to our fifty-two (52) production chemicals. Many were transferred in similar locations or using similar BMP techniques so we also group them into the following categories.

- Pigment BMP – Bag/pallets (<60 lbs.) transfers from delivery truck to covered hanger building. Standard housekeeping is performed and spills from bag tears outside of enclosure are cleaned up.
- SR Granules BMP – SP granule are placed into Totes (indoors) then transfer to covered hanger building. Standard housekeeping is performed and spills from tote tears are cleaned up.
- Wrentham Rock – Transferred outside onto rock pile, no cover. No BMP.
- Oil transfer BMP – (including sodium silicate) to storage tanks. Bulk transfer follows SPCC Plan, which requires adjacent storm drains to be covered during transfer.
- Limestone, Sand and Colored granule transfer BMP. Standard housekeeping is performed and spills from truck transfers are cleaned up.

Item 6 –

In response to your request for maximum design flow of the oil/water separators and the holding tank capacities of the sump pumps currently used for treatment of effluent from outfalls 003 and 004 the information is as follows:

OUTFALL 003 – Tank Farm

The oil/water separator is an AFL Industries, Inc. Model: VTC-20A, which is rated for 20 gpm. Inside dimensions are 5'7" long x 2'2" wide x 4' high. The submersible pump feeding this separator is a Barnes Pumps Inc. Model P/H094658. This pump is rated a 20 gpm for a head of 20 ft.

OUTFALL 004 – Still/Yard

The oil/water separator is an AFL Industries, Inc. Model: VTC-100A2, which is rated for 100 gpm. Inside dimensions are 10' long x 2' wide x 6' high. The separator is supplied by two pumps; one at 20 gpm for a head of 20 feet and the second pump at 60 gpm for a head of 20 feet. The first pump comes on at a first level for normal rain events. If the pump cannot keep up the second pump comes online to keep up with the rainfall. The total flow to the oil water separator when both pumps are running is 80 gpm.

Item 7 –

Days and estimated flow that the facility discharged from cooling tower emergency outfall during the period of 12/01/2005 through 11/30/2010 are discussed in Table 2. **Continued on next page**

Item 7

Table 2: Cooling Towers discharge estimated flow & frequency

Approximated			Maximum		
Year	Number Events (days)	Duration of Event (hours)	Flow Rate** (GPM)	~ Gallons Discharge	Description
2005	1	½ to 1	1,635	≤ 98,100	Loss of prime to pump
2006	4	½ to 1	1,635	≤ 392,400	Pump repairs (~1/19/2006 & ~ 6/2/2006); Loss of prime to pump*
2007	2	½ to 1	1,635	≤ 196,200	Loss of prime to pump*
2008	2	½ to 1	1,635	≤ 196,200	Loss of prime to pump*
2009	2	½ to 1	1,635	≤ 196,200	Loss of prime to pump*
2010	4	½ to 1	1,635	≤ 392,400	Pump repairs (~ 2/19/2010 & ~ 6/1/2010); Loss of prime to pump

* (1-2 times per per)

** Flow rate basic on fully open city water supplied valve.

Item 8 –

In response to your request for description of the points and frequency of non-contact cooling water in closed cycle cooling at roofing plant.

The both the cooling tower primary tank and secondary (return) tank has overflow discharge pipes. These discharge pipes are schedule to be cap off and purchase order issued. The loss to the non-contact cooling water close-loop system occur when their failure to cooling water return pump. Production will turn on the city water supplied to cooling section until the cooling return pump can be placed back into service. Frequency of occurs of the non-contact cooling water discharging refer to Table 2 listed above.

Item 9-

Please find in Attachment C the laboratory analytical reports for Whole Effluent Toxicity for outfall 001 during the period 12/1/2005 through 11/30/10.

Item 10 –

Please find in Attachment D the updated diagram showing all storm drain and drain connections on the CertainTeed site that we been able to identify.

Item 11 –

Please find in Attachment E the SOP for the cleaning and disposal of the roof plant drainage trough and rectangular drain pit located inside the plant leading to Outfall 001's primary collection system.

Item 12 –

The Granule plant's slurry tank is managed in the following manner. In the process of producing granules at the Norwood plant, it becomes necessary to clean adhered solids from the interior of the batch mixer. Such solids consist primarily of colored granules but also include any combination of the various

chemicals and pigments used in the coloring process. This "washing" of the mixer occurs approximately once or twice per week under normal circumstances.

Since the main objective is to remove solids, and not to render a pristine environment within the mixer, it is sufficient and desirable to use re-cycled wash water for this process. This "gray" water is pumped from the north end of the settling basin into the mixer, which is the rotated for approximately 40 minutes. Upon completion of the wash, the contents are released into the settling basin, with the coarser granule particles settling near the south end of the tank.

Minimal maintenance is ordinarily required aside from regular mechanical maintenance of the pump. Since the tank is covered, it will operate at a slight fluid deficit, notably during summer months, and will occasionally require the addition of fresh water into the wash cycle.

The settling pond is cleaned approx. every eight to ten years depending on business level. The BMP for this cleaning is to stage a fractionation tank next to the settling basin into which the material is vacuumed via an industrial VAC- truck. Solids recovered may, depending on free liquid remaining, be mixed with dry inert fines from the crushing operation to stabilize for bulk truck shipment. The sediment removed from the basins maybe staged in the adjacent property away from the river following generally accepted slit containment practices until it can be transported further as a solid waste and disposed offsite. Solid waste is shipped to an asphalt recycler for incorporation into pavement, (preferred), or to an approved landfill if recycling option is unavailable.

Liquid recovered maybe re-introduced into the settling tank upon completion for re-use as wash-water.

Item 13 –

Please find in Attachment F the evaluation of the detention pond associated with the Outfall 002. The pond is currently being drained and collected material removed in order to determine what improvements are needed to the overflow system. Therefore, comments contained in 13e may be later modified based on the findings.

ATTACHMENT A

Facility Information and Permitted Outfalls

1. Facility Information

   Bird Inc. d/b/a CertainTeed, located in Norwood, Massachusetts, is engaged in the manufacture and distribution of fiberglass/asphalt roofing materials. Raw materials used in the roofing plant include fiberglass rolls, asphalt, rock granules, limestone, sand, Mylar tape, latex paint, and biocide coating. The facility produces its own ceramic coated granules at the granule processing plant and solar reflective granules at the Solaris plant. Raw materials used at the granule processing plant and Solaris plant to produce granules include quarry rock, kaolin clay, inorganic pigments, sodium silicate, and mineral oil.

2. Permitted Outfalls

   a) The discharge from outfall 001 consists of contact cooling water from the roofing manufacturing process at the roofing plant.

      Roofing materials are manufactured at the roofing plant by drawing fiberglass mat over a series of steel rollers. The fiberglass mat is heated, followed by application of hot asphalt that is mixed with limestone. Ceramic coated, pigmented rock granules are then applied over the asphalt coated web to the top of the web. Mylar tape and sand are then applied to the back of the sheet. The web is then pressed through rolls, cooled by surface evaporative cooling and by closed loop non-contact cooling water in the rolls. Latex paint and/or biocide coating may also be applied to select roofing materials. Contact cooling water supplied by the Massachusetts Water Resource Authority ("MWRA") is used to prevent roofing materials from sticking to the equipment, and to cool the final manufactured product. This contact cooling water drains through a grated trough to a rectangular pit. The rectangular pit is divided into two sections: The first section is where the sand screw fed the pit then the water with sediment goes over divider wall into the second chamber. This second section is cleaned regularly (east pit); approximate area below discharge pipe is 32.6 cubic feet (3.08'x4.17'x 2.54'). The pit discharges by gravity overflow through a subsurface pipe to the settling basins and then to the Neponset River via outfall 001. The closed loop non-contact cooling water is cycled through four 6-foot fanned cooling towers. Make up water is supplied by the MWRA.

      The treatment process for contact cooling water consists of sedimentation in two rectangular concrete basins approximately 40 feet wide by 60 feet long by 12 feet deep. Each basin has a holding capacity of 215,000 gallons and a retention time of 5.3 days. The influent water travels down a channel between the basins and enters each basin at the end furthest from the outfall sampling location. Water passes through a turbidity curtain and beneath a surface skimmer in each basin. The overflow from each basin combines at the sampling location for outfall 001 and discharges via the outfall pipe to the Neponset River. The sediment, consisting primarily of granules, filler and sand, is mechanically removed using a front end loader or similar equipment approximately once annually. The sediment removed from the basins is staged in the adjacent property away from the river following generally accepted slit containment practices until it can be transported further as a solid waste and disposed offsite.

   b) The discharge from outfall 002 consists of contact process water, non-contact cooling water, and storm water from the granule processing plant.

      The granule plant supplies the roofing plant with pigmented rock granules. The plant receives ¾ inch crushed stone from the Bird Quarry in Wrentham, Massachusetts. Crushed stone is processed through the plant via a conveyor system for drying, crushing, screening, pigmenting

and firing. Finished granules are coated with mineral oil and transported via conveyor to thirty eight storage silos at the roofing plant. Contact process water is used for dust control, including seventeen sprinklers and a truck loading stall fitted with sprayers for stone dust wetting. This water comes in contact with stone dust in the air, on the ground, and on building surfaces. Non-contact cooling water used to cool compressors in the plant and discharges intermittently when the equipment is in use. Storm water discharges are intermittent and occur only during precipitation events. Contact process water, non-contact cooling water, boiler condensate, boiler blow-down, and storm water from the granule processing plant drain to the facility's storm drain system to a detention pond, and to the Neponset River via outfall 002.Contact cooling water, closed loop pigment mixing water, generated at the facility does not discharge to outfall 002. Treatment of the contact process water, non-contact cooling water and storm water consists of sedimentation in the detention pond associated with outfall 002. The discharge waters enter the detention pond through a pipe at the end furthest from the sampling location and cylindrical concrete overflow structure. When the water level in the pond exceeds the elevation of the top of the overflow structure, it drains to a subsurface pipe to the outfall 002 drainage pipe. Water from the outfall 002 drainage pipe combines with storm water from the municipal drainage system along Pleasant Street prior to discharging to the Neponset River. The facility reports that discharges to outfall 002 are infrequent due to groundwater infiltration and evaporation. Based on the O&M manual's performance criteria the sediment, consisting primarily of granule rock dust, is mechanically removed using a front end loader or similar equipment. The sediment removed from the detention pond is staged in the adjacent property away from the river following generally accepted runoff containment practices until it can be transported further as a solid waste and disposed offsite.

c) The discharge from outfall 003 consists of storm water from the old tank farm.

The Tank Farm is used to store asphalt products in aboveground storage tanks and is surrounded by a water tight concrete wall dike. The area inside the dike is pitched to a sump pit containing a sump pump. During a rain event the storm water is pumped from the sump pit to an oil / water separator located in the tank farm for treatment. Alternative methods to control TSS are often used around the sump pit, if water sample results require additional controls. The treated storm water discharges onto a 2-foot wide paved channel outside the tank farm dike and ultimately discharges to the Neponset River via the facility's storm drain system to outfall 003. The last storm drain in the catch basin series contains an oil skimmer. Storm water discharges are intermittent and occur only during precipitation events, when the sump pump is activated manually.

d) The discharge from outfall 004 consists of storm water from the Still Yard (blowstill tank farm). The Still Yard is used to process and store asphalt products in aboveground storage tanks. The asphalt is used for the manufacture of asphalt roofing products. The tank farm is surrounded by a water tight concrete wall dike. The area inside the dike is pitched to a sump pit containing sump pumps. During a rain event the storm water is pumped from the sump pit to an oil / water separator located in the Still Yard for treatment. Alternative methods to control TSS are often used around the sump pit, if water sample results require additional controls. The treated storm water discharges onto a paved area outside the tank farm wall, ultimately discharging to the Neponset River via the facility's storm drain system to outfall 004. The last storm drain in the catch basin series, before reaching the river contains an oil skimmer. Storm water discharges are intermittent and occur only during precipitation events, when a manually operated sump pump is activated.

Attachment B (Item 5)

Norwood - NPDES List of Chemicals and MSDS						
#	Roofing	Granule	Material Description	bags, sacks, drums	Type (S, L)	Description of any Best Management Practices used to prevent such discharges
1	X		Asphalt Coating, Steep Asphalt and Roofing Flux	Bulk	L	JSA/SOP: Unloading of the Flux truck delivery (still yard); See also SPCC Plan
2	X	X	NW Headlap Roofing Granules	Bulk	S	SOP for unloading granules in alleyway
3	X	X	NW Colored Roofing Granules	Bulk	S	SOP for unloading granules in alleyway
4		X	Bird Mineral Filler*	Bulk	S	No longer used (replace with limestone filler)
5	X		Calflo AF	Drums	L	SPCC and Hazard Waste Management
6	X		Calflo HTF	Drums	L	SPCC and Hazard Waste Management
7	X		Paraflex HT 9	Drums	L	SPCC and Hazard Waste Management
8	X	X	Black Beauty Abrasives and Roofing Products	Bulk	S	SOP for unloading granules in alleyway
9	X		Dolomitic Limestone	Bulk	S	SOP for unloading limestone in alleyway
10	X		Silica Sand	Bulk	S	SOP for unloading Sand in alleyway; SOP cleaning of process sand pit (Monthly)
11	X		Polyphosphoric Acid 105 to 118%	Bulk	L	JSA/SOP for unloading Acid
12	X		Moorcraft Super Latex Field Marking Paint - 165 White	Drums	L	Drums Received under cover
13	X		Latex Flat Marking Paint - CertainTeed Blue	Drums	L	Drums Received under cover

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Attachment B continued

Norwood - NPDES List of Chemicals and MSDS						
#	Roofing	Granule	Material Description	bags, sacks, drums	Type (S, L)	Description of any Best Management Practices used to prevent such discharges
14	X		Speedwall Latex Flat Wind Tick	Drums	L	Drums Received under cover
15	X		3M Brand Copper Roofing Granules	Bulk	S	SOP for unloading granules in alleyway
16		X	SR Granules	Bulk	S	Refer to SR Granules BMP; SR granules are transfer inside totes which are placed under covered storage.
17	X		AR Granules	Bulk	S	SOP for unloading granules in alleyway
18	X	X	Natural Sand or Gravel	Bulk	S	SOP for unloading granules in alleyway
19	X		Roofing Granules - Little Rock 7800	Bulk	S	SOP for unloading granules in alleyway
20	X		Copper Roofing Granules - Little Rock 7000	Bulk	S	SOP for unloading granules in alleyway
21	X		Laminate	Bulk	L	JSA/SOP: Unloading of the Laminate truck delivery (old tank farm)
22		X	Green 410 - Pigment	Bags	S	see Pigment BMP
23		X	Burgee No. 50 - Pigment	Bags	S	see Pigment BMP
24		X	Marlin Sparkle Brass 9222J	Bags	S	see Pigment BMP
25		X	Microbronze 9250M	Bags	S	see Pigment BMP

EXHIBIT 6
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Attachment B continued

Norwood - NPDES List of Chemicals and MSDS						
#	Roofing	Granule	Material Description	bags, sacks, drums	Type (S, L)	Description of any Best Management Practices used to prevent such discharges
26		X	Mearlin Satin White 9130F	Bags	S	see Pigment BMP
27		X	Ti-Pure Titanium Dioxide Pigment R-931	Bags	S	see Pigment BMP
28		X	Zinc Phosphate	Bags	S	see Pigment BMP
29		X	Sil RES BS-68	Bags	S	see Pigment BMP
30		X	Kaolin clay	Bags	S	see Pigment BMP
31		X	Wet-able Cement Black (Davis 807 Black)	Bags	S	see Pigment BMP
32		X	Furnex D, H (Pelletex)	Bags	S	see Pigment BMP
33		X	Chrome Oxide Green GN	Bags	S	see Pigment BMP
34		X	Bayferrox Tan 222 pigment	Bags	S	see Pigment BMP
35		X	Heucodur Yellow 255	Bags	S	see Pigment BMP
36		X	Natural Graphite / Talc Blend, Grade 7-A	Bags	S	see Pigment BMP
37		X	Uninap 100 BSD	Bulk	L	see SPCC Plan

Attachment B continued

Norwood - NPDES List of Chemicals and MSDS						
#	Roofing	Granule	Material Description	bags, sacks, drums	Type (S, L)	Description of any Best Management Practices used to prevent such discharges
38		X	Kronos Titanium Dioxide Pigment	Bags	S	see Pigment BMP
39		X	OxyChem Sodium Silicate Liquid Siliceous - Grade 40 Silicate	Bulk	L	see SPCC Plan
40		X	Wrentham rock	Bulk	S	Outside storage no cover
41		X	Crushed rock	Bulk	S	Outside storage no cover
42		X	Bayferrox 120N - Red Iron Oxide	Bags	S	see Pigment BMP
43		X	AR ultramarine blue	Bags	S	see Pigment BMP
44		X	10411 Bright Golden Yellow - Inorganic pigment	Bags	S	see Pigment BMP
45		X	V-12100 Iron-free Brown - Inorganic pigment	Bags	S	see Pigment BMP
46		X	V-12600 Camo Green - Inorganic pigment	Bags	S	see Pigment BMP
47		X	V-12650 Cool Color Green - Inorganic pigment	Bags	S	see Pigment BMP
48		X	V-9156 Autumn Gold - Inorganic pigment	Bags	S	see Pigment BMP
49		X	V-9412 Yellow - Inorganic pigment	Bags	S	see Pigment BMP
50		X	V-9115 Buff - Inorganic pigment	Bags	S	see Pigment BMP
51		X	Black 411A - Pigment	Bags	S	see Pigment BMP
52		X	Brown 19 - Pigment	Bags	S	see Pigment BMP

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Attachment B continued (Item 5)
MSDS's

EXHIBIT 6
AR D.5

Attachment B continued (Item 5)
SOP, SPCC plan, SWPPP, & Hazardous Waste Management

Attachment C (Item 9)
Laboratory analytical reports for Whole Effluent Toxicity for Outfall #001 during the period 12/01/2005 through 11/30/2010

EXHIBIT 6
AR D.5

Attachment D (Item 10)
Updated diagram showing all storm drain and drain connections

EXHIBIT 6
AR D.5

Attachment E (Item 11)
SOP for cleaning and disposal of the roof plant drainage trough and rectangular drain pit.

Attachment F (Item 13)
Evaluation of the detention pond associated with Outfall #002

EXHIBIT 6
AR D.5