



GOKOH COLDWATER INCORPORATED

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March 21, 2023

Michigan Department of Environment, Great Lakes, and Energy (EGLE)
Air Quality Division
Kalamazoo District Office
7953 Adobe Road
Kalamazoo, Michigan 49009

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GOKOH COLDWATER INCORPORATED, SRN 5904, RESPONSE TO MARCH 6, 2023 VIOLATION NOTICE

Dear Sir/Madam:

This letter provides Gokoh Coldwater Incorporated (GCI)'s response to each of the items requested in the referenced Violation Notice.

The dates the violation occurred: As documented in the enclosed Permit Exemption Determination, the four new Kiriu Hot Shell Machines meet all criteria for the Rule 290 Exemption for Emission Units with Limited Emissions specified at Michigan Regulation R336.1290. Therefore, no Permit to Install (PTI) was required to install and commence operation of the equipment. No violation of Rule 201 (Michigan Regulation R336.1201) occurred.

An explanation of the causes and duration of the violation: As described above, no violation of Rule 201 (Michigan Regulation R336.1201) occurred.

Whether the violation is ongoing: As described above, the four Kiriu Hot Shell machines were installed under the Rule 290 exemption. Since their installation, emission calculations and other records required by Michigan Rules 278 and 290 have been retained. There is no ongoing violation.

A summary of the actions that have been taken and are proposed to correct the violation and the dates by which these actions will take place: As described above, installation and commencement of operation of the four Kiriu Hot Shell machines occurred in accordance with the Rule 290 exemption. No violation occurred.

What steps are being taken to prevent reoccurrence: As described above, installation and commencement of operation of the four Kiriu Hot Shell machines occurred in accordance with the Rule 290 exemption. No violation occurred. Since operation of the four Kiriu Hot Shell Machines commenced, monthly records have been maintained demonstrating continued compliance with the criteria of the Rule 290 exemption. Any future activities at GCI that involve installation, construction, reconstruction, relocation, or modification any process or



Goldenberg Schneider, LPA

MEMORANDUM

To: Kyoichi Miki, Gokoh Coldwater Incorporated
 From: Stephen M. Beckman *[Signature]*
 Date: March 21, 2023
 RE: Permit Exemption Determination for Installation of Kiriu Hot Shell Machines

You requested Goldenberg Schneider LPA (GS) to evaluate the applicability of air emission permit exemptions under Michigan air emission Rules 277 through 291 to the installation of four new Kiriu Hot Shell Core Making machines at the Gokoh Coldwater Incorporated (GCI) facility Coldwater, Michigan.

Background

Emissions from four Emission Units at GCI were originally permitted under PTI-162-11, issued December 14, 2011; they are currently permitted under PTI 162-11B, issued September 3, 2020. Emission Unit EU -Shell Core permits emissions from seven shell core machines that were in operation prior to 2011. The PTI limits Volatile Organic Compound (VOC) emissions from the shell core process to a maximum 1 Ton/year 12-month rolling total. There is no capacity or throughput limit.

Four new Kiriu hot shell machines were installed in 2022 to increase capacity of the shell core process. The Kiriu hot shell machines use a process and materials identical to the existing shell core machines. Total VOC emissions with all eleven machines (existing seven machines plus 4 new machines) will remain several orders of magnitude below the 1 ton/year limit. The highest monthly total VOC emissions during 2022 (after startup of Hot Shell Machines) was 0.33 pounds.

2022 Hot Shell Machine Emissions (pounds)

	Jan	Feb	March	April	May	June	July	Aug	Sep	Oct	Nov	Dec
Phenol ¹	Did not operate	0.0002	0.0005	0.0004	0.0006	0.0006	0.0004	0.0005	0.0006	0.0007	0.0006	0.0006
Formaldehyde ¹		0.0005	0.0012	0.0009	0.0013	0.0014	0.0009	0.0012	0.0013	0.0017	0.0015	0.0015
Hexamethylene ¹ tetramine		0.0721	0.1699	0.1340	0.1908	0.1949	0.1243	0.1677	0.1875	0.2356	0.2138	0.2082
Total VOCs ²		0.07	0.17	0.14	0.19	0.20	0.13	0.17	0.19	0.24	0.22	0.21
Criteria Pollutants ³		103	103	103	103	103	103	103	103	103	103	103
CO ₂ Equivalent Emissions (from natural gas consumption)		400	400	400	400	400	400	400	400	400	400	400

¹Composition of VOCs taken from SDS for AGC-SFR 2890 Resin Coated Sand

²Based on emission factor (lb./ton sand) from 2011 PTI application

³Based on AP-42 emission factors for core production

contributing appreciably to the formation of ozone, with initial threshold screening levels greater than or equal to 0.04 micrograms per cubic meter and less than 2.0 micrograms per cubic meter, the total uncontrolled or controlled emissions shall not exceed 20 or 10 pounds per month, respectively.

- *None of the toxic air contaminants emitted by the Kiriu hot shell machines have initial threshold screening levels (ITSLs) greater than or equal to 0.04 micrograms per cubic meter and less than 2.0 micrograms per cubic meter.*

(B) For toxic air contaminants with initial risk screening levels greater than or equal to 0.04 micrograms per cubic meter, the total uncontrolled or controlled emissions shall not exceed 20 or 10 pounds per month, respectively.

- *The highest monthly uncontrolled emissions of formaldehyde (Initial Risk Screening Level (IRSL) of 0.08 micrograms per cubic meter) from the Kiriu hot shell machines during 2022 was 0.0017 pounds. No IRSL's have been assigned for phenol or hexamethylene tetramine.*

(C) The emission unit shall not emit any toxic air contaminants, excluding noncarcinogenic volatile organic compounds and noncarcinogenic materials that are listed in R 336.1122(f) as not contributing appreciably to the formation of ozone, with an initial threshold screening level or initial risk screening level less than 0.04 micrograms per cubic meter.

- *None of the toxic air contaminants emitted by the Kiriu hot shell machines have an ITSL or IRSL less than 0.04 micrograms per cubic meter.*

(D) For total mercury, the uncontrolled or controlled emissions shall not exceed 0.01 pounds per month.

- *There are no mercury emissions from the Kiriu hot shell machines*

(E) For lead, the uncontrolled or controlled emissions shall not exceed 16.7 pounds per month.

- *There are no lead emissions from the Kiriu hot shell machines.*

(b) The following requirements apply to emission units with control equipment:

- *There is no control equipment on the Kiriu hot shell machines.*

(c) A description of the emission unit is maintained throughout the life of the unit.

- *This information is available and will be maintained.*

(d) Records of material use and calculations identifying the quality, nature, and quantity of the air contaminant emissions are maintained in sufficient detail to demonstrate that the emissions meet the emission limits outlined in this rule.

Volatile organic compound emissions shall be calculated using mass balance,