



Commonwealth of Massachusetts  
Executive Office of Energy & Environmental Affairs

## Department of Environmental Protection

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June 5, 2015

Mr. Tom Hathaway  
Hathaway Construction Corporation  
41 Perry Hill Road  
Westhampton, MA 01027

**RE: Westhampton**  
Transmittal No.: X262282  
Application No.: WE-14-023  
Class: *SM-50*  
FMF No.: X262282  
**AIR QUALITY PLAN APPROVAL**

Dear Mr. Hathaway:

The Massachusetts Department of Environmental Protection (“MassDEP”), Bureau of Air and Waste, has reviewed your Non-major Comprehensive Plan Application (“Application”) listed above. This Application concerns the proposed construction and operation of a ready mix concrete batching plant and associated baghouse, a 113 kilowatt generator, and a hot water heater at your existing crushed stone processing facility located at 119 North Road in Westhampton, Massachusetts (“Facility”). The Application bears the seal and signature of John Lavin, Massachusetts Registered Professional Engineer Number 40234.

This Application was submitted in accordance with 310 CMR 7.02 Plan Approval and Emission Limitations as contained in 310 CMR 7.00 “Air Pollution Control” regulations adopted by MassDEP pursuant to the authority granted by Massachusetts General Laws, Chapter 111, Section 142 A-N, Chapter 21C, Section 4 and 6, and Chapter 21E, Section 6. MassDEP’s review of your Application has been limited to air pollution control regulation compliance and does not relieve you of the obligation to comply with any other regulatory requirements.

MassDEP has determined that the Application is administratively and technically complete and that the Application is in conformance with the Air Pollution Control regulations and current air pollution control engineering practice, and hereby grants this **Plan Approval** for said Application, as submitted, subject to the conditions listed below.

**This Plan Approval modifies facility-wide emission limits established through a previous Non-major Comprehensive Plan Application #1-P-10-042 (X235443), dated January 13, 2012.**

Please review the entire Plan Approval, as it stipulates the conditions with which the Facility owner/operator (“Permittee”) must comply in order for the Facility to be operated in compliance with this Plan Approval.

## **1. DESCRIPTION OF FACILITY AND APPLICATION**

Hathaway Construction Corporation (HCC) proposes to construct a RexCon Mobile 5 ready mix concrete (RMC) batch concrete system (system) which will have the capacity to produce up to 100 cubic yards per hour (yd<sup>3</sup>/hr) of RMC. The proposed concrete batching system will be powered by a diesel-fired (#2 grade oil) 113 kilowatt (kW) generator. Heated water will be supplied during the colder months with a diesel-fired 7,500 gallon water heater. Each unit is described below. The proposed concrete batch plant will be constructed on the same parcel of land as an existing crushed stone processing plant.

The pollutants of concern for the concrete batching system process are total particulate matter (PM), particulate matter with an aerodynamic diameter equal to or less than 10 microns, also known as PM10, particulate matter with an aerodynamic diameter equal to or less than 2.5 microns, also known as PM2.5 and hazardous air pollutants (HAPs). The pollutants of concern for the generator are nitrogen oxides (NO<sub>x</sub>), sulfur dioxide (SO<sub>2</sub>), carbon monoxide (CO), and PM. However, the proposed generator includes an oxidation catalyst and diesel particulate filter which reduces CO and PM, respectively, to insignificant levels. The water heater unit has a maximum heat input rating of 621,000 Btu/hr and therefore is not subject to Plan Approval (310 CMR 7.02(2)(b)(15)b).

The new RMC system has the potential to emit greater than one ton but less than ten tons per year of a single air contaminate and so, based on potential emissions, would be subject to 310 CMR 7.02(4), Limited Plan Application. However, the facility’s proposed generator cannot meet the Environmental Result Program emission limitations for oxides of nitrogen (NO<sub>x</sub>) (Table 2 of 310 CMR 7.26(43)(b)). Accordingly, HCC has applied for a Non-major Comprehensive Plan Application (nmCPA) and has proposed fuel use restrictions.

The facility proposes to construct the major components (or their equivalent) as outlined in the following table:

<b>Equipment Specifications</b>	
<b>Component</b>	<b>Theoretical Maximum Rate/Capacity</b>
Rexcon Mobile 5 Batch Plant	100 yd <sup>3</sup> /hr of concrete <sup>1</sup>
Aggregate (fine and course) storage bins	3 bins, 16.5 cubic yards
Cement storage compartment	900 cubic feet
Air compressor	10 Horsepower
Inclined batch transfer conveyer – fully covered	30 inches
Cement batcher	5 cubic yards
Motor control center – Electric pushbutton batch controls	N/A
Passive dust collector, weigh batcher filter vent	See “Pollution Control” table below
Griffin Clean-A-Batch Model A Airvac D-144TR Concrete Dry Batch Control System with Model U-144 baghouse (or equivalent)	See “Pollution Control” table below
Griffin overfill control system	N/A

**Table Key:**

EU# = Emission Unit Number;  
 PCD = Pollution Control Device;  
 yd<sup>3</sup>/hr = cubic yards per hour;  
 N/A = Not applicable

**Table Notes:**

1 – 80 yd<sup>3</sup>/hr was estimated for emission calculations.

Emissions will be controlled by two dust collection systems as summarized in the following table:

<b>Pollution Control Equipment</b>									
<b># of units</b>	<b>Baghouse Filter Model</b>	<b>Point(s) of control</b>	<b>Bag Material</b>	<b># of filter bags</b>	<b>Total Filter Area (ft<sup>2</sup>)</b>	<b>Fan Capacity (ft<sup>3</sup>/min)</b>	<b>Average Pressure Drop Across the Filter (inches of water)</b>	<b>Air to Cloth Ratio (ft<sup>3</sup>/min-ft<sup>2</sup>)</b>	<b>Method of Cleaning</b>
1	Passive dust collector, weigh batcher filter vent	Above the cement hopper and batcher	Cotton sateen	18	18	N/A	N/A	N/A	Mechanical shaker
1	Griffin Clean-A-Batch Model A Airvac D-144TR system with Model U-144 baghouse (or equivalent)	Cement storage container and truck loading	9 oz. Woven polyester	144	944	6,000	12	6.36:1	Mechanical Shaker

**Table Key:**

PCD = Pollution Control Device  
 ft<sup>2</sup> = square feet  
 ft<sup>3</sup>/min = cubic feet per minute  
 N/A = not applicable

**Concrete Batch Plant**

The proposed concrete batch system is portable, but will remain onsite. Like a permanent structure, it will be enclosed on three sides. One side will be open to allow trucks to load the concrete for offsite delivery. The batch plant operator will utilize a computer to request specific amounts of various materials (sand, cement, aggregate, and water). HCC does not plan to use cement supplements in the process.

The transfer of cement will take place as follows: Cement will arrive by truck and will be transferred by low pressure piping, to the main cement storage area of the system. The cement storage area has a capacity of 900 cubic feet. During truck mix operations, the cement will be transferred to the cement surge hopper via a six inch cement screw conveyer. Fugitive dust from this process is controlled with a weigh batcher filter vent, which is positioned over the cement surge hopper. This filter vent does not have an exhaust fan. Instead, dust laden air moves through the filter as a result of displacement forces. Material trapped on the filter is

mechanically shaken down into the cement surge hopper and recycled back into the process. The cement main storage area is equipped with an over-fill audible alarm.

The transfer of sand and aggregate material will take place as follows: Aggregate and washed sand are generated on-site by HCC's crushing operations. The sand and aggregate material will be loaded into three sided storage bins and wet down, as needed, to control dust. These materials will be transferred via bucket loader to one of three aggregate storage compartments on the system. When programmed, the sand/aggregate will travel to the charge shoot via a fully enclosed 30 inch conveyer system.

The Griffin Clean-A-Batch Model A Airvac D-144TR system (Griffin Clean-A-Batch system, or equivalent) will operate anytime batch mixing and/or loading is taking place. It will control particulate emissions from cement, sand, and aggregate at the point of truck loading. The truck load-out area will be equipped with a hood-type shroud under negative pressure. The trucks will pull in under the batcher. After the shroud is lowered, a blower will automatically activate as the silo is discharged.

After the material has been discharged into the truck, the shroud is raised. The blower shuts off and the trapped dust is shaken from the bags. The Griffin filter is cleaned continuously by shaking the bags at thirty (30) second intervals. The material filtered out by the baghouse drops into a hopper which is monitored with an audible high-level alarm to alert the operator when clean-out is needed. Material collected in the hopper is reused in the product. Maximum air flow demands at the cement batcher are not expected to exceed 6,000 CFM, the fan capacity of the Griffin Clean-A-Batch system.

With the exception of the truck mix loading, PM<sub>2.5</sub> emission factors were assumed to be 15% of the PM<sub>10</sub> values based on the historical use of this method for the Tresca Brothers Sand & Gravel, Inc. (MBR-08-IND-013, dated 2/26/2009) and Paulini Loam, LLC (MBR-08-IND-009, dated 9/23/2008) Plan Approvals as well as EPA AP 42 guidance<sup>1</sup>.

Emission rate limits for the RMC process were determined by using the estimated number of hours resulting from an engine fuel use restriction of 1,600 gallons of ultra low sulfur diesel oil per year, assuming that the engine runs at 50% power. This was multiplied by a concrete production rate of 80 cubic yards per hour. A maximum annual production rate of approximately 34,000 cubic yards was estimated.

The fuel-use restriction is BACT since annual allowable emissions will be equivalent to the Environmental Result Program (ERP) engine potential annual NO<sub>x</sub> emission level for an engine of this size.

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<sup>1</sup> Background Document for Revisions to Fine Fraction Ratios Used for AP-42 Fugitive Dust Emission Factors (2/06) (Ch. 13.2.4, Fifth Edition, Volume I)

Based on EPA AP-42 emission factors<sup>2</sup>, using the proposed maximum annual production of concrete, the following PM, PM10, PM2.5 and HAP emissions were determined and are summarized in the following table:

<b>Proposed Particulate Matter and HAP Emissions</b>				
<b>Source</b>	<b>PM (tons per year)</b>	<b>PM10 (tons per year)</b>	<b>PM2.5<sup>1</sup> (tons per year)</b>	<b>HAPs (tons per year)</b>
Aggregate Delivery to Ground Storage	0.11	0.05	0.008	-
Sand Delivery to Ground Storage	0.03	0.01	0.002	-
Aggregate Transfer to Elevated Storage/Bin	0.11	0.05	0.008	-
Sand Transfer to Elevated Storage/Bin	0.03	0.01	0.002	-
Cement Delivery to batcher main storage	0.003	0.0017	0.0003	6.9 x 10 <sup>-6</sup>
Weigh Hopper Loading	0.13	0.06	0.010	-
Truck Mix Loading	0.25	0.10	0.01	2.1 x 10 <sup>-4</sup>
<b>Total Emissions</b>	<b>0.65</b>	<b>0.29</b>	<b>0.04</b>	<b>2.2 x 10<sup>-4</sup></b>

1 – With the exception of truck mix loading, PM<sub>2.5</sub> was estimated as 15% of the PM<sub>10</sub> emission rate as established in the Plan Approvals for Tresca Brothers Sand & Gravel, Inc. (MBR-08-IND-013, dated 2/26/2009) and Paulini Loam, LLC (MBR-08-IND-009, dated 9/23/2008).

### **Generator**

The proposed RMC batch system will be located in a remote area that is without available line power. HCC will install a John Deere PowerTech PVX 4.5L diesel engine, model number 4045HFG93 (or equivalent) to supply energy needs. The engine is rated for 113 kW of power at prime operation. It is certified as an interim Tier 4 engine according to Part 1039 of the Environmental Protection Agency's New Source Performance Standards (NSPS, 40 CFR §1039.102). To comply with the MassDEP ERP standards of 310 CMR 7.26(43), HCC will limit diesel fuel usage to 1,600 gallons per rolling 12 month period.

Engine emission control devices include Exhaust Gas Recirculation (EGR) for nitrogen oxides (NO<sub>x</sub>) control, diesel oxidation catalyst for carbon monoxide (CO) control, and a diesel particulate filter (DPF). The engine's diesel particulate filter will be installed with a backpressure monitor that will notify the owner or operator when the high backpressure limit of the engine is approached and maintenance is required (40 CFR §60.4209(b)).

<sup>2</sup> Emission factors were calculated using Equation 11.12-1 and Table 11.12-3, as well as emission factors from 11.12-5 and Table 11.12-8.

## **BACT Analysis**

The RexCon ready mix concrete batch concrete system is subject to the Best Available Control Technology (BACT) requirement of 7.02(8)(a)2. Accordingly, the system will meet the following specifications:

- Fuel usage will be restricted to 1,600 gallons per consecutive 12-month period to restrict annual emissions to those equivalent to an ERP compliant engine running for 8,760 hours per year;
- The Griffin Clean-A-Batch dust collection system will operate at a minimum capture efficiency of over 99% and operate with an air to cloth ratio of 6.36:1;
- The system will be equipped with a “fail safe” electronic interlock to prevent truck loading and cement weigh hopper operations without the concurrent operation of the Griffin Clean-A-Batch dust collection system;
- The Griffin Clean-A-Batch system will be equipped with instrumentation to continuously monitor the differential pressure across the fabric collector. The baghouse/dust collectors will be repaired or replaced if the pressure drop is outside the manufacturer’s recommend range of pressure drop for efficient operation;
- Visolite testing will be performed on the Griffin Clean-A-Batch system once per year (each spring) to determine the need for repair or replacement of the filters or, alternatively, all filters will be replaced annually;
- The filter bags on the weigh batcher filter vent will be inspected every first and third quarter of the year for bag integrity and will be replaced, if necessary.

Operational, production, and air contaminant emission limits are stated in Table 2.

## **Facility-Wide Best Management Practices**

To minimize fugitive particulate matter emissions from the facility, the following good housekeeping practices will be employed.

- Any sand used in the process will have the fines removed (it will be washed);
- If needed, high traffic areas will be paved to minimize dust. Paved areas will be swept as conditions warrant;
- A water truck will wet down the unpaved portions of the site on an as needed basis;
- Truck charging stations below the individual mixer station will be periodically cleaned of any spillage. Trucks will be washed or wet down to control dust. All trucks used for the transport of raw materials entering or exiting the plant property will be properly tarpaulin covered as quickly as possible;
- Front-end loaders that are used to stockpile, transfer and load aggregate will minimize drop heights to minimize fugitive particulate matter;

- Stockpiles will be kept as compact as possible to limit exposure to the wind and so that they may be adequately wetted as necessary to control particulate matter emissions; and
- A vehicle speed limit of no higher than 10 miles per hour will be established, enforced and posted in highly visible locations at the plant entrance and along the roadways within the facility.

### **Additional Regulatory**

The facility is subject to the visible emission requirements of 310 CMR 7.06, the dust, odor, construction and demolition requirements of 310 CMR 7.09 and the noise reduction requirements of 310 CMR 7.10. Proximity to the nearest residence is estimated to be 1,500 feet. Therefore, noise from the facility is not expected to cause a nuisance.

The facility has stated in their application that they are subject to 40 CFR 60 Subpart IIII, Standards of Performance for Stationary Compression Ignition Internal Combustion Engines, and 40 CFR 63 Subpart ZZZZ, National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines. Since MassDEP has not accepted delegation for Subparts IIII and ZZZZ for sources which are not subject to 310 CMR Appendix C, the Permittee is advised to consult with EPA Region 1 at 5 Post Office Square, Suite 100, Boston, MA 02109-3912, telephone: (617) 918-1111. Other applicable requirements may include notification, record keeping, and reporting requirements.



## 2. EMISSION UNIT IDENTIFICATION

Each Emission Unit (“EU”) identified in Table 1 is subject to and regulated by this Plan Approval:

<b>Table 1</b>			
<b>EU</b>	<b>Description</b>	<b>Design Capacity</b>	<b>Pollution Control Device (PCD)</b>
1	RexCon Mobile 5 Ready Mix Concrete Batch Plant (or equivalent)	≤ 100 cubic yards per hour	<ul style="list-style-type: none"> <li>• Weigh batcher filter vent</li> <li>• Griffin Clean-A-Batch Model A Airvac D-144TR system with Model U-144 baghouse (or equivalent)</li> </ul>
2	John Deere Model # 4045HFG93 PowerTech PVX 4.5L diesel-fired generator (or equivalent)	113 kilowatt mechanical output	<ul style="list-style-type: none"> <li>• Exhaust Gas Recirculation (EGR);</li> <li>• Diesel Oxidation Catalyst (DOC);</li> <li>• Diesel Particulate Filter (DPF).</li> </ul>
3	Infern-O-Therm hot water heater Model # HW-7.5, #2 oil-fired burner model 150 (or equivalent)	7,500 gallons	N/A

### 3. APPLICABLE REQUIREMENTS

#### A. OPERATIONAL, PRODUCTION and EMISSION LIMITS

The Permittee is subject to, and shall not exceed the Operational, Production, and Emission Limits as contained in Table 2:

<b>Table 2</b>			
<b>EU</b>	<b>Operational / Production Limit</b>	<b>Air Contaminant</b>	<b>Emission Limit</b>
1	1. $\leq 34,000$ cubic yards processed per consecutive 12-month period $\leq 6,800$ cubic yards processed per month 2. Griffin Clean-A-Batch Model A Airvac D-144TR system and Model U-144 baghouse (or equivalent) with 99% filter capture efficiency for cement storage container and truck loading area. 3. Filter bag temperature rating of $\geq 250^{\circ}\text{F}$ . 4. Replace/repair filters when pressure drop across the Griffin Clean-A-Batch system reaches the manufacturers recommended pressure drop for replacement or as needed for performance.	PM	0.65TPY 0.13 TPM
		PM <sub>2.5</sub>	0.04 TPY 0.01 TPM
		PM <sub>10</sub>	0.29 TPY 0.06 TPM
		Total HAP	0.01TPY 0.01 TPM
		Opacity	Visible emissions $\leq 5$ percent opacity except up to 10 percent opacity for no more than 2 minutes during any one hour, not to exceed 10 percent opacity from any process point, internal roads, work areas, material storage areas or stockpiles.
2	5. $\leq 1,600$ gallons diesel fuel per year $\leq 320$ gallons diesel fuel per month 6. ULSD fuel (0.0015 %	NO <sub>x</sub>	6.17 lb/MW-hr 0.07 TPY 0.02 TPM
		Opacity	< 5%, EXCEPT 5 TO < 10% FOR < 2 MINUTES DURING ANY ONE HOUR

<b>Table 2</b>			
<b>EU</b>	<b>Operational / Production Limit</b>	<b>Air Contaminant</b>	<b>Emission Limit</b>
	sulfur)	Smoke	310 CMR 7.06(1)(a)
Facility- wide <sup>1</sup>	-	PM	6.89 TPY 1.38 TPM
		PM <sub>10</sub>	2.43 TPY 0.49 TPM
		Total HAP	0.0741 TPY 0.0148 TPM
		NO <sub>x</sub>	20.73 TPY 4.15 TPM

**Table 2 Key:**

EU = Emission Unit Number

TPM = tons per month

TPY = tons per consecutive 12-month period

PM = Total Particulate Matter

PM<sub>2.5</sub> = Particulate Matter less than or equal to 2.5 microns in diameter

NO<sub>x</sub> = Nitrogen Oxides

Total HAP = total Hazardous Air Pollutants

ULSD = Ultra-Low Sulfur Distillate

lb/MW-hr = pound per megawatt-hour

PM<sub>10</sub> = Particulate Matter less than or equal to 10 microns in diameter

**Table 2 Notes:**

**1 – Plan Approval # 1-P-10-042 dated January 13, 2012 includes rolling 12-month emission limits for Emission Units #2 and #3 of carbon monoxide (3.64 TPY), sulfur oxides (3.32 TPY), aldehydes (0.80 TPY), and volatile organic compounds (4.12 TPY).**

**B. COMPLIANCE DEMONSTRATION**

The Permittee is subject to, and shall comply with, the monitoring, testing, record keeping, and reporting requirements as contained in Tables 3, 4, and 5:

<b>Table 3</b>	
<b>EU</b>	<b>Monitoring and Testing Requirements</b>
1	<ol style="list-style-type: none"> <li>1. In accordance with 310 CMR 7.02(3)(d), the Permittee shall monitor the total concrete output in cubic yards per month and cubic yards per 12 consecutive month period.</li> <li>2. In accordance with the best available control technology provision of 310 CMR 7.02(8)(a)2, the Griffin Clean-A-Batch Model A Airvac D-144TR system (or equivalent) with Model U-144 baghouse shall be equipped with instrumentation to monitor the differential pressure across the unit on a continuous basis. The pressure gauge shall be positioned so that it is easily accessed and read.</li> <li>3. The Permittee shall replace/repair filters when pressure drop across the Griffin Clean-A-Batch system reaches the manufacturers recommended pressure drop for replacement or as needed for performance.</li> <li>4. In accordance with 310 CMR 7.02(3)(d), the Permittee shall conduct a visolite (or equivalent) test on Griffin Clean-A-Batch Model A Airvac D-144TR system (or equivalent) at least once per year (each spring) to locate leaks, filter failures, or problems with the operation, such as excessive opacity. Alternatively, the Permittee shall replace the filter bags at a frequency of at least one time per year (each spring).</li> <li>5. In accordance with 310 CMR 7.02(3)(d), the Permittee shall, during the first and third quarter, inspect the filter system on the weigh batcher filter vent for leaks and wear.</li> <li>6. In accordance with 310 CMR 7.02(3)(d), the Permittee shall inspect, on a semi-annual basis, all components on each fabric collector that are not subject to wear or plugging including structural components, housing, ducts and hoods.</li> <li>7. The Permittee shall ensure that at a minimum of once per workday, a designated employee familiar with facility operations and air pollution matters relating to this Final Approval, performs a visible emission observation, in accordance with USEPA Method 22, except that there is no required minimum time of observation (Method 22 Short Test)<sup>1</sup>, of all areas of the facility (engines, process equipment, conveyor transfer points, raw/finished material stockpiles, unpaved roadways, etc.) with a potential to emit visible particulate emissions.</li> </ol> <p>The Permittee shall establish and maintain a recordkeeping log (in written or electronic format) that, at a minimum, notes the date, time, area of the facility observed, and a statement of visible emissions or other conditions noted by the designated employee and any preventive/corrective actions taken.</p>

<b>Table 3</b>	
<b>EU</b>	<b>Monitoring and Testing Requirements</b>
	8. In accordance with the best available control technology provision of 310 CMR 7.02(8)(a)2, the main cement storage container of the RexCon Mobile 5 Batch Plant shall be equipped with an overfill control system to prevent damage to the dust collector filter(s). The high level bin signal shall be manually tested on a weekly basis.
2	9. The Permittee shall monitor sulfur content of each new shipment of fuel oil received. Sulfur content of the fuel can be demonstrated through fuel analysis. The analysis of sulfur content of the fuel shall be in accordance with the applicable American Society for Testing Materials (ASTM) test methods or any other method approved by the MassDEP and USEPA. Fuel sulfur information may be provided by fuel suppliers.
	10. The Permittee shall monitor, on a monthly basis, the #2 diesel fuel usage of EU 2.
	11. The Permittee shall install a backpressure monitor to notify the operator when the high backpressure limit of the engine is approached.
Facility-wide	12. The Permittee shall monitor all operations to ensure sufficient information is available to comply with 310 CMR 7.12 Source Registration
	13. If and when MassDEP requires it, the Permittee shall conduct emission testing in accordance with USEPA Reference Test Methods and Regulation 310 CMR 7.13
	14. At least 30 days prior to emission testing, the Permittee shall submit to MassDEP for approval a stack emission pretest protocol.
	15. Within 45 days after emission testing, the Permittee shall submit to MassDEP a final stack emission test results report.

**Table 3 Key:**

EU = Emission Unit Number  
 USEPA = United States Environmental Protection Agency  
 MassDEP = Massachusetts Department of Environmental Protection  
 CMR = Code of Massachusetts Regulations

DPF = Diesel Particulate Filter

**Table 4**

<b>Table 4</b>	
<b>EU</b>	<b>Record Keeping Requirements</b>
1	<p>1. In accordance with 310 CMR 7.02(3)(e), the Permittee shall record the total concrete output in cubic yards per month and cubic yards per 12 consecutive month period.</p> <p>2. In accordance with 310 CMR 7.02(3)(e), the Permittee shall calculate and record the total facility actual emissions of total particulate matter, total PM10 (filterable and condensable), total PM2.5 (filterable and condensable) and total HAPs for the previous month and for the previous 12 consecutive month period by no later than the 15<sup>th</sup> day of each month that the facility is operating.</p> <p>3. In accordance with 310 CMR 7.02(3)(e), the Permittee shall record the differential pressure (in inches of water) across the Griffin Clean-A-Batch Model A: U-144 (or equivalent) during weigh hopper and truck loading operations and while the blower is in operation at a minimum frequency of once per calendar week.</p> <p>4. In accordance with 310 CMR 7.06(1)(b), the Permittee shall record the date and time during which emissions of greater than 5% opacity were seen as coming from the exhaust of the Griffin Clean-A-Batch Model A: U-144 (or equivalent) and the weigh batcher filter vent and the corrective actions taken to ensure the facility has returned to compliance.</p>
2	<p>5. The Permittee shall maintain oil analysis results used to demonstrate compliance with fuel oil sulfur content requirements.</p> <p>6. The Permittee shall record, on a monthly basis, the #2 diesel fuel usage of the EU 2.</p> <p>7. The Permittee shall record the backpressure of the engine on a once per calendar week basis, when operational. Any instances when the high backpressure limit of the engine is approached, due to the maintenance requirements of the DPF, as well as the measures taken to correct it, shall be noted.</p>
Facility-wide	<p>8. The Permittee shall maintain adequate records on-site to demonstrate compliance status with all operational, production, and emission limits contained in Table 2 above. Records shall also include the actual emissions of air contaminant(s) emitted for each calendar month and for each consecutive twelve-month period (current month plus prior eleven months). These records shall be compiled no later than the 15<sup>th</sup> day following each month. An electronic version of the MassDEP approved record keeping form, in Microsoft Excel format, can be downloaded at <a href="http://www.mass.gov/eea/agencies/massdep/air/approvals/limited-emissions-record-keeping-and-reporting.html#WorkbookforReportingOn-SiteRecordKeeping">http://www.mass.gov/eea/agencies/massdep/air/approvals/limited-emissions-record-keeping-and-reporting.html#WorkbookforReportingOn-SiteRecordKeeping</a>.</p> <p>9. The Permittee shall maintain records of monitoring and testing as required by Table 3.</p> <p>10. The Permittee shall maintain a copy of this Plan Approval, underlying Application and the most up-to-date SOMP for the EU(s) and PCD(s) approved herein on-site.</p> <p>11. The Permittee shall maintain a record of routine maintenance activities performed on the approved EU(s), PCD(s) and monitoring equipment. The records shall include, at a minimum, the type or a description of the maintenance performed and the date and time the work was completed.</p>

<b>Table 4</b>	
<b>EU</b>	<b>Record Keeping Requirements</b>
Facility-wide	12. The Permittee shall maintain a record of all malfunctions affecting air contaminant emission rates on the approved EU(s), PCD(s) and monitoring equipment. At a minimum, the records shall include: date and time the malfunction occurred; description of the malfunction; corrective actions taken; the date and time corrective actions were initiated and completed; and the date and time emission rates and monitoring equipment returned to compliant operation.
	13. The Permittee shall maintain records to ensure sufficient information is available to comply with 310 CMR 7.12 Source Registration.
	14. The Permittee shall maintain records required by this Plan Approval on-site for a minimum of five (5) years.
	15. The Permittee shall make records required by this Plan Approval available to MassDEP and USEPA personnel upon request.

**Table 4 Key:**

EU = Emission Unit Number  
 SOMP = Standard Operating and Maintenance Procedure  
 CMR = Code of Massachusetts Regulations

PCD = Pollution Control Device  
 USEPA = United States Environmental Protection Agency  
 DPF = Diesel Particulate Filter

<b>Table 5</b>	
<b>EU</b>	<b>Reporting Requirements</b>
Facility-wide	<p>1. The Permittee shall notify MassDEP, in writing, attention Permit Chief, Bureau of Air and Waste, when installation of the concrete batching process and associated facility emissions control equipment, including pressure differential monitors, product level devices/monitors (for the baghouse hopper and cement main storage), and “fail-safe” electronic interlock system, has been completed and operational, within 14 days thereof. If an equivalent dust collectors system is installed, the Permittee will notify the Department and provide equivalent equipment specifications for the system.</p>
	<p>2. Prior to start-up, the Permittee shall submit to MassDEP the updated Standard Operating and Maintenance Procedure (SOMP) manual for the facility, which includes but is not limited to, the operating parameters recommended by the manufacturer, including a) operating pressure differential alarm limits for the Griffin Clean-A-Batch Model A: U-144filter system (or equivalent); b) start-up and maintenance procedures for the Griffin Clean-A-Batch Model A: U-144 (or equivalent) filter system; c) corrective actions to be taken under alarm conditions; d) emergency measures to be taken should air pollution control equipment malfunction; and e) all monitoring [See Table 3] and record keeping [ See Table 4] requirements for the subject equipment. The facility shall operate in accordance with the SOMP, including the parameters that were recommended by the manufacturer. Future updates to the SOMP shall be submitted to MassDEP within fifteen (15) days of said revisions. MassDEP must approve of significant changes to the SOMP prior to the change becoming effective. The updated SOMP shall supersede prior versions of the SOMP.</p>
	<p>3. The Permittee shall submit to MassDEP all information required by this Plan Approval over the signature of a “Responsible Official” as defined in 310 CMR 7.00 and shall include the Certification statement as provided in 310 CMR 7.01(2)(c).</p>
	<p>4. The Permittee shall notify the Western Regional Office of MassDEP, BAW Section Chief by telephone: (413) 755-2115, email: marc.simpson@state.ma.us, or fax : (413) 784-1149, as soon as possible, but no later than three (3) business day after discovery of an exceedance(s) of Table 2 requirements. A written report shall be submitted to the Section Chief at MassDEP within ten (10) business days thereafter and shall include: identification of exceedance(s), duration of exceedance(s), reason for the exceedance(s), corrective actions taken, and action plan to prevent future exceedance(s).</p>
	<p>5. The Permittee shall report every three years to MassDEP, in accordance with 310 CMR 7.12, all information as required by the Source Registration/Emission Statement Form. The Permittee shall note therein any minor changes (under 310 CMR 7.02(2)(e), 7.03, 7.26, etc.), which did not require Plan Approval.</p>

**Table 5 Key:**

EU = Emission Unit Number  
 CMR = Code of Massachusetts Regulations

MassDEP = Massachusetts Department of  
 Environmental Protection



**4. SPECIAL TERMS AND CONDITIONS**

A. The Permittee is subject to, and shall comply with, the Special Terms and Conditions as contained in Table 6 below:

<b>Table 6</b>	
<b>EU</b>	<b>Special Terms and Conditions</b>
1	<p>1. In accordance with the best available control technology provision of 310 CMR 7.02(8)(a)2, the RexCon Mobile 5 Batch Plant shall be controlled by 1) a Passive dust collector/weigh batcher filter vent and 2) a Griffin Clean-A-Batch Model A Airvac D-144TR system with Model U-144 baghouse, or equivalent as determined by MassDEP. Each fabric collector shall be operated during all material transfers to and from the concrete storage containers. A “fail safe” electronic interlock system shall ensure that the baghouse is in operation during all truck loading and cement weigh hopper operations. Filling of the storage containers shall not take place without operation of the associated overfill control systems.</p> <p>2. In accordance with the best available control technology provision of 310 CMR 7.02(8)(a)2, any conveyor that moves the sand and aggregate material from the storage bins to the elevated storage shall be fully covered.</p> <p>3. The Permittee shall have readily accessible at all times a sufficient number of replacement filters for the Passive dust collector/weigh batcher filter vent and the Griffin Clean-A-Batch baghouse.</p> <p>4. The Permittee shall, if applicable, include the contribution of concrete supplements to the monthly and 12 consecutive month PM and HAP calculations.</p>
2	<p>5. The Permittee shall install, configure, operate, and maintain the engine per the manufacturer’s instructions. The results of said inspection, maintenance and testing and the date upon which it was performed shall be recorded and posted conspicuously on or near the permitted equipment.</p> <p>6. The Permittee shall ensure that engine stack is configured to discharge the exhaust gases vertically upwards.</p> <p>7. The Permittee shall ensure that the engine stack top stands a minimum of 15 feet above ground level and does not have rain protection of a type that restricts the vertical flow of the exhaust gases into the ambient air. “Shanty caps”, “egg beaters” and the like are prohibited.</p>

<b>Table 6</b>	
<b>EU</b>	<b>Special Terms and Conditions</b>
2	<p>8. The Permittee shall operate and maintain the stationary CI internal combustion engine and control device according to the manufacturer's emission-related written instructions and shall change only those emission-related settings that are permitted by the manufacturer. If the Permittee does not install, configure, operate, and maintain EU 2 and its control devices according to the manufacturer's emission-related written instructions, or emission-related settings are changed in a way that is not permitted by the manufacturer, the Permittee must demonstrate compliance as follows:</p> <ul style="list-style-type: none"> <li>• keep a maintenance plan and records of conducted maintenance;</li> <li>• to the extent practicable, maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions;</li> <li>• conduct an initial performance test to demonstrate compliance with the applicable emission standards within 1 year of startup, or within 1 year after an engine and control device is no longer installed, configured, operated, and maintained in accordance with the manufacturer's emission-related written instructions, or within 1 year after the Permittee changes emission-related settings in a way that is not permitted by the manufacturer.</li> </ul>
Facility-wide	<p>9. The Permittee shall, within 3 months of commencing operation, determine street sweeping frequency and pave any areas that have been determined to be high traffic areas and that cause a nuisance condition. This schedule shall be added to the SOMP manual (see Table 5, Provision 2).</p> <p>10. Any prior Plan Approvals issued under 310 CMR 7.02 shall remain in effect unless specifically changed or superseded by this Plan Approval. The Facility shall not exceed the emission limits and shall comply with approved conditions specified in the prior Plan Approval(s) unless specifically altered by this Plan Approval.</p>

**Table 6 Key:**

EU = Emission Unit Number	NO <sub>x</sub> = Nitrogen Oxides
CO = Carbon Monoxide	SO <sub>2</sub> = Sulfur Dioxide
PM = Total Particulate Matter	PM <sub>10</sub> = Particulate Matter less than or equal to 10 microns in diameter
PM <sub>2.5</sub> = Particulate Matter less than or equal to 2.5 microns in diameter	HAP (total) = total Hazardous Air Pollutants.
CO <sub>2</sub> = Carbon Dioxide	TPM = tons per month
TPY = tons per consecutive 12-month period	VOC = Volatile Organic Compounds
HAP (single) = maximum single Hazardous Air Pollutant	

**Table 6 Notes:**

1 - The "Method 22 Short Test" is performed identically as a Method 22 Visual Determination of Fugitive Emissions except for the length of observation, for which no minimum time is specified. However, Hathaway must ensure that anyone performing a Method 22 Short Test must be familiar with the process and must observe the fugitive emission point long enough to be able to include in his/her observations any time-dependent process variations that may increase visible emissions.

- B. The Permittee shall install and use an exhaust stack, as required in Table 7, on each of the Emission Units that is consistent with good air pollution control engineering practice and that discharges so as to not cause or contribute to a condition of air pollution. Each exhaust stack shall be configured to discharge the gases vertically and shall not be equipped with any part or device that restricts the vertical exhaust flow of the emitted gases, including, but not limited to, rain protection devices known as “shanty caps” and “egg beaters.”
- C. The Permittee shall install and utilize exhaust stacks with the following parameters, as contained in Table 7, for the Emission Units that are regulated by this Plan Approval:

<b>Table 7</b>				
<b>EU</b>	<b>Stack Height Above Ground (feet)</b>	<b>Stack Inside Exit Dimensions (feet)</b>	<b>Stack Gas Exit Velocity Range (feet per second)</b>	<b>Stack Gas Exit Temperature Range (°F)</b>
1	30	1.54 x 1.33	80 - 120	70 - 250
2	15	0.5	19	850 - 950

**Table 7 Key:**

EU = Emission Unit Number

°F = Degree Fahrenheit

## **5. GENERAL CONDITIONS**

The Permittee is subject to, and shall comply with, the following general conditions:

- A. Pursuant to 310 CMR 7.01, 7.02, 7.09 and 7.10, should any nuisance condition(s), including but not limited to smoke, dust, odor or noise, occur as the result of the operation of the Facility, then the Permittee shall immediately take appropriate steps including shutdown, if necessary, to abate said nuisance condition(s).
- B. If asbestos remediation/removal will occur as a result of the approved construction, reconstruction, or alteration of this Facility, the Permittee shall ensure that all removal/remediation of asbestos shall be done in accordance with 310 CMR 7.15 in its entirety and 310 CMR 4.00.
- C. If construction or demolition of an industrial, commercial or institutional building will occur as a result of the approved construction, reconstruction, or alteration of this Facility, the Permittee shall ensure that said construction or demolition shall be done in accordance with 310 CMR 7.09(2) and 310 CMR 4.00.
- D. Pursuant to 310 CMR 7.01(2)(b) and 7.02(7)(b), the Permittee shall allow MassDEP and / or USEPA personnel access to the Facility, buildings, and all pertinent records for the purpose of making inspections and surveys, collecting samples, obtaining data, and reviewing records.
- E. This Plan Approval does not negate the responsibility of the Permittee to comply with any other applicable Federal, State, or local regulations now or in the future.
- F. Should there be any differences between the Application and this Plan Approval, the Plan Approval shall govern.
- G. Pursuant to 310 CMR 7.02(3)(k), MassDEP may revoke this Plan Approval if the construction work is not commenced within two years from the date of issuance of this Plan Approval, or if the construction work is suspended for one year or more.
- H. This Plan Approval may be suspended, modified, or revoked by MassDEP if MassDEP determines that any condition or part of this Plan Approval is being violated.
- I. This Plan Approval may be modified or amended when in the opinion of MassDEP such is necessary or appropriate to clarify the Plan Approval conditions or after consideration of a written request by the Permittee to amend the Plan Approval conditions.

- J. Pursuant to 310 CMR 7.01(3) and 7.02(3)(f), the Permittee shall comply with all conditions contained in this Plan Approval. Should there be any differences between provisions contained in the General Conditions and provisions contained elsewhere in the Plan Approval, the latter shall govern.

## **6. MASSACHUSETTS ENVIRONMENTAL POLICY ACT**

MassDEP has determined that the filing of an Environmental Notification Form (ENF) with the Secretary of Energy & Environmental Affairs, for air quality control purposes, was not required prior to this action by MassDEP. Notwithstanding this determination, the Massachusetts Environmental Policy Act (MEPA) and 301 CMR 11.00, Section 11.04, provide certain “Fail-Safe Provisions,” which allow the Secretary to require the filing of an ENF and/or an Environmental Impact Report (EIR) at a later time.

## **7. APPEAL PROCESS**

This Plan Approval is an action of MassDEP. If you are aggrieved by this action, you may request an adjudicatory hearing. A request for a hearing must be made in writing and postmarked within twenty-one (21) days of the date of issuance of this Plan Approval.

Under 310 CMR 1.01(6)(b), the request must state clearly and concisely the facts, which are the grounds for the request, and the relief sought. Additionally, the request must state why the Plan Approval is not consistent with applicable laws and regulations.

The hearing request along with a valid check payable to the Commonwealth of Massachusetts in the amount of one hundred dollars (\$100.00) must be mailed to:

Commonwealth of Massachusetts  
Department of Environmental Protection  
P.O. Box 4062  
Boston, MA 02211

This request will be dismissed if the filing fee is not paid, unless the appellant is exempt or granted a waiver as described below. The filing fee is not required if the appellant is a city or town (or municipal agency), county, or district of the Commonwealth of Massachusetts, or a municipal housing authority.

MassDEP may waive the adjudicatory hearing-filing fee for a person who shows that paying the fee will create an undue financial hardship. A person seeking a waiver must file, together with the hearing request as provided above, an affidavit setting forth the facts believed to support the claim of undue financial hardship.

Should you have any questions concerning this Plan Approval, please contact Amy Stratford by telephone at (413) 755-2144, or in writing at the letterhead address.

This final document copy is being provided to you electronically by the Department of Environmental Protection. A signed copy of this document is on file at the DEP office listed on the letterhead.

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Marc Simpson  
Section Chief  
Bureau of Air and Waste

Enclosure

ecc: MassDEP/Boston - Yi Tian  
John Lavin, PE, Earthworks Engineering, Inc.