

State Registration Number  
N7754

Michigan Department of Environmental Quality  
Air Quality Division  
**RENEWABLE OPERATING PERMIT  
STAFF REPORT**

ROP Number  
MI-ROP-N7754-2018

**Harbor Foam, Inc.**

SRN: N7754

Located at

2950 Prairie Street SW, Suite 300, Grandville, Kent County, Michigan 49418

Permit Number: MI-ROP-N7754-2018

Staff Report Date: May 14, 2018

This Staff Report is published in accordance with Sections 5506 and 5511 of Part 55, Air Pollution Control, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (Act 451). Specifically, Rule 214(1) requires that the Michigan Department of Environmental Quality (MDEQ), Air Quality Division (AQD), prepare a report that sets forth the factual basis for the terms and conditions of the Renewable Operating Permit (ROP).

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**May 14, 2018 - STAFF REPORT**

**Purpose**

Major stationary sources of air pollutants, and some non-major sources, are required to obtain and operate in compliance with an ROP pursuant to Title V of the federal Clean Air Act of 1990 and Michigan's Administrative Rules for Air Pollution Control pursuant to Section 5506(1) of Act 451. Sources subject to the ROP program are defined by criteria in Rule 211(1). The ROP is intended to simplify and clarify a stationary source's applicable requirements and compliance with them by consolidating all state and federal air quality requirements into one document.

This Staff Report, as required by Rule 214(1), sets forth the applicable requirements and factual basis for the draft ROP terms and conditions including citations of the underlying applicable requirements, an explanation of any equivalent requirements included in the draft ROP pursuant to Rule 212(5), and any determination made pursuant to Rule 213(6)(a)(ii) regarding requirements that are not applicable to the stationary source.

**General Information**

Stationary Source Mailing Address:	Harbor Foam, Inc. 2950 Prairie Street SW, Suite 300 Grandville, Michigan 49418
Source Registration Number (SRN):	N7754
North American Industry Classification System (NAICS) Code:	326140
Number of Stationary Source Sections:	1
Is Application for a Renewal or Initial Issuance?	Renewal
Application Number:	201700160
Responsible Official:	Laura Kuperus, V.P., Secretary Treasurer 616-855-8150
AQD Contact:	Adam Shaffer, Environmental Quality Analyst 616-356-0767
Date Application Received:	December 15, 2017
Date Application Was Administratively Complete:	December 15, 2017
Is Application Shield in Effect?	Yes
Date Public Comment Begins:	May 14, 2018
Deadline for Public Comment:	June 13, 2018

## Source Description

Harbor Foam, Inc. is a family owned business that was founded in 2007 and produces expanded polystyrene foam (EPS) products at their current location in Grandville, Kent County, Michigan. The area surrounding the facility is a mixture of commercial/industrial businesses, wooded areas, and residential structures. The company receives pentane impregnated polystyrene beads which are expanded with steam heat into larger spheres then molded into large solid blocks of various densities and sizes. The blocks are aged, and then undergo post production operations such as sanding and wire cutting into specific shapes for their customers. The primary pollutant from this process is volatile organic compounds (VOCs). Emissions from onsite operations are emitted uncontrolled.

The following table lists stationary source emission information as reported to the Michigan Air Emissions Reporting System (MAERS) for the year **2017**.

### **TOTAL STATIONARY SOURCE EMISSIONS**

<b>Pollutant</b>	<b>Tons per Year</b>
Volatile Organic Compounds (VOCs)	113.98

The following table lists Hazardous Air Pollutant emissions as identified for the year 2017 by the company:

<b>Individual Hazardous Air Pollutants (HAPs) **</b>	<b>Tons per Year</b>
<b>Total Hazardous Air Pollutants (HAPs)</b>	<b>&lt;1</b>

\*\*As listed pursuant to Section 112(b) of the federal Clean Air Act.

See Parts C and D in the ROP for summary tables of all processes at the stationary source that are subject to process-specific emission limits or standards.

## Regulatory Analysis

The following is a general description and history of the source. Any determinations of regulatory non-applicability for this source are explained below in the Non-Applicable Requirement part of the Staff Report and identified in Part E of the ROP.

The stationary source is located in Kent County, which is currently designated by the U.S. Environmental Protection Agency (USEPA) as attainment/unclassified for all criteria pollutants.

The stationary source is subject to Title 40 of the Code of Federal Regulations (CFR) Part 70, because the potential to emit of VOCs exceeds 100 tons per year (tpy).

The stationary source is considered to be a minor source of HAP emissions because the potential to emit of any single HAP regulated by the federal Clean Air Act, Section 112, is less than 10 tpy and the potential to emit of all HAPs combined are less than 25 tpy.

No emission units at the stationary source are currently subject to the Prevention of Significant Deterioration regulations of Part 18, Prevention of Significant Deterioration of Air Quality of Act 451, because at the time of New Source Review permitting the potential to emit of VOCs was less than 250 tpy.

Although EU-Boiler was installed after August 15, 1967, this equipment was exempt from New Source Review (NSR) permitting requirements at the time it was installed. However, future modifications of this equipment may be subject to NSR. Based on the size (<10 MMBtu/hr), the boiler is not subject to the New Source Performance Standards for Small Industrial-Commercial-Institutional Steam Generating Units,

(40 CFR Part 60, Subpart Dc). Harbor Foam, Inc. is not a major source of HAPs; therefore, the boiler is not subject to the National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters, (40 CFR Part 63, Subpart DDDDD). Harbor Foam, Inc. is an area source of HAPs, however, the boiler is natural gas fired and, therefore, not subject to the National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers Area Sources, (40 CFR Part 63, Subpart JJJJJ).

Harbor Foam, Inc. was issued Permit to Install (PTI) No. 35-07 on February 15, 2007 during the initial construction of the facility with a VOC limit of 80 tpy. The equipment identified in the permit (Hirsch 9000 resin pre-expander, canvas holding bags, Hirsch adjustable wall mold, hot room, wire cutting operations, embossing area, and other polystyrene foam producing operations) reflects the present-day state of the facility.

An emission limit increase for VOCs to 90 tpy was approved in PTI No. 35-07A. An additional emission limit increase for VOCs to 139.8 tpy was approved in PTI No. 35-07B. During the permitting process, the facility underwent a best available control technology (BACT) per Rule 702 (a). A proposed average of 6.3 % pentane content by weight for the beads during operation was considered acceptable. No add on controls were concluded to be necessary to meet BACT.

Toxic air contaminants were evaluated according to Rule 225. Maximum hourly emissions of pentane were calculated using a 6.3% by weight pentane concentration in the bead minus a 2% by weight pentane concentration in the shipped product. Rule 227, Table 21. Algorithms for determining allowable emission rates (AER), was used for the initial health-screening. The potential pentane emissions are below the 1-hour maximum AER calculated number from the initial threshold screening level (ITSL) of 17,700 µg/m<sup>3</sup> (8-hr), but not the 8-hr AER. A previously run SCREEN3 model result from PTI No. 35-07A was used and the worse-case potential pentane emissions were less than 20% of health-screening. The process as proposed was found to be acceptable per Rule 225.

Harbor Foam has been in operation under MI-ROP-N7754-2013 since September 18, 2013. Since that time no significant changes have occurred at the facility.

The monitoring conditions contained in the ROP are necessary to demonstrate compliance with all applicable requirements and are consistent with the "Procedure for Evaluating Periodic Monitoring Submittals."

No emission units have emission limitations or standards that are subject to the federal Compliance Assurance Monitoring rule under 40 CFR Part 64, because all emission units at the stationary source either do not have a control device or those with a control device do not have potential pre-control emissions over the major source thresholds.

Please refer to Parts B, C and D in the draft ROP for detailed regulatory citations for the stationary source. Part A contains regulatory citations for general conditions.

**Source-wide Permit to Install (PTI)**

Rule 214a requires the issuance of a Source-wide PTI within the ROP for conditions established pursuant to Rule 201. All terms and conditions that were initially established in a PTI are identified with a footnote designation in the integrated ROP/PTI document.

The following table lists all individual PTIs that were incorporated into previous ROPs. PTIs issued after the effective date of ROP No. MI-ROP-N7754-2013 are identified in Appendix 6 of the ROP.

PTI Number			
35-07	35-07A	35-07B	

**Streamlined/Subsumed Requirements**

This ROP does not include any streamlined/subsumed requirements pursuant to Rules 213(2) and 213(6).

**Non-applicable Requirements**

Part E of the ROP lists requirements that are not applicable to this source as determined by the AQD, if any were proposed in the ROP Application. These determinations are incorporated into the permit shield provision set forth in Part A (General Conditions 26 through 29) of the ROP pursuant to Rule 213(6)(a)(ii).

**Processes in Application Not Identified in Draft ROP**

The following table lists processes that were included in the ROP Application as exempt devices under Rule 212(4). These processes are not subject to any process-specific emission limits or standards in any applicable requirement.

<b>PTI Exempt Emission Unit ID</b>	<b>Description of PTI Exempt Emission Unit</b>	<b>Rule 212(4) Citation</b>	<b>PTI Exemption Rule Citation</b>
EU-Boiler	6.69 MMBtu/hr natural gas-fired boiler to provide steam for the pre-expander	Rule 212(4)(c)	Rule 282(2)(b)(i)

**Draft ROP Terms/Conditions Not Agreed to by Applicant**

This draft ROP does not contain any terms and/or conditions that the AQD and the applicant did not agree upon pursuant to Rule 214(2).

**Compliance Status**

The AQD finds that the stationary source is expected to be in compliance with all applicable requirements as of the effective date of this ROP.

**Action taken by the MDEQ, AQD**

The AQD proposes to approve this ROP. A final decision on the ROP will not be made until the public and affected states have had an opportunity to comment on the AQD's proposed action and draft permit. In addition, the USEPA is allowed up to 45 days to review the draft ROP and related material. The AQD is not required to accept recommendations that are not based on applicable requirements. The delegated decision maker for the AQD is Heidi Hollenbach, Grand Rapids District Supervisor. The final determination for ROP approval/disapproval will be based on the contents of the ROP Application, a judgment that the stationary source will be able to comply with applicable emission limits and other terms and conditions, and resolution of any objections by the USEPA.

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**June 14, 2018 - STAFF REPORT ADDENDUM**

**Purpose**

A Staff Report dated May 14, 2018, was developed in order to set forth the applicable requirements and factual basis for the draft Renewable Operating Permit (ROP) terms and conditions as required by R 336.1214(1). The purpose of this Staff Report Addendum is to summarize any significant comments received on the draft ROP during the 30-day public comment period as described in R 336.1214(3). In addition, this addendum describes any changes to the draft ROP resulting from these pertinent comments.

**General Information**

Responsible Official:	Laura Kuperus, V.P., Secretary Treasurer 616-855-8150
AQD Contact:	Adam Shaffer, Environmental Quality Analyst 616-356-0767

**Summary of Pertinent Comments**

No pertinent comments were received during the 30-day public comment period.

**Changes to the May 14, 2018 Draft ROP**

No changes were made to the draft ROP.