

**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5**

In the Matter of:)	EPA-5-20-113(a)-MI-06
)	
Kalsec, Inc.)	Proceeding Under Sections 113(a)(1)(3) and
Kalamazoo, Michigan)	114(a)(1) of the Clean Air Act, 42 U.S.C.
)	§§ 7413(a)(1)(3) and 7414(a)(1)

Administrative Consent Order

1. The Director of the Enforcement and Compliance Assurance Division, U.S. Environmental Protection Agency (EPA), Region 5, is issuing this Order to Kalsec, Inc. (Kalsec) under Sections 113(a)(1)(3) and 114(a)(1) of the Clean Air Act (CAA or the Act), 42 U.S.C. §§ 7413(a)(1)(3) and 7414(a)(1).

Statutory and Regulatory Background

2. The CAA is designed to, among other things, protect and enhance the quality of the nation's air so as to promote the public health and welfare and the productive capacity of its population. Section 101(b)(1) of the CAA, 42 U.S.C. § 7401(b)(1).

National Emission Standards for Hazardous Air Pollutants

3. Section 112 of the Act, 42 U.S.C. § 7412, requires EPA to promulgate a list of all categories and subcategories of major sources and area sources of hazardous air pollutants (HAPs) and establish emissions standards for the categories and subcategories. These emission standards are known as the National Emission Standards for Hazardous Air Pollutants (NESHAP).

4. The NESHAPs in 40 C.F.R. Part 63 are national technology-based performance standards for HAP sources in each category that become effective on a specified date. The

purpose of these standards is to ensure that all sources achieve the maximum degree of reduction in emissions of HAPs that EPA determines is achievable for each source category.

5. Pursuant to Section 112(b) of the CAA, 42 U.S.C. § 7412(b), EPA designates HAPs, which present or may present a threat of adverse effects to human health or the environment.

6. Section 112(a)(1) of the CAA, 42 U.S.C. § 7412(a)(1), defines “major source” as any stationary source or group of stationary sources located within a contiguous area and under common control that emits or has the potential to emit (PTE) considering controls, in the aggregate, 10 tons per year (TPY) or more of any single HAP or 25 TPY or more of any combination of HAPs.

7. Section 112(a)(2) of the CAA, 42 U.S.C. § 7412(a)(2), defines “area source” as any stationary source of HAPs that is not a major source.

8. Section 112(i)(3) of CAA, 42 U.S.C. § 7412(i)(3), and 40 C.F.R. § 63.4 prohibit the owner or operator of any source from operating such source in violation of any NESHAP applicable to such source.

9. The NESHAP, at 40 C.F.R. Part 63, Subpart A, contains general provisions applicable to the owner or operator of any stationary source that contains an affected source subject to the NESHAP at Part 63. These general provisions include definitions at 40 C.F.R. § 63.2.

10. The NESHAP, at 40 C.F.R. § 63.2, defines “affected source” as the collection of equipment, activities, or both within a single contiguous area and under common control that is included in a CAA Section 112(c) source category or subcategory for which a Section 112(d) standard or other relevant standard is established pursuant to Section 112 of the CAA.

11. The NESHAP, at 40 C.F.R. § 63.2, defines “existing source” as any affected source that is not a new source.

12. The NESHAP, at 40 C.F.R. § 63.2, defines “new source” as any affected source the construction or reconstruction of which is commenced after EPA first proposes a relevant emission standard under 40 C.F.R. Part 63 establishing an emission standard applicable to such source.

NESHAP for Miscellaneous Organic Chemical Manufacturing at 40 C.F.R. Part 63, Subpart
FFFF

13. On November 10, 2003, EPA promulgated the NESHAP for Miscellaneous Organic Chemical Manufacturing (Miscellaneous Organic NESHAP or MON), codified at 40 C.F.R. Part 63, Subpart FFFF. 68 Fed. Reg. 63888. The MON establishes emission standards, requirements to demonstrate initial and continuous compliance with emission limits, operating limits, work practice standards, and recordkeeping requirements associated with miscellaneous organic chemical manufacturing. See 40 C.F.R. § 63.2430.

14. 40 C.F.R. § 63.2445(b) provides that owners and operators of existing sources subject to the MON must comply with the requirements for existing sources no later than May 10, 2008.

15. 40 C.F.R. § 63.2435(a) provides that owners and operators are subject to the MON if they operate miscellaneous organic chemical manufacturing process units (MCPU) that are located at, or are part of, a major source of HAP emissions as defined in Section 112(a) of the CAA.

16. 40 C.F.R. § 63.2435(b) provides that an MCPU includes equipment necessary to operate a miscellaneous organic chemical manufacturing process that, among other things, processes, uses or generates any of the organic HAPs listed in Section 112(b) of the CAA. An

MPCU also includes any assigned storage tanks and transfer racks; equipment in open systems that is used to convey or store water having the same concentration and flow characteristics as wastewater; and components such as pumps, compressors, agitators, pressure relief devices, sampling connection systems, open ended valves or lines, valves, connectors, and instrumentation systems that are used to manufacture any material or family of materials, including but not limited to, an organic chemical with a North American Industry Classification Number (NAICS) code listed in 40 C.F.R. § 63.2435(b)(1)(ii).

17. The NAICS was developed under the direction and guidance of the Office of Management and Budget as the standard for use by Federal statistical agencies in classifying business establishments for the collection, tabulation, presentation, and analysis of statistical data describing the U.S. economy.

18. 40 C.F.R. § 63.2550 defines “miscellaneous organic chemical manufacturing process” as all equipment which collectively functions to produce a product or isolated intermediate that is “material” described in 40 C.F.R. § 63.2435(b). Process includes any, all, or a combination of reaction, recovery, separation, purification, or other activity, operation, manufacture, or treatment which is used to produce a product or isolated intermediate.

19. 40 C.F.R. § 63.2435(b)(1)(ii) provides that an MPCU produces material or family of materials classified using NAICS code 325.

20. NAICS 325 covers the transformation of organic and inorganic raw materials by a chemical process and the formulation of products.

21. On January 25, 2018, EPA issued a guidance memorandum, “Reclassification of Major Sources as Area Sources Under Section 112 of the Clean Air Act.” (“2018 Memo”).

22. 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.”

23. Under Section 113(a)(3) of the CAA, 42 U.S.C. § 7413(a)(3), the Administrator of EPA may issue an order requiring compliance to any person who has violated or is violating the NESHAP regulations. The Administrator has delegated this authority to the Director of the Enforcement and Compliance Assurance Division.

24. The Administrator of EPA may require any person who owns or operates an emission source to make reports and provide information required by the Administrator under Section 114(a)(1) of the CAA, 42 U.S.C. § 7414(a)(1). The Administrator has delegated this authority to the Director of the Enforcement and Compliance Assurance Division.

Findings

25. Kalsec operates a manufacturing facility at 3713 West Main Street in Kalamazoo, Michigan (“Facility”) and has been operating the Facility at this location since at least 1967.

26. At the Facility, Kalsec processes spices, herbs, and hops to produce oleoresins, essential oils, miscella (as an isolated intermediate), and other isolated intermediates in the hops product production process. These products or isolated intermediates fall under NAICS 325 or NAICS 311.

a. Oleoresins derived from plant materials are one of Kalsec’s final food products.

Kalsec’s oleoresin production process begins with miscella, an organic raw material.

- Some of this material undergoes a chemical process, specifically solvent recovery through distillation. This process results in the recovery of various oleoresins from plant material which Kalsec produces.
- b. Miscella is an isolated intermediate, as defined in 40 C.F.R. § 63.2550, created in the process of oleoresin production. Miscella begins with ground plant material, which is an organic raw material. The ground plant material is processed through solvent extraction and solvent recovery by distillation. These processes result in the recovery of the final product—oleoresins.
 - c. The hops product production process also involves the creation of isolated intermediates. The production process begins with carbon dioxide extracted hops, an organic raw material, which undergoes chemical processing, resulting in the final hops products.
 - d. Kalsec also produces natural essential, or “volatile,” oils derived from plant material for incorporation into its final products. Essential oils are a by-product of the desolvenization of herbs, spice miscella or hops through solvent extraction. Some essential oils are listed in 1997 NAICS Code 325998H103.

27. Kalsec uses the solvents methanol and n-hexane, both of which are HAPs, in solvent extraction and distillation processes.

28. Kalsec has the PTE 10 TPY or more of a single HAP and 25 TPY or more of combinations of HAPs.

29. Kalsec has been a major source of HAPs and engaged in miscellaneous organic chemical manufacturing processes since May 10, 2008 and has been required to comply with the requirements of the MON.

30. Kalsec owns or operates an “emission source” within the meaning of Section 114(a)(1) of the CAA, 42 U.S.C. § 7414(a)(1) and is subject to the requirements of Section 114(a)(1) of the CAA.

31. On August 13, 2015, EPA issued to Kalsec a Finding of Violation alleging that Kalsec violated the Miscellaneous Organic NESHAP.

32. On October 6, 2015 and subsequent dates, representatives of Kalsec and EPA discussed the August 13, 2015 Finding of Violation.

33. Kalsec violated the MON by failing to comply with applicable requirements, which include emission standards, requirements to demonstrate initial and continuous compliance with emission limits, operating limits, work practice standards, and recordkeeping requirements associated with miscellaneous organic chemical manufacturing.

Compliance Program

34. By one year from the effective date of this Order, Kalsec must achieve and demonstrate PTE below the major source threshold of 10 TPY of any individual HAP and 25 TPY of combined HAP emissions, determined on a 12-month rolling average basis.

35. In order to ensure that the HAP emission limits in this Order survive the termination of this Order, within 120 days of the effective date of this Order, Kalsec shall submit to the Michigan Department of Environment, Great Lakes, and Energy (EGLE), with a copy to EPA, a complete permit application to incorporate conditions specified in paragraphs 36 through 38. This application shall request a federally enforceable permit, which is issued by EGLE pursuant to a SIP-approved, construction permit program, that shall be made permanent as long as the Facility remains an area source.

36. Kalsec's permit application shall request permit conditions to limit the PTE for individual HAPs to less than 10 TPY and 25 TPY for total HAPs. These permit conditions shall include, but not be limited to:

- a. Limiting the use of n-hexane to less than 10 tons per year;
- b. Limiting emissions of methanol to less than 10 tons per year by:
 - i. Establishing a limit on the quantity of emissions from process batches using methanol as a solvent;
 - ii. Establishing a limit on the amount of methanol sent to wastewater operations;
and
 - iii. Implementing a leak detection and repair program (LDAR);

37. Kalsec's LDAR program as required under Paragraph 36 (b) shall include the following requirements:

- a. Kalsec must conduct inspections of process vessels and equipment in HAP service¹ to determine that the process vessels and equipment are sound and free of leaks.
 - i. Inspections must be conducted at least once during each calendar quarter in which process vessels and equipment are in HAP service.
 - ii. For these inspections, detection methods incorporating sight, sound, or smell are acceptable. Indications of a leak identified using such methods constitute a leak unless Kalsec demonstrates that the indications of a leak are due to a condition other than loss of HAP.

¹ "In HAP service" shall be defined as a process vessel or piece of equipment that either contains or contacts a feedstock, byproduct, or product that contains > 5% of a HAP, excluding any HAP used in manual cleaning activities. A process vessel is no longer in HAP service after the vessel has been emptied to the extent practicable (i.e., a vessel with liquid left on process vessel walls or as bottom clingage, but not in pools, due to floor irregularity, is considered completely empty) and any cleaning has been completed.

- iii. As an alternative to conducting quarterly inspections to detect leaks Kalsec, may use Method 21 of 40 CFR part 60, appendix A-7 on an annual basis, with a leak definition of 500 parts per million by volume (ppmv). Kalsec may also use Method 21 with a leak definition of 500 ppmv to determine if indications of a leak identified during an inspection conducted in accordance with Paragraph 37(a)(3)(ii) are due to a condition other than loss of HAP.
 - iv. Inspections must be conducted while the process equipment in HAP service is operating under typical manufacturing conditions.
 - v. No inspection is required in a calendar quarter during which the process equipment does not operate for the entire calendar quarter and is not in HAP service. If the process equipment operates at all during a calendar quarter, an inspection is required for that quarter.
- b. Kalsec must repair any leak within 15 calendar days after detection of the leak or document the reason for any delay of repair. For the purposes of this paragraph, a leak will be considered “repaired” if one of the following conditions is met:
- i. The visual, audible, olfactory, or other indication of a leak to the atmosphere has been eliminated, or
 - ii. No bubbles are observed at potential leak sites during a leak check using soap solution, or
 - iii. The system will hold a test pressure.
- c. Kalsec must keep records of the dates and results of each inspection event, the dates of equipment repairs, and, if applicable, the reasons for any delay in repair. These

records shall be kept at the Facility and made available for EPA inspection upon request.

38. Kalsec's permit application shall request monitoring, recordkeeping, and reporting requirements that include, but are not limited to:
- a. Monthly and 12-month rolling average n-hexane usage with supporting calculations;
 - b. Monthly and 12-month rolling average stack and fugitive emissions calculations for individual batches using methanol as a solvent;
 - i. Stack emissions calculations shall be based on performance test data or EPA emission factors, including those identified in the August 2007 "Methods for Estimating Air Emissions from Chemical Manufacturing Facilities, Volume II: Chapter 16" or any document designated by EPA as superseding this document.
 - ii. Fugitive emissions calculations shall be based on emission factors consistent with the 1995 "Protocol for Equipment Leak Emission Estimates for Fugitive Sources" (EPA-453/R-95-017) or any document designated by EPA as superseding this document and of which Kalsec receives written notice directly from EPA. Kalsec's calculations for fugitive emissions, following the 1995 Protocol, must use the Average Emission Factor Approach for all non-Method 21-screened components, and Correlation Approach for all Method 21-screened components.
 - c. Monthly and 12-month rolling added methanol emissions from wastewater operations;
 - i. Wastewater emissions shall be calculated using WATER9 software or calculated using the emission factors used by WATER9;

d. If after the entry of this ACO, Kalsec obtains a permit condition limiting its methanol usage to less than 10 tons per year, as set forth in condition 36(c), above, Kalsec shall submit, monthly methanol usage with supporting calculations in lieu of the requirement set forth in conditions 38 (b) and (c), above.

39. Following submission of the application to EGLE, Kalsec shall submit to EGLE any additional information requested by EGLE and shall submit copies of such information to EPA within 14 days of submittal to EGLE under Section 114(a)(1) of the CAA, 42 U.S.C. § 7414(a)(1).

40. Kalsec must provide the information requested in paragraph 35 and any subsequent revised permit applications to EPA within 14 days of submittal to EGLE under Section 114(a)(1) of the CAA, 42 U.S.C. § 7414(a)(1).

41. Kalsec must provide quarterly copies of monthly records required pursuant to paragraph 38 to EPA within 30 days of the end of each calendar quarter and an annual HAP emission report within 30 days of the end of each calendar year for the duration of this Order.

42. Kalsec must send all reports required by this Order to be sent to EPA by electronic mail to r5airenforcement@epa.gov and prentice.dakota@epa.gov. If Kalsec is unable to send a report to this address due to email size restrictions or other problems, use these email addresses to make additional arrangements for transmission of the report.

General Provisions

43. Kalsec consents to the service of this Order by e-mail at the following e-mail addresses: Ian Kennedy, Kalsec General Counsel (IKennedy@kalsec.com); Steven Kohl, Kalsec Outside Counsel (skohl@wnj.com).

44. This Order does not affect Kalsec's responsibility to comply with other federal, state, and local laws.

45. This Order does not restrict EPA's authority to enforce the CAA and its implementing regulations.

46. Failure to comply with this Order may subject Kalsec to penalties of up to \$101,439 per day for each violation under Section 113 of the CAA, 42 U.S.C. § 7413, and 40 C.F.R. Part 19.

47. The terms of this Order are binding on Kalsec, its assignees and successors. Kalsec must give notice of this Order to any successors in interest prior to transferring ownership and must simultaneously verify to EPA, at the above addresses, that it has given the notice.

48. Kalsec may assert a claim of business confidentiality under 40 C.F.R. Part 2, Subpart B, for any portion of the information it submits to EPA. Information subject to a business confidentiality claim is available to the public only to the extent allowed by 40 C.F.R. Part 2, Subpart B. If Kalsec fails to assert a business confidentiality claim, EPA may make all submitted information available, without further notice, to any member of the public who requests it. Emission data provided under Section 114 of the CAA, 42 U.S.C. § 7414, is not entitled to confidential treatment under 40 C.F.R. Part 2, Subpart B. "Emission data" is defined at 40 C.F.R. § 2.301.

49. This order is not subject to the Paperwork Reduction Act, 44 U.S.C. § 3501 et seq., because it seeks collection of information by an agency from specific individuals or entities as part of an administrative action or investigation.

50. EPA may use any information submitted under this Order in an administrative, civil judicial, or criminal action.

51. Kalsec agrees to the terms of this Order. Kalsec waives any remedies, claims for relief, and otherwise available rights to judicial or administrative review that it may have with respect to any issue of fact or law set forth in this Order, including any right of judicial review under Section 307(b) of the CAA, 42 U.S.C. § 7607(b).

52. Respondent admits the jurisdictional allegations set forth in paragraphs 23 and 24 of this Order and neither admits nor denies the factual allegations in this Order.

53. This Order is effective on the date of signature by the Director of the Enforcement and Compliance Assurance Division. This Order will terminate two years from the effective date, provided that Kalsec has complied with all terms of the Order throughout its duration.

Kalsec, Inc.

August 28, 2020
Date

Scott M. Nykaza
Scott M. Nykaza, CEO
Kalsec, Inc.

United States Environmental Protection Agency

Date

Michael D. Harris
Director
Enforcement and Compliance Assurance Division
U.S. Environmental Protection Agency, Region 5