

State Registration Number
A1991

**RENEWABLE OPERATING PERMIT
STAFF REPORT**

ROP Number
MI-ROP-A1991-2022

Kalsec, Incorporated

State Registration Number (SRN): A1991

Located at

3713 West Main Street, Kalamazoo, Kalamazoo County, Michigan 49006

Permit Number: MI-ROP-A1991-2022

Staff Report Date: September 27, 2021

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) of the administrative rules promulgated under Act 451, requires that the Michigan Department of Environment, Great Lakes, and Energy (EGLE), 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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**RENEWABLE OPERATING PERMIT
SEPTEMBER 27, 2021 - STAFF REPORT**

ROP Number

MI-ROP-A1991-2022

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; and Michigan’s Administrative Rules for Air Pollution Control promulgated under 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:	Kalsec, Incorporated 3713 West Main Street Kalamazoo, Michigan 49006
Source Registration Number (SRN):	A1991
North American Industry Classification System (NAICS) Code:	311942
Number of Stationary Source Sections:	1
Is Application for a Renewal or Initial Issuance?	Renewal
Application Number:	201900120
Responsible Official:	James Justice, Senior Vice President of Corporate Responsibility and Resource Management 269-349-9711
AQD Contact:	Monica Brothers, Senior Environmental Quality Analyst 269-312-2535
Date Application Received:	July 12, 2019
Date Application Was Administratively Complete:	July 12, 2019
Is Application Shield in Effect?	Yes
Date Public Comment Begins:	September 27, 2021
Deadline for Public Comment:	October 27, 2021

Source Description

Kalsec, Incorporated (Facility) is a food ingredient facility that utilizes extraction/distillation equipment to process spices and herbs to produce concentrated flavors, colors, hops and antioxidants for the food and beverage industry. Various methods, including grinding, solvent extraction, distillation, and chemical alteration, are used, depending on the product.

The primary source of air pollutants from the Facility are the extraction and distillation processes, which result in the emission of VOC and HAP. Emissions are controlled by condensers and baghouses.

The facility commenced operations in 1958 and is located on the west side of Kalamazoo, with residential areas surrounding the facility on all sides.

The following table lists stationary source emission information as reported to the Michigan Air Emissions Reporting System (MAERS) for the year **2020**.

TOTAL STATIONARY SOURCE EMISSIONS

Pollutant	Tons per Year
Carbon Monoxide (CO)	2.2
Nitrogen Oxides (NO _x)	2.8
Particulate Matter (PM)	0.7
Volatile Organic Compounds (VOCs)	210.0

The following table lists Hazardous Air Pollutant emissions as calculated for the year 2020 by Kalsec:

Individual Hazardous Air Pollutants (HAPs) **	Tons per Year
n-Hexane	0.05
Total Hazardous Air Pollutants (HAPs)	0.10

**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 in Kalamazoo County, which is currently designated by the United States 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 volatile organic compounds exceeds 100 tons per year. The stationary source is a "synthetic minor" source regarding HAP emissions because the stationary source accepted a legally enforceable permit condition limiting the potential to emit of any single HAP regulated by Section 112 of the federal Clean Air Act, to less than 10 tons per year and the potential to emit of all HAPs combined to less than 25 tons per year.

No emission units at the stationary source are currently subject to the Prevention of Significant Deterioration (PSD) regulations of The Michigan Air Pollution Control Rules Part 18, Prevention of Significant Deterioration of Air Quality or 40 CFR 52.21 because the process equipment was

constructed/installed prior to June 19, 1978, the promulgation date of the PSD regulations. The permitted changes since June 19, 1978, have not been significant. The source is considered to be an existing major source for PSD as a chemical process plant where the emission threshold for criteria air pollutants is 100 tons/year. Future modifications or installation of new process equipment at this stationary source may be subject to the PSD requirements.

EU41-EXT-01 was installed prior to August 15, 1967. As a result, this equipment is considered "grandfathered" and is not subject to New Source Review (NSR) permitting requirements. However, future modifications of this equipment may be subject to NSR.

The emergency generators, EUPDGE.630.001, EUPDGE.630.002, EUPDGE.630.003, and EUPDGE.630.004 at the stationary source are subject to the Standards of Performance for Stationary Reciprocating Internal Combustion Engines promulgated in 40 CFR Part 60, Subparts A and JJJJ. The emergency generators, EUPDGE63002, EUPDGE63003, and EUPDGE63004 at the stationary source are subject to the National Emission Standard for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines promulgated in 40 CFR Part 63, Subparts A and ZZZZ (RICE MACT).

The boiler, EUPDBO63031 is subject to NSPS for Small Industrial-Commercial-Institutional Steam Generating Units promulgated in 40 CFR Part 60, Subparts A and Dc.

EUPDTKD-002 at the stationary source is subject to the National Emission Standard for Hazardous Air Pollutants for Gasoline Dispensing Facilities promulgated in 40 CFR Part 63, Subparts A and CCCCC.

The batch processes included in FGCOMB (EU44-SP-01, EU48-BLD100-01, and EU49-BLD200-01) are subject to Best Available Control Technology and were reviewed under the state toxics rules (Rules 223 and 225).

The AQD's Rules 287 and 290 were revised on December 20, 2016. FGRULE287(2)(c) and FGRULE290 are flexible group tables created for emission units subject to these rules. Emission units installed before December 20, 2016, can comply with the requirements of Rule 287 and Rule 290 in effect at the time of installation or modification as identified in the tables. However, emission units installed or modified on or after December 20, 2016, must comply with the requirements of the current rules as outlined in the tables.

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."

On June 10, 2015, USEPA conducted an air quality inspection of the facility. On August 13, 2015, USEPA issued a Finding of Violation alleging the facility had been and continued to be a major source of HAPs and had violated applicable requirements of the federal NESHAP for Miscellaneous Organic and Chemical Manufacturing (MON), 40 CFR Part 63, Subpart FFFF. On October 6, 2015 and subsequent dates, facility representatives and USEPA discussed the August 13, 2015 Finding of Violation.

On January 25, 2018, USEPA issued a guidance memorandum, "Reclassification of Major Sources as Area Sources Under Section 112 of the Clean Air Act (CAA)," ("2018 Memo"). The 2018 Memo allows for a major source of HAPs to be reclassified as an area source of HAPs "at such time that the source takes an enforceable limit on its potential to emit (PTE) hazardous air pollutants (HAP) below the major source thresholds. In such circumstances, a source that was previously classified as major, and which so limits its PTE, will no longer be subject either to the major source MACT or other major source requirements that were applicable to it as a major source under CAA section 112." In accordance with the 2018 Memo, and in accordance with the Administrative Consent Order, EPA-5-20-113(a)-MI-06, entered on September 9, 2020, the facility will be reclassified as an area source and would not be subject to the MON. Consent Agreement and Final Order (CAFO), CAA-05-2020-0036 was entered between USEPA and the facility on September 25, 2020. On December 18, 2020, the facility submitted application No. APP-2021-0010 to

take enforceable limits on their PTE for HAPs below major source thresholds. This PTI #27-21 was issued on June 21, 2021 and will be rolled into the ROP during renewal.

On October 25, 2018, the facility was issued Permit to Install (PTI) No. 158-18 for a new distillation system in Building 200. The system consists of a 3,000-gallon reactor, distillation column condenser, three distillation receivers, and vacuum pump and emissions are controlled by existing tail condensers. On March 29, 2021, the facility was issued PTI No. 158-18A which authorized installation of a dump station and removed methylene chloride usage and emission limitations from FGCOMB. An ROP modification application has been submitted to incorporate PTI No. 158-18A conditions into the ROP renewal.

No emission units have emission limitations or standards that are subject to the federal Compliance Assurance Monitoring rule pursuant to 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. Specifically, for EU41-EXT-01, there is no permitted emissions limit since the equipment is grandfathered. For FGCOMB, the VOC emission limits (19.1 pph based calendar month average and 47.3 tpy based on a 12-month rolling time period as determined at the end of each calendar month) are applicable to the combined emissions. The process units (EU44-SP-01, EU48-BLD100-01, EU49-BLD200-01, EU-TANKSEV) are individually controlled, but the emissions are exhausted through a single stack. The pre-control potential to emit (PTE) for VOC is less than 100 tpy. The pre-control PTE was calculated as 94.6 tpy using the control efficiency of the condenser and the VOC emission limit in the permit.

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-A1991-2015 are identified in Appendix 6 of the ROP.

PTI Number			
104-95A	1123-91	139-83B	106-05
72-14			

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.

PTI Exempt Emission Unit ID	Description of PTI Exempt Emission Unit	Rule 212(4) Citation	PTI Exemption Rule Citation
EUPDSH00096	4 kW portable emergency generator	Rule 212(4)(e)	Rule 285(2)(g)
EUPDGE63005	5 kW portable emergency generator	Rule 212(4)(e)	Rule 285(2)(g)
EUPDTKD-002	1100 gallon gasoline storage tank	Rule 212(4)(d)	Rule 284(2)(g)(i)

Draft ROP Terms/Conditions Not Agreed to by Applicant

The following table lists terms and/or conditions of the draft ROP that the AQD and the applicant did not agree upon and outlines the applicant’s objections pursuant to Rule 214(2). The terms and conditions that the AQD believes are necessary to comply with the requirements of Rule 213 shall be incorporated into the ROP.

Emission Unit/ Flexible Group ID	Permit Term(s) and/or Condition(s) in Dispute	Applicant’s Objection
FGRICE-MACT	SC VI.4	Facility objects because the referenced federal RICE MACT standard only requires calendar year records. EGLE’s rationale for keeping this condition as it is written is that this language is standard language in the RICE MACT template and is needed for enforceability.
FG-RULE290	SC VI.1.e	Facility objects because this condition does not reflect the actual language from Rule 290. EGLE’s rationale for keeping this condition as it is written is that the language is standard language in the Rule 290 template.

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 EGLE, 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 Mr. Rex Lane, Kalamazoo 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.

State Registration Number

A1991

RENEWABLE OPERATING PERMIT

NOVEMBER 15, 2021 - STAFF REPORT ADDENDUM

ROP Number

MI-ROP-A1991-2022

Purpose

A Staff Report dated September 27, 2021, was developed to set forth the applicable requirements and factual basis for the draft Renewable Operating Permit (ROP) terms and conditions as required by Rule 214(1) of the administrative rules promulgated under Act 451. 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 Rule 214(3). In addition, this addendum describes any changes to the draft ROP resulting from these pertinent comments.

General Information

Responsible Official:	James Justice, Senior Vice President of Corporate Responsibility and Resource Management 269-349-9711
AQD Contact:	Monica Brothers, Senior Environmental Quality Analyst 269-312-2535

Summary of Pertinent Comments

The following changes were made based on an October 27, 2021 discussion with USEPA and a following discussion with the facility.

Changes to the September 27, 2021 Draft ROP

EU41-EXT-02: Based on discussion with USEPA, on page 21, the condition under Section IX. OTHER REQUIREMENT(S), which states, "The permittee shall implement the Malfunction Abatement Plan when visible emissions are observed, as per requirement VI (1) of this table, (R 336.1213(3))" was moved to Section VI.

EUPDB063050: On page 22, "FGBOILERMACT" was removed from the Flexible Group ID because there is no longer an FGBOILERMACT in the ROP.

FGGRIND: Based on discussion with USEPA, on page 27, the condition under Section IX. OTHER REQUIREMENT(S), which states, "The Malfunction Abatement Plan for the baghouses shall be implemented when visible emissions are observed as per requirement VI (1) of this table. (R 336.1213(3))" was moved to Section VI.

FGCOMB: Based on discussion with the facility, on page 28, under POLLUTION CONTROL EQUIPMENT, "Scrubber tank (TK48125)" was changed to "Venturi Scrubber Hold Tank (TK48003)".

FGCOMB: On page 29, the following condition was added to Section III: "The permittee shall implement and maintain a Malfunction Abatement Plan (MAP), or an alternate plan approved by the AQD District Supervisor. The plan shall include procedures for maintaining and operating in a satisfactory manner, the chilled coolant "tail condensers" during malfunction events, and a program for corrective action for such events. If the malfunction abatement plan fails to address or inadequately addresses an event that meets the characteristics of a malfunction at the time the plan is initially developed, the owner or operator shall

revise the malfunction abatement plan within 45 days after such an event occurs and submit the revised plan to the AQD District Supervisor. **(R 336.1213(2), R 336.1911)**”

FGCOMB: Based on discussion with USEPA, on page 30, the condition under Section IX. OTHER REQUIREMENT(S), which states, “The Malfunction Abatement Plan for the chilled coolant “tail condensers” shall be implemented when the daily reading of the condenser gas outlet temperature exceeds 5°C.² **(R 336.1201, R 336.1911)**” was moved to Section VI.