

**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5**

In the Matter of:)	Docket No. CAA-05-2023-0028
)	
The Dow Chemical Company in Kankakee)	Proceeding to Assess a Civil Penalty
Rohm and Haas Chemicals, LLC)	Under Section 113(d) of the Clean Air Act,
Kankakee, Illinois)	
)	42 U.S.C. § 7413(d)
Respondent.)	
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Consent Agreement and Final Order

Preliminary Statement

1. This is an administrative action commenced and concluded under Section 113(d) of the Clean Air Act (the CAA), 42 U.S.C. § 7413(d), and Sections 22.1(a)(2), 22.13(b) and 22.18(b)(2) and (3) of the Consolidated Rules of Practice Governing the Administrative Assessment of Civil Penalties and the Revocation/Termination or Suspension of Permits (Consolidated Rules), as codified at 40 C.F.R. Part 22.

2. Complainant is the Director of the Enforcement and Compliance Assurance Division, U.S. Environmental Protection Agency (EPA), Region 5.

3. Respondent is The Dow Chemical Company in Kankakee, Rohm and Haas Chemical Company, LLC (Dow), a corporation doing business in Illinois.

4. Where the parties agree to settle one or more causes of action before the filing of a complaint, the administrative action may be commenced and concluded simultaneously by the issuance of a consent agreement and final order (CAFO). 40 C.F.R. § 22.13(b).

5. The parties agree that settling this action without the filing of a complaint or the adjudication of any issue of fact or law is in their interest and in the public interest.

6. Respondent consents to the assessment of the civil penalty specified in this CAFO and to the terms of this CAFO.

Jurisdiction and Waiver of Right to Hearing

7. Respondent admits the jurisdictional allegations in this CAFO and neither admits nor denies the factual allegations in this CAFO.

8. Respondent waives its right to request a hearing as provided at 40 C.F.R. § 22.15(c), any right to contest the allegations in this CAFO and its right to appeal this CAFO.

Statutory and Regulatory Background

9. Pursuant to Sections 111(b)(1)(A) of the CAA, EPA identified synthetic organic chemical manufacturing industry and volatile organic liquid (VOL) storage vessels and handling equipment as one category of stationary sources that cause or contribute significantly to air pollution which may reasonably be anticipated to endanger public health or welfare.

10. Section 111(b) of the CAA, 42 U.S.C. § 7411(b), requires EPA to publish a list of categories of stationary sources and, within a year after the inclusion of a category of stationary sources in the list, to publish proposed regulations establishing federal standards of performance for new sources within the source category. These emission standards are known as the New Source Performance Standards (NSPS). EPA codified these standards at 40 C.F.R. Part 60.

11. On April 8, 1987, EPA promulgated the Standards of Performance for Volatile Organic Liquid (VOL) Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced After July 23, 1984 at 40 C.F.R. Part 60, Subpart Kb (Subpart Kb). See 52 Fed. Reg. 11429 (Apr. 8, 1988), and 40 C.F.R. §§ 60.110b - 60.117b.

12. Subpart Kb, at 40 C.F.R. § 60.110b(a), specifies that the regulation applies to each storage vessel with a capacity greater than or equal to 75 cubic meters (m³) that is used to store VOL for which construction, reconstruction, or modification is commenced after July 23, 1984.

13. Subpart Kb, at 40 C.F.R. § 60.110b(b), states that the subpart does not apply to storage vessels with a capacity greater than or equal to 151 m³ storing a liquid with a maximum true vapor pressure of less than 3.5 kilopascals (kPa) or with a capacity greater than or equal to 75 m³ but less than 151 m³ and stores a liquid with a maximum true vapor pressure less than 15.0 kPa.

14. Subpart Kb, at 40 C.F.R. § 60.111b, defines "storage vessel" to mean each tank, reservoir, or container used for the storage of VOL (with exceptions that are not applicable here).

15. Subpart Kb, at 40 C.F.R. § 60.111b, defines "volatile organic liquid (VOL)" as any organic liquid which can emit volatile organic compounds (as defined in 40 CFR § 51.100) into the atmosphere.

16. Subpart Kb, at 40 C.F.R. § 60.111b, defines "Maximum true vapor pressure" as the equilibrium partial pressure exerted by the volatile organic compounds (as defined in 40 CFR § 51.100) in the stored VOL at the temperature equal to the highest calendar-month average of the VOL storage temperature for VOLs stored above or below the ambient temperature or at the local maximum monthly average temperature as reported by the National Weather Service for VOLs stored at the ambient temperature, as determined:

- a. In accordance with methods described in American Petroleum Institute Bulletin 2517, Evaporation Loss From External Floating Roof Tanks, (incorporated by reference—see § 60.17); or
- b. As obtained from standard reference texts; or
- c. As determined by ASTM D2879-83, 96, or 97 (incorporated by reference—see § 60.17); or

- d. Any other method approved by the Administrator.

17. Subpart Kb, at 40 C.F.R. § 60.112b(a), specifies that the owner or operator of each storage vessel either with a design capacity greater than or equal to 151 m³ containing a VOL that, as stored, has a maximum true vapor pressure equal to or greater than 5.2 kPa but less than 76.6 kPa or with a design capacity greater than or equal to 75 m³ but less than 151 m³ containing a VOL that, as stored, has a maximum true vapor pressure equal to or greater than 27.6 kPa but less than 76.6 kPa, shall equip each storage vessel with one of the following:

- a. a fixed roof in combination with an internal floating roof, meeting the specifications identified under 40 C.F.R. § 60.112b(a)(1)(i-ix);
- b. an external floating roof, defined as a pontoon-type or double-deck type cover that rests on the liquid surface in a vessel with no fixed roof, meeting the specifications identified under 40 C.F.R. § 60.112b(a)(2)(i-iii);
- c. a closed vent system and control device meeting the specifications identified under 40 C.F.R. § 60.112b(a)(3)(i-ii); or
- d. a system equivalent to those described in 40 C.F.R. § 60.112b(a)(1-3) as provided by submittal of a written application to the Administrator including certain information, and approval of the alternative means of emission (AMEL) as specified in 40 C.F.R. § 60.114b.

18. CAA Section 111(e) makes it unlawful to operate a new source in violation of an NSPS that applies to that source. The Administrator of EPA (the Administrator) may assess a civil penalty of up to \$55,808 per day of violation up to a total of \$446,456 for violations that occurred after November 2, 2015 under Section 113(d)(1) of the CAA, 42 U.S.C. § 7413(d)(1), and 40 C.F.R. Part 19.

19. Section 113(d)(1) limits the Administrator's authority to matters where the first alleged date of violation occurred no more than 12 months prior to initiation of the administrative action, except where the Administrator and the Attorney General of the United

States jointly determine that a matter involving a longer period of violation is appropriate for an administrative penalty action.

20. The Administrator and the Attorney General of the United States, each through their respective delegates, have determined jointly that an administrative penalty action is appropriate for the period of violations alleged in this CAFO.

Factual Allegations and Alleged Violations

21. Dow owns and operates a chemical manufacturing facility at 1400 Harvard Drive, Kankakee, Illinois (the Facility). EPA's environmental justice (EJ) screening and mapping tool indicates that the Facility is located in a community with potential EJ concerns.

22. Dow is a corporation doing business in Illinois and is a "person," as that term is defined in Section 302(e) of the CAA, 42 U.S.C. § 7602(e).

23. At the Facility, Dow owns and operates numerous storage vessels, including the storage vessel identified as tank TK-72¹ (TK-72), which stores and has always been used to store vinyl acetate. TK-72 was constructed in 1990 when the facility was owned and operated by UNOCAL, has a working capacity of approximately 580 m³, and operates at ambient temperature.

24. As defined in 40 C.F.R. § 60.111b, the local maximum monthly average temperature as reported by the National Weather Service is 74.7°F. Vinyl acetate is a VOC and has a maximum true vapor pressure of 12.8 kilopascals (kPa) at 74.7°F.

25. At the time of initial air permitting, UNOCAL represented that the VOC standards of the NSPS, Subpart Kb, at 40 CFR § 60.112b (a) were not applicable to TK-72 based

¹ This tank is misidentified as TK-2 in Dow's Federally Enforceable State Operating Permit (FESOP).

on the maximum true vapor pressure² of the vinyl acetate liquid stored. This determination was memorialized in subsequent of Federally Enforceable State Operating Permits (FESOP) issued by the Illinois Environmental Protection Agency (IEPA) to UNOCAL and all subsequent owners.

26. The most recent FESOP is identified as 89060066 and was issued on September 23, 2011.³

27. Provision 4a of FESOP 89060066 states, “This permit is issued based on storage tanks not being subject to New Source Performance Standards (NSPS) for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced After July 23, 1984, 40 CFR 60, Subpart Kb, pursuant to 40 CFR 60.110b(b).”

28. On April 16, 2015, after completing an internal audit in March 2015, Dow disclosed to IEPA that TK-72 meets the applicability criteria of 40 C.F.R §§ 60.110b(a) and 60.112b(a) and that the storage vessel is and always has been subject to NSPS Subpart Kb⁴. After several months of discussion, Illinois EPA determined that Tank TK-72 would need to meet an alternative means of emission limitation (AMEL) criteria at 40 CFR 60.114b and that EPA had the sole authority to make this determination. On or about February 1, 2017, Dow notified EPA of the same.

² *Maximum true vapor pressure*, as defined at 40 CFR § 60.111b, means the equilibrium partial pressure exerted by the volatile organic compounds (as defined in 40 CFR § 51.100) in the stored VOL at the temperature equal to the highest calendar-month average of the VOL storage temperature for VOL's stored above or below the ambient temperature or at the local maximum monthly average temperature as reported by the National Weather Service for VOL's stored at the ambient temperature, as determined [by one of four methods].

³ FESOP 89060066 has an expiration date of January 14, 2013. However, prior to the expiration date, Dow submitted to IEPA a timely FESOP renewal application. In December 2013, Dow submitted an application for a Title V permit which has not yet been issued by IEPA.

⁴ Dow attests that, to the best of its knowledge, the origin of provision 4a of FESOP 89060066 was based on an error in calculating the vapor pressure of vinyl acetate at the time of the initial construction permitting action by the previous owner of the facility.

29. On March 7, 2017 and May 20, 2019, EPA conducted inspections of the Facility.

30. On September 8, 2017, EPA issued to Dow a CAA Section 114 request for information. The request sought information on permitting history and equipment and operating specifications of TK-72, among other things.

31. On November 1, 2017, Dow responded to EPA's September 8, 2017 CAA Section 114 request for information.

32. Based on observation and evaluation of both obtained at the inspection of the Facility and information submitted by Dow, EPA concludes that TK-72 is a fixed-roof, atmospheric pressure tank with three pressure relief points. TK-72 is not equipped and has never been equipped with any of the control systems identified in 40 C.F.R. § 60.112b(a)(1)-(3). Instead, TK-72 utilizes a vapor balancing system during the unloading of rail cars but vapors from TK-72 are not routed to a control device.

33. On January 23, 2018, EPA notified Dow in writing that Dow should implement one of the four compliance options set forth in 40 C.F.R. § 60.112b(a) for TK-72.

34. On May 7, 2018, Dow submitted a written request pursuant to 40 C.F.R. § 60.112b(a)(4) for an AMEL determination related to the existing vapor balancing system for TK-72.

35. In November 2019, EPA OAQPS denied Dow's May 7, 2018 request for an AMEL and informed Dow that its existing operating process related to TK-72 does not demonstrate equivalency with the requirements of 40 C.F.R. Part 60, Subpart Kb.

36. On December 27, 2019 EPA issued Dow a Finding of Violation (FOV)⁵. On March 18, 2020, EPA met with Dow to discuss the FOV.

⁵ <https://www.epa.gov/il/compliance-assurance-and-enforcement-documents-illinois>

37. On June 17, 2020, Dow requested an AMEL that would apply to a proposed new vinyl acetate bulk storage tank that does not contain either an external or internal floating roof or a closed vent system and control device that are specified by 40 CFR 60.112b; rather, it is designed to reduce emissions through vapor balancing and pressure containment.

38. After reviewing comments received on the proposed AMEL, OAQPS approved Dow's AMEL request and on July 19, 2021, Dow's final AMEL was published in the Federal Register⁶.

39. Tank TK-72 was not equipped with any of the emission control options under 40 C.F.R. 60.112b(a)(1) through (4). Therefore, Dow violated the CAA Sections 111 and the CAA implementing regulations at 40 C.F.R. 60.112b(a)(1) through (4).

40. Dow is simultaneously entering into an Administrative Consent Order (ACO) with EPA that requires Dow to install the new tank as specified in the AMEL that was approved by EPA on July 19, 2021.

Civil Penalty

41. Based on analysis of the factors specified in Section 113(e) of the CAA, 42 U.S.C. § 7413(e), the facts of this case and Dow's cooperation, Complainant has determined that an appropriate civil penalty to settle this action is \$300,000.

42. Penalty Payment. Respondent agrees to:

- a. pay the civil penalty of \$300,000 within 30 days after the effective date of this CAFO.
- b. Pay the civil penalty using any method provided in the table below.

⁶ <https://www.federalregister.gov/documents/2021/07/19/2021-15321/notice-of-final-approval-for-an-alternative-means-of-emission-limitation>

Payment Method	Payment Instructions
Automated Clearinghouse (ACH) payments made through the US Treasury	<p>US Treasury REX/Cashlink ACH Receiver ABA: 051036706 Account Number: 310006, Environmental Protection Agency CTX Format Transaction Code 22 – checking</p> <p>In the comment area of the electronic funds transfer, state Respondent’s name and the CAFO docket number.</p>
Wire transfers made through Fedwire	<p>Federal Reserve Bank of New York ABA: 021030004 Account Number: 68010727 SWIFT address: FRNYUS33 33 Liberty Street New York, NY 10045 Beneficiary: US Environmental Protection Agency</p> <p>In the comment area of the electronic funds transfer, state Respondent’s name and the docket number of this CAFO.</p>
<p>Payments made through Pay.gov</p> <p>Payers can use their credit or debit cards (Visa, MasterCard, American Express & Discover) as well as checking account information to make payments.</p>	<ul style="list-style-type: none"> • Go to Pay.gov and enter “SFO 1.1” in the form search box on the top left side of the screen. • Open the form and follow the on-screen instructions. • Select your type of payment from the "Type of Payment" drop down menu. • Based on your selection, the corresponding line will open and no longer be shaded gray. Enter the CAFO docket number into the field
<p>Cashier’s or certified check payable to “Treasurer, United States of America.”</p> <p>Please notate the CAFO docket number on the check</p>	<p>For standard delivery: U.S. Environmental Protection Agency Fines and Penalties Cincinnati Finance Center P.O. Box 979077 St. Louis, Missouri 63197-9000</p> <p>For signed receipt confirmation (FedEx, UPS, Certified Mail, etc): U.S. Environmental Protection Agency Government Lockbox 979077 U.S. EPA Fines and Penalties 1005 Convention Plaza SL-MO-C2-GL St. Louis, Missouri 63101</p>

43. Within 24 hours of the payment of the civil penalty, respondent must send a notice of payment that states Respondent's name and the docket number of this CAFO to EPA at the following addresses:

Air Enforcement and Compliance Assurance Branch
U.S. Environmental Protection Agency, Region 5
R5airenforcement@epa.gov

Nicole Wood
Office of Regional Counsel
U.S. Environmental Protection Agency, Region 5
Wood.nicole@epa.gov

Regional Hearing Clerk (E-19J)
U.S. Environmental Protection Agency, Region 5
r5hearingclerk@epa.gov

44. This civil penalty is not deductible for federal tax purposes.

45. If Respondent does not pay timely the civil penalty, EPA may request the Attorney General of the United States to bring an action to collect any unpaid portion of the penalty with interest, nonpayment penalties and the United States enforcement expenses for the collection action under Section 113(d)(5) of the CAA, 42 U.S.C. § 7413(d)(5). The validity, amount and appropriateness of the civil penalty are not reviewable in a collection action.

46. Respondent must pay the following on any amount overdue under this CAFO. Interest will accrue on any overdue amount from the date payment was due at a rate established by the Secretary of the Treasury pursuant to 26 U.S.C. § 6621(a)(2). Respondent must pay the United States enforcement expenses, including but not limited to attorneys' fees and costs incurred by the United States for collection proceedings. In addition, Respondent must pay a quarterly nonpayment penalty each quarter during which the assessed penalty is overdue. This nonpayment penalty will be 10 percent of the aggregate amount of the outstanding penalties and nonpayment penalties accrued from the beginning of the quarter. 42 U.S.C. § 7413(d)(5).

General Provisions

47. The parties consent to service of this CAFO by e-mail at the following valid e-mail addresses: wood.nicole@epa.gov (for Complainant), and TFDykton@dow.com and RRWeiss@dow.com (for Respondent).

48. This CAFO resolves only Respondent's liability for federal civil penalties for the violations alleged in this CAFO.

49. The CAFO does not affect the rights of EPA or the United States to pursue appropriate injunctive or other equitable relief or criminal sanctions for any violation of law.

50. This CAFO does not affect Respondent's responsibility to comply with the CAA and other applicable federal, state and local laws. Except as provided in paragraph 48, above, compliance with this CAFO will not be a defense to any actions subsequently commenced pursuant to federal laws administered by EPA.

51. Respondent certifies that upon completion of the compliance provisions in the ACO being entered into simultaneously with this CAFO it will be complying with NSPS Subpart Kb.

52. This CAFO constitutes an "enforcement response" as that term is used in EPA's Clean Air Act Stationary Civil Penalty Policy to determine Respondent's "full compliance history" under Section 113(e) of the CAA, 42 U.S.C. § 7413(e).

53. The terms of this CAFO bind Respondent, its successors and assigns.

54. Each person signing this consent agreement certifies that he or she has the authority to sign for the party whom he or she represents and to bind that party to its terms.

55. Each party agrees to bear its own costs and attorney's fees in this action.

56. This CAFO and the ACO referenced in paragraph 40 above constitute the entire agreement between the parties.

Dow Chemical Company, Respondent

9/8/2023
Date



Brooke M. Barnes
Site Manufacturing Director- Kankakee Operations
Dow Chemical Company

38-1285128
Tax Identification Number

United States Environmental Protection Agency, Complainant

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

**Consent Agreement and Final Order
In the Matter of: Dow Chemical Company
Docket No. CAA-05-2023-0028**

Final Order

This Consent Agreement and Final Order, as agreed to by the parties, shall become effective immediately upon filing with the Regional Hearing Clerk. This Final Order concludes this proceeding pursuant to 40 C.F.R. §§ 22.18 and 22.31. IT IS SO ORDERED.

Date

Ann L. Coyle
Regional Judicial Officer
U.S. Environmental Protection Agency
Region 5