U.S. Department
of Transportation

1200 New Jersey Avenue, SE
Washington, DC 20590

**Pipeline and Hazardous
Materials Safety Administration**

December 10, 2024

Mr. James D. Smith
Owner/Manager
Cowboy Pipeline Operators, LLC
550 Westcott Street, Suite 250
Houston, TX 77007-6040

Dear Mr. Smith:

In a letter to the Railroad Commission of Texas (Commission) dated June 28, 2024, you requested an interpretation of the federal pipeline safety regulations in 49 Code of Federal Regulations (CFR) Part 195 with respect to the scope of the part under § 195.0 for pipelines transporting vinyl acetate monomer (VAM; chemical formula $C_2H_6O_2$) near Houston, Texas. Specifically, you requested an interpretation of whether VAM is a regulated product as defined in § 195.2.

You specified that you are the pipeline operator and that you are following up on an informal request for interpretation from the Commission on behalf of Kuraray America, Inc. (KAI), the owner of the VAM pipelines. You mentioned that it was recommended to KAI that it make a formal request for an interpretation regarding the VAM pipelines.

In your letter, you described the VAM pipelines with the northernmost location being the "La Porte" plant, which produces most of the VAM. You discussed two more mid-line plants, the "POVAL and EVAL" plants, which both use VAM in the production of consumer products. You stated the POVAL plant is approximately 1.5 miles north of the EVAL plant.

You discussed your method of producing VAM through the reaction of ethylene, acetic acid, and oxygen to generate a finished product that is used as an intermediate for other products. You mentioned that ethylene, a hydrocarbon, and the pipelines providing the ethylene to the La Porte, EVAL, and POVAL plants are regulated by Part 195, including the KAI 2-inch ethylene pipeline. You also stated that acetic acid and oxygen are not regulated products under Part 195 and suggested that acetic acid pipelines are non-jurisdictional since their product is a carboxylic acid and not a hazardous liquid.

Your letter offered several reasons in support of your position that VAM is not a regulated commodity under Part 195. You argued that VAM does not meet the definition of a "hazardous liquid" under 49 CFR § 195.2. You stated that while VAM is flammable, it is primarily a chemical ingredient and not used as fuel. You contended that although VAM is both toxic and harmful to the environment, it is not petroleum, petroleum product, ammonia, ethanol, or non-petroleum fuel and, therefore, does not satisfy the first part of the definition of "hazardous

liquid." You mentioned that "harmful" is not defined in the pipeline safety regulations and suggested that plenty of industrial chemicals that are toxic and harmful to the environment such as acetic acid and ethylene glycol are not regulated by the Pipeline and Hazardous Materials Safety Administration (PHMSA) because they are not petroleum products.

You also defined hydrocarbon as a compound "composed solely of hydrogen and carbon," based on the scientific definition and a 1996 interpretation issued by PHMSA,[1] which determined that a prior understanding[2] of the meaning of "petroleum product" was too broad in light of the historical context of Part 195. You stated that PHMSA's interpretation clarified that PHMSA did not intend to expand the regulation of petroleum products. You indicated that KAI's petrochemical products are acids and organic compounds produced though processing hydrocarbons and that further processing of the compounds as ingredients delineates hydrocarbons from petrochemical products.

Lastly, you suggested in your letter that because VAM is the end-product of the reaction between two unregulated and one regulated commodity, VAM is not regulated. You indicated that there have been no previous interpretations or rulings regarding the regulation of VAM and that it reinforces your position that VAM was not intended to be regulated as a petroleum product under Part 195. You inferred that VAM is instead a petrochemical product under PHMSA's characterization of that term.

The applicable regulatory language is reprinted below.

> **§ 195.0 Scope.**
> This part prescribes safety standards and reporting requirements for pipeline facilities used in the transportation of hazardous liquids or carbon dioxide.
>
> **§ 195.2 Definitions.**
> *Hazardous liquid* means petroleum, petroleum products, anhydrous ammonia, and ethanol or other non-petroleum fuel, including biofuel, which is flammable, toxic, or would be harmful to the environment if released in significant quantities.
>
> *Petroleum* means crude oil, condensate, natural gasoline, natural gas liquids, and liquefied petroleum gas.
>
> *Petroleum product* means flammable, toxic, or corrosive products obtained from distilling and processing of crude oil, unfinished oils,

[1] Notice of Interpretation and Partial Stay of Enforcement: Petroleum Products and Low-stress Pipelines, PI-96-0101 (May 3, 1996), https://www.phmsa.dot.gov/sites/phmsa.dot.gov/files/legacy/interpretations/Interpretation%20Files/Pipeline/1996/g96_05_03_ChiefPort_195.1_wmx.pdf (last accessed Sept. 3, 2024) [hereinafter 1996 Interpretation].
[2] *See* Letter to Hoechst Celanese Corporation, SR-95-086 (Sept. 12, 1995), https://www.phmsa.dot.gov/sites/phmsa.dot.gov/files/legacy/interpretations/Interpretation%20Files/Pipeline/1995/PI95038.pdf (last accessed Sept. 3, 2024).

natural gas liquids, blend stocks and other miscellaneous hydrocarbon compounds.

You asked PHMSA the following question and PHMSA's response follows.

Question: Is vinyl acetate monomer (VAM) a "hazardous liquid" under 49 CFR § 195.2?

Response:
No, VAM is not a "hazardous liquid" under § 195.2.[3] A "hazardous liquid" means petroleum, petroleum products, anhydrous ammonia, and ethanol or other non-petroleum fuel, including biofuel, which is flammable, toxic, or would be harmful to the environment if released in significant quantities. First, VAM is not "petroleum" within the meaning of § 195.2 because it is not "crude oil, condensate, natural gasoline, natural gas liquids, and liquefied petroleum gas." Second, VAM is not anhydrous ammonia, ethanol, or other non-petroleum fuel such as biofuel. Finally, PHMSA analyzed whether VAM is a "petroleum product" under § 195.2.

Since Part 195 was codified in 1969 establishing the minimum federal safety standards for the transportation of regulated liquids by pipeline, it has applied to the transportation of liquid petroleum products by pipeline. On June 28, 1994, PHMSA[4] published a Final Rule (1994 Final Rule) that adopted what is now the current definition of "petroleum product."[5] In 1996, PHMSA issued Interpretation PI-96-0101, referenced above, which clarified the meaning of "petroleum product" as the term was defined prior to and as adopted in the 1994 Final Rule. In the 1996 Interpretation, PHMSA provided examples of products—notably all hydrocarbons—that were included in the definition of "petroleum products," including butane, propane, gasoline, heating oil, aviation fuel, kerosene, diesel fuel, and hydrocarbon feedstocks such as ethylene and propylene. PHMSA explained that prior to adopting a definition of "petroleum product" it had not considered the intermediate and finished products manufactured by processing hydrocarbon feedstock to be "petroleum products." PHMSA clarified that such "petrochemical products," made by chemical means and characterized by the addition of other chemicals to hydrocarbon feedstock, are not included in the definition of "petroleum product." PHMSA further explained that petrochemical products made using petroleum products as raw material are not included in the definition of "petroleum products."

You stated in your letter that you generate VAM by reacting a hydrocarbon feedstock and ethylene with acetic acid and oxygen. VAM manufactured through the process you described is a "petrochemical product" described by PHMSA in the 1996 Interpretation

[3] VAM is a flammable, clear, colorless liquid used to manufacture various other industrial products that can cause irritation to the eyes and respiratory system. Nat'l Libr. Of Med., Vinyl acetate, https://pubchem.ncbi.nlm.nih.gov/compound/Vinyl-acetate (last accessed Sept. 3, 2024).
[4] Previously, PHMSA was the Research and Special Programs Administration or "RSPA."
[5] Regulatory Review: Hazardous Liquid and Carbon Dioxide Pipeline Safety Standards, 59 Fed. Reg. 33388, 33395 (June 28, 1994)(codified at 49 C.F.R. pt. 195).

because it is made by chemical means through the addition of chemicals (acetic acid and oxygen) to a hydrocarbon feedstock (ethylene).

Therefore, VAM is not a "petroleum product" within the meaning of § 195.2, and thus is not a regulated "hazardous liquid" under the federal pipeline safety regulations.[6] Accordingly, transportation by pipeline of VAM is not regulated under Part 195. Due to VAM's hazardous properties, PHMSA recommends that the pipeline operator consult with applicable federal and state authorities to ensure compliance with any applicable regulations.

If we can be of further assistance, please contact Joe Berry at (720) 601-3577.

Sincerely,

JOHN A GALE

Digitally signed by JOHN A GALE
Date: 2024.12.11 08:22:37 -05'00'

John A. Gale
Director, Office of Standards
and Rulemaking

[6] Although VAM does not currently meet the definition of a hazardous liquid, 49 U.S.C. § 60101(a)(4)(C) authorizes PHMSA to determine that a substance is a hazardous liquid if it may pose an unreasonable risk to life or property when transported by a hazardous liquid pipeline facility in a liquid state.

June 28, 2024

VIA E-MAIL: safety@rrc.texas.gov
Ms. Stephanie Weidman
Pipeline Safety Director
RAILROAD COMMISSION OF TEXAS
1701 North Congress Ave.
Austin, TX 78711-2967

Re: Request for Interpretation of Vinyl Acetate Monomer as Non-Jurisdictional | P-5 No. 478807 | T-4 Permit No. 09486 (KAI)

Dear Mrs. Weidman,

Cowboy Pipeline Operators, LLC. (**CPO**), through our consultant, Energy Services & Solutions, LLC. (**EnServ**), is following up on an informal request for interpretation on behalf of our client, Kuraray America, Inc. (**KAI**). Several years ago,[1] it was determined during a special inspection that the Acetic Acid (**AA**) pipelines were not jurisdictional under 49 CFR 195 since AA is not a hazardous liquid. At that time, it was recommended that the KAI team follow up with a formal request for interpretation[2] regarding the Vinyl Acetate Monomer (**VAM**) pipelines. During a recent Integrity Management inspection,[3] this topic resurfaced, so the purpose of this letter is to make this formal request. For clarification, KAI is the Owner of the pipelines, while CPO is the Operator of the pipelines, with EnServ as a consultant for both. The KAI team reflects the undersigned representatives from all three companies.

Regarding the VAM pipelines, the northernmost location is the "La Porte" plant which produces most of the VAM. The "POVAL" and "EVAL" plants are mid-line plants that both use VAM in their production of consumer products,[4/5] respectively. The POVAL plant is approximately 1.5 miles north of the EVAL plant. VAM's empirical formula is $C_4H_6O_2$, an organic compound which is produced through the reaction of Ethylene, Acetic Acid, and Oxygen. Ethylene is certainly a hydrocarbon, and the pipelines providing it to the La Porte, EVAL, and POVAL plants are regulated by their respective owner/operators, including the KAI 2" Ethylene pipeline. However, Acetic Acid and Oxygen are not regulated products of Part 195. As mentioned above, the AA pipelines are non-jurisdictional since their product is a carboxylic acid and not a hazardous liquid.

49 CFR 195.2[6] has definitions for hazardous liquid, petroleum, and petroleum product. Petroleum and petroleum products are iterative definitions of hazardous liquid. Whether looking at them either independently or dependently, the KAI team concludes that VAM does not meet any or all of these definitions. Our primary point of view is that VAM should not be a regulated product as defined by 49 CFR 195.2 and previous interpretations under the basic premise that VAM is not a hazardous liquid.

In support of same, first, VAM is not a product listed as a hazardous liquid, i.e., petroleum, petroleum product, ammonia, ethanol, or non-petroleum fuel. While VAM is flammable, it is primarily a chemical ingredient and not used as a fuel. Similarly, though it is considered toxic and

"harmful" to the environment, both of these are **predicated** on VAM being a regulated product by the first half of the definition. Plenty of industrial chemicals are still unregulated which are considered toxic and "harmful," such as AA or Ethylene Glycol ($C_2H_6O_2$) because they are not considered petroleum products. Note that "harmful" is not defined by any part of the Code, either in the preamble or by interpretation.

Second, as established above, VAM is not a hydrocarbon. By the scientific definition and PHMSA interpretation,[7] a hydrocarbon is a compound "composed solely of hydrogen and carbon." The interpretation rescinded its ruling against Hoechst Celanese Corporation because the decision was too broad.[8] Both Hoechst Celanese Corporation's and KAI's ***petrochemical products*** are acids and organic compounds and are produced through the processing of hydrocarbons, such that the further processing of the compounds as ingredients delineates between hydrocarbon compounds and petrochemical compounds.

Finally, since VAM is the end-product of the reaction of two unregulated products and one regulated product, it stands to reason that VAM is not regulated. The same interpretation[8] that identifies regulated petroleum products further clarified that it was not PHMSA's intent to expand the regulation of petroleum products, only to clarify. Since there have been no previous interpretations or rulings known to the KAI team of the regulation of VAM before or after this Final Rule and Interpretation, it reinforces the KAI team's stance that VAM was never intended to be recognized as a regulated petroleum product; instead as a "petrochemical product" by PHMSA's characterization of the term. VAM uses hydrocarbon feedstock (ethylene) and further processing of additional chemicals (AA and oxygen) to generate a finished product—VAM—to be used as an intermediate for other products.

We trust that the Railroad Commission of Texas understands the KAI team's position and will provide a formal interpretation consistent with KAI's argument herein. The KAI team is willing and available to provide additional information, as necessary, in order to fulfill the request for interpretation of VAM's jurisdictional status. Please feel free to contact the undersigned at your convenience.

Sincerely,

James D. Smith

James D. Smith
Owner/Manager
Cowboy Pipeline Operators, LLC
713-652-3299
Jim@CPOperators.com

cc:

Jose “Chevy” Cheverez Integrity Director Energy Services & Solutions, LLC 682-597-1436 chevy@enservsolutions.com	Randy Wilson VAM Senior Specialist Kuraray / Vinyls 832.568.8501 Randy.Wilson@kuraray.com
Mr. Alan K. Mayberry Associate Administrator for Pipeline Safety PIPELINE SAFETY, PIPELINE AND HAZARDOUS MATERIALS SAFETY ADMINISTRATION 1200 New Jersey Avenue, SE., East Building Washington, DC 20590 **VIA E-MAIL: Alan.Mayberry@dot.gov** **VIA E-MAIL: phmsa.pipelinesafety@dot.gov** **VIA FAX: 202-366-4566**	

Appendix A – References

1. RRC Inspection – INSPPKG-0000070491 (formerly IP# 129435), Jan 28 – Feb 03, 2021.
2. Email Correspondence – Subject: "acetic acid and VAM (vinyl acetate)," dated May 22, 2019.
3. RRC Inspection – INSPPKG-0000090112, Jun 05-07, 2023.
4. EVAL™ is KAI's product for its line of Ethylene Vinyl-Alcohol Polymers, an air-tight polymer used for packaging, storing, or lining a variety of food, chemical, cosmetic, and pharmaceutical products. https://kuraray.us.com/products/polymers/kuraray-eval/
5. POVAL™, also known as ELVANOL™, is KAI's product for its line of Polyvinyl Alcohol resins. The product's characteristics are ideal for film formation, emulsifying power, and adhesion to substrates making the product ideal for producing adhesives, specialty papers, gas-tight barriers, textiles, injection molding, and many other industrial applications. https://kuraray.us.com/products/polymers/kuraray-poval-elvanol/
6. **49 CFR 195.2 Definitions.** https://www.ecfr.gov/current/title-49/subtitle-B/chapter-I/subchapter-D/part-195/subpart-A/section-195.2
    a. ***Hazardous liquid*** means petroleum, petroleum products, anhydrous ammonia, and ethanol or other non-petroleum fuel, including biofuel, which is flammable, toxic, or would be harmful to the environment if released in significant quantities.
    b. ***Petroleum*** means crude oil, condensate, natural gasoline, natural gas liquids, and liquefied petroleum gas.
    c. ***Petroleum Product*** means flammable, toxic, or corrosive products obtained from distilling and processing of crude oil, unfinished oils, natural gas liquids, blend stocks and other miscellaneous hydrocarbon compounds.
7. **Interpretation Response #PI-96-0101 (May 03, 1996) -** https://www7.phmsa.dot.gov/sites/phmsa.dot.gov/files/legacy/interpretations/Interpretation%20Files/Pipeline/1996/g96_05_03_ChiefPort_195.1_wmx.pdf
8. **Interpretation PI-95-038 (September 12, 1995) -** https://www.phmsa.dot.gov/sites/phmsa.dot.gov/files/legacy/interpretations/Interpretation%20Files/Pipeline/1995/PI95038.pdf