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March 23, 2023

Dr. Michal Freedhoff  
Assistant Administrator  
Office of Chemical Safety and Pollution Prevention  
U.S. Environmental Protection Agency  
Mail Code 7101M  
1200 Pennsylvania Avenue NW  
Washington DC 20460

Re: Request for Extension of Comment Period on Notice of Data Availability for Asbestos Part I Rulemaking under TSCA -- EPA-HQ-OPPT-2021-0057

Dear Assistant Administrator Freedhoff:

The Asbestos Disease Awareness Organization (ADAO) hereby requests a 30-day extension of the comment period on the March 17, 2023 Notice of Data Availability (NODA) for EPA’s Part 1 chrysotile asbestos rulemaking under section 6(a) of the Toxic Substances Control Act (TSCA) 88 Federal Register 16389.

The NODA seeks comment on information added to the rulemaking docket after the initial comment period closed on July 13, 2022. This information, mainly submitted by industry, “pertain[s] to chrysotile asbestos diaphragms used in the chlor-alkali industry and chrysotile asbestos-containing sheet gaskets used in chemical production.” As the NODA describes, the industry submissions “may be used by EPA in the development of the final rule, including EPA’s determination of . . . the proposed chrysotile asbestos prohibition compliance dates.” Id.

ADAO has reviewed these new industry submissions. We are concerned that they are incomplete and one-sided and fail to provide a full and balanced picture of the ability of chlor-alkali producers to transition to non-asbestos technology. As ADAO emphasized in its November 17, 2022 letter to EPA, an informed decision on the phase-out deadline for asbestos diaphragm plants requires critical information that the industry has failed to provide. EPA should immediately obtain this information from industry and give the public an opportunity to comment on its implications for the compliance deadline in the final Part 1 rule and the protection of public health. This can be accomplished by extending the NODA comment period by 30 days.

The industry submissions continue to demand a lengthy transition period (15 years or more) to eliminate the use of asbestos in chlor-alkali production. Yet industry has been on notice of the need to end its dependence on outdated asbestos technology for decades and should have started transition planning no later than 2016, when asbestos was chosen for one of the 10 initial risk evaluations under amended TSCA. Most asbestos plants have previously been converted to the more cost-effective membrane process and the economic benefits of this technology are well-recognized. The urgency of ending asbestos use has been reinforced by recent reports of unsafe workplace conditions at chlor-alkali plants and the ever-increasing generation of hazardous waste from the asbestos diaphragm process.

Since Occidental Chemical has recognized that asbestos diaphragm units can be converted to membrane technology without reductions in chlor-alkali output, EPA should presume that these plants can be transitioned simultaneously. This would warrant a relatively short compliance period. However, the industry claims it needs 15 years or longer to transition because current asbestos plants cannot be converted to non-asbestos technology in parallel but must be replaced sequentially. The basis for this claim cannot be meaningfully evaluated on the current state of the rulemaking record. While EPA has held numerous meetings with industry,<sup>1</sup> the memos in the docket documenting these meetings are uninformative and fail to reflect the substance of industry presentations and accompanying give-and-take with EPA. In addition, PowerPoint presentations by Occidental Chemical, a leading chlor-alkali producer, are heavily redacted, blocking public access to important information shared with EPA.

ADAO is filing a Freedom of Information Act (FOIA) request for the notes of EPA employees attending meetings with industry and unredacted versions of the Occidental presentations. We urge that the comment period be kept open for an additional 30 days so that the information disclosed under FOIA can be addressed in our comments.

Equally important, the limited and self-serving data industry presents to justify a sequential approach to plant conversion needs to be considered in the larger context of recent reductions in chlorine supply due to voluntary closure of asbestos diaphragm plants, the impact of conversion on return on investment and product quality, and the time required to complete the different steps in the conversion process. For this reason, our November 17, 2022 letter asked EPA to seek answers to the following questions from industry:

1. The chlor-alkali industry asserts that 33% of chlorine and caustic soda production derives from asbestos diaphragm plants. In light of recent asbestos diaphragm plant shutdowns and reductions in production, what percentage of total chlor-alkali production was supplied by these plants in 2021? Specifically, what share of total production was provided by your company's asbestos-diaphragm plants in that year? Please make this calculation based on the estimates of 2020 production in the Chlorine Institute Pamphlet 10. For the period 2019- 2022, please provide year-by-year chlorine and caustic soda production capacities for each of your asbestos diaphragm units.
2. Please identify asbestos diaphragm plants of your company that have closed, reduced their output, or transitioned to other technologies since 2018 and the dates when these changes were implemented. Please explain your company's reasons for eliminating or reducing production using the asbestos diaphragm process.
3. How much of your company's chlorine and caustic soda total production was distributed to operators of drinking water systems and wastewater treatment facilities in each year between 2018 and 2022? Please provide the prices charged to these customers for each year.
4. Does your company have plans for transitioning current asbestos diaphragm plants to non-asbestos technologies in the next 10 years? For each plant, specify (a) the technology to be used for conversion, (b) the start and finish dates for the conversion, (c) the specific steps in the conversion process and the length of time for each step, (d) whether the plant's output of chlorine and caustic

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<sup>1</sup> According to the NODA, meetings were held with the Chlorine Institute (July 6, 2022); Dow Chemicals (October 28, 2022); Axial/Westlake (November 3, 2022); Olin Corp. (November 14, 2022); OxyChem (November 16, December 7, 2022 & February 9, 2023), and Chemours (January 18, 2023)

soda will be maintained during the conversion and, if not, the amount of lost output anticipated, (e) whether the chlor-alkali capacity of the plant will be increased as a result of the conversion, and (f) the estimated costs of the conversion.

5. Has your company conducted analyses of the financial and economic impacts of converting asbestos diaphragm plants to non-asbestos technology? If, so please provide comparisons between asbestos and non-asbestos technology with respect to (a) costs of energy, (b) other operational costs, (c) product quality and price, (d) emissions of greenhouse gasses and other pollutants, (e) waste disposal and treatment costs and (f) return on investment.

6. Please provide the amount of chrysotile asbestos your company has imported per year between 2018 and 2022, the sources of the imports and the ports of entry. Indicate the quantity of imports you anticipate per year between 2022 and 2026.

7. Please indicate the amount of raw asbestos your company has stockpiled for the manufacture of future chlor-alkali asbestos diaphragms. What amount of stockpiled asbestos is in each plant?

We are deeply concerned that industry has not answered our pressing questions. The requested information is more important now than ever as EPA moves into the final phase of its chrysotile asbestos rulemaking. It should be obtained without delay, if necessary, by issuing subpoenas to the chlor-alkali producers.

EPA should also ask the American Chemistry Council and Occidental Chemical to document and identify the sources for its claims that raw materials shortages and limited expertise preclude simultaneous conversion of asbestos diaphragm plants.

In sum, the current comment deadline on the NODA is fatally flawed because of the lack of public access to information that is critical to addressing industry's claimed need for a lengthy delay in eliminating asbestos use at chlor-alkali plants. EPA should extend the comment period by 30 days and move quickly to obtain and make publicly available information essential to setting the most expeditious and health protective compliance deadline possible in the final rule.

Respectfully submitted,



Linda Reinstein

cc: Denise Keehner  
Mark Hartman  
Brian Symmes  
Robert Courtnage  
Sharon Clark  
Peter Gimlin  
Robert Sussman



November 17, 2022

Denise Keehner, Director  
Office of Pollution Prevention and Toxics  
Environmental Protection Agency  
1200 Pennsylvania Avenue, N.W.  
Washington, DC 20460

Re: Recommendations for EPA Information Requests on Current Chlor-Alkali Asbestos Diaphragm Imports, Use, and Chlorine and Caustic Soda Production

Dear Ms. Keehner:

On behalf of the [Asbestos Disease Awareness Organization](#) (ADAO), we want to thank you for meeting with ADAO and the International Association of Firefighters (IAFF) on Thursday, October 13th, 2022. As we emphasized in our comments on EPA's Part 1 risk management proposal, we strongly support both EPA's determination that the six ongoing uses of chrysotile asbestos present an unreasonable risk of injury to health and EPA's proposal to ban these uses under the Toxic Substances Control Act (TSCA).

Raw chrysotile asbestos is imported into the U.S. only by the chlor-alkali industry, which uses the asbestos for the fabrication of semi-permeable diaphragms used in the production of chlorine and sodium hydroxide. EPA's Part I proposal would eliminate importation and use of asbestos by this industry within two years of the effective date of its final rule. Although the overwhelming majority of commenters supported banning asbestos use in chlor-alkali production, industry argued that the ban was unnecessary to protect public health and that a much longer phase out period was required.

New information directly refutes both of these claims.

**Unsafe Workplace Practices:** [An October 20](#) investigation by the non-profit publication *ProPublica*, "*The U.S. Never Banned Asbestos. These Workers Are Paying the Price*," provides extensive documentation that chlor-alkali producers have long exposed workers to dangerously high chrysotile asbestos levels despite claiming to follow "safe" practices for handling this deadly carcinogen. This evidence confirms EPA's findings of unreasonable risks to workers and refutes the basis for industry's demand to be exempt from the proposed TSCA ban.

**Shutdown of Asbestos Diaphragm Capacity:** It is now clear that industry has shut down a substantial portion of its asbestos diaphragm production capacity in the last three years and is in the process of transitioning to non-asbestos membrane technology, which EPA's [Economic Impact Analysis](#) finds is more efficient and profitable. Our research shows that two asbestos diaphragm plants have been closed entirely, two have reduced production volumes using the diaphragm process, and two are being converted to non-asbestos production technology. Only four diaphragm plants remain in full production: plants remain in full production:

Chlor-Alkali Plants Using Asbestos Diaphragms		
Plants	Status	Evidence
OxyChem - Convent, LA	Active	
OxyChem - Taft (Hanhville), LA	Active	
OxyChem - Gregory (Ingleside), TX	Active	
Westlake - Plaquemine, LA	Active	
Olin - Plaquemine, LA	Production Reduced	<a href="https://bit.ly/3D2jrkj">2022: Olin Announces Chlor Alkali Capacity Reduction https://bit.ly/3D2jrkj</a>
Olin - Freeport, TX	Production Reduced	<a href="https://bit.ly/3eWu3cD">2021: Olin announces chlor-alkali capacity reduction in Louisiana https://bit.ly/3eWu3cD</a>
OxyChem - Wichita, KS	Conversion in Process	<a href="https://bit.ly/3TsA2ES">2022: Oxy Second Quarter Earnings Conference Call https://bit.ly/3TsA2ES</a>
OxyChem - La Porte (Battleground), TX	Conversion in Process	<a href="https://bit.ly/3MZdxF2">2022: Occidental Petroleum (OXY) Q2 2022 Earnings Call Transcript https://bit.ly/3MZdxF2</a>
Olin- McIntosh, AL	Diaphragm Use Ended	<a href="https://bit.ly/3SwQlzp">2021: Olin to shut more caustic soda capacity at Alabama plant https://bit.ly/3SwQlzp</a>
OxyChem - Niagara Falls, NY	Closed	<a href="https://bit.ly/3D1BgQs">2021: OxyChem to Close Niagara Falls Chlor Alkali Plant https://bit.ly/3D1BgQs</a>

Because of the reductions in production capacity, the asbestos diaphragm portion of total U.S. output of chlorine and caustic soda is now well below the 33 percent share previously assumed by EPA and industry. One result has been shortages of supply and dramatic increases in prices, as noted by [EPA itself](#) and representatives of [drinking water suppliers](#). It is noteworthy that the chlor-

alkali industry – which has opposed the EPA ban out of professed concern for the safety of drinking water – has itself subjected this sector to reduced availability of chlorine and caustic soda and sharply increased treatment costs.

**Conversion to Membrane Process:** On August 3, 2022, in its quarterly earnings presentation, OxyChem [announced](#) it was proceeding with the conversion of its LaPorte, Texas (Battleground) asbestos diaphragm facility to an membrane unit with substantially greater production capacity:

HIGHLIGHTS

**OXYCHEM BATTLEGROUND MEMBRANE CONVERSION**

- Modernization and expansion of the Battleground plant expected to increase cash flow through improved margins and higher product volumes, while enhancing operational flexibility:
  - Conversion from diaphragm to membrane technology expected to improve margins, while lowering maintenance capital and GHG emissions intensity
  - Expand chlor-alkali capacity to cover strategic commercial and supply chain initiatives
  - Improve plant logistics to create additional operating flexibility
- Battleground project expected to generate a strong return while improving OxyChem’s market position
- Construction expected to commence in 2023, with completion expected in early 2026:
  - Existing operations to continue as normal during construction



Project Spending 2023 – 2025:	~\$1.1 B (~20% in 2023)
Incremental Annual EBITDA:	\$250 – \$350 MM
Incremental Plant Capacity:	~80%



Industry predictions of catastrophic shortages of chlorine and caustic soda under EPA’s rule assume that chloro-alkali plants will suspend production during conversion to new manufacturing technology. However, OxyChem’s recent LaPorte announcement indicates that alkali-alkali production will continue without any interruption while asbestos-diaphragm units transition to the membrane cell process. During the August 3 investor presentation, Occidental’s CFO explained:

we will continue to operate the facility throughout the construction process. There may be some short periods where we'd take very short outages for important connections between existing infrastructure in the facility. We're confident, throughout that process, we can build inventory and continue to build product with no impact on our customers. And so, as you think about the Battleground process, you should not assume any loss of sales or margin during the actual project itself.

OxyChem’s ability to continue operating diaphragm units until conversion is complete has important implications for the length of the phase-out period under EPA’s rule. If in fact closure of diaphragm units to comply with an asbestos ban would not reduce available supplies of chlor-alkali

chemicals, the shortages predicted by ACC and others would not materialize and it would be unnecessary to stagger unit closures to avoid supply disruptions.

According to the EPA Economic Analysis (p. 3-41), while conversion to the membrane process would incur capital costs, it would also increase energy efficiency and reduce operational costs and enable production of higher-quality caustic soda that would boost revenues. Thus, EPA's analysis shows that, under some scenarios, conversion of plants to membrane technology would actually result in annualized cost savings to the industry, meaning that it would produce net economic benefits and pay for itself over time by improved energy efficiency, higher quality product and longer service life.

These findings are strongly confirmed by OxyChem's business case for its LaPorte membrane conversion project. In its February 2022 quarterly presentation, Occidental's Chief Financial Officer Rob Peterson [elaborated](#) on the benefits of membrane conversion, emphasizing that “[m]odernizing these assets would result in a material energy efficiency improvement, which will also lower the carbon intensity per ton of the product produced and delivered. The project would also provide the opportunity for a significant expansion of our existing capacity to meet growing demand for our key products.”

These benefits of investing in membrane and other non-asbestos technologies underscore that transitioning away from asbestos is a win-win proposition for public health and industry.

**Questions for Three Companies Using the Asbestos Diaphragm Process:** In light of these new developments and the industry's lack of transparency, we strongly urge EPA to seek additional information from the three remaining users of the asbestos-diaphragm process – OxyChem, Olin and Westlake. To assure that the companies fully comply with EPA's requests, EPA should issue subpoenas if the initial responses of the companies are inadequate.

We recommend that EPA seek answers to the following questions:

1. The chlor-alkali industry asserts that 33% of chlorine and caustic soda production derives from asbestos diaphragm plants. In light of recent asbestos diaphragm plant shutdowns and reductions in production, what percentage of total chlor-alkali production was supplied by these plants in 2021? Specifically, what share of total production was provided by your company's asbestos-diaphragm plants in that year? Please make this calculation based on the estimates of 2020 production in the Chlorine Institute [Pamphlet 10](#). For the period 2019-2022, please provide year-by-year chlorine and caustic soda production capacities for each of your asbestos diaphragm units.
2. Please identify asbestos diaphragm plants of your company that have closed, reduced their output, or transitioned to other technologies since 2018 and the dates when these changes were implemented. Please explain your company's reasons for eliminating or reducing production using the asbestos diaphragm process.


3. How much of your company's chlorine and caustic soda production was distributed to operators of drinking water systems and wastewater treatment facilities in each year between 2018 and 2022? Please provide the prices charged to these customers for each year.
4. Does your company have plans for transitioning current asbestos diaphragm plants to non-asbestos technologies in the next 10 years? For each plant, specify (a) the technology to be used for conversion, (b) the start and finish dates for the conversion, (c) the specific steps in the conversion process and the length of time for each step, (d) whether the plant's output of chlorine and caustic soda will be maintained during the conversion and, if not, the amount of lost output anticipated, (e) whether the chlor-alkali capacity of the plant will be increased as a result of the conversion, and (f) the estimated costs of the conversion.
5. Has your company conducted analyses of the financial and economic impacts of converting asbestos diaphragm plants to non-asbestos technology? If, so please provide comparisons between asbestos and non-asbestos technology with respect to (a) costs of energy, (b) other operational costs, (c) product quality and price, (d) emissions of greenhouse gasses and other pollutants, (e) waste disposal and treatment costs and (f) return on investment.
6. Please provide the amount of chrysotile asbestos your company has imported per year between 2018 and 2022, the sources of the imports and the ports of entry. Indicate the quantity of imports you anticipate per year between 2022 and 2026.
7. Please indicate the amount of raw asbestos your company is currently holding for future chlor-alkali asbestos diaphragms.

We feel strongly that answers to the above questions will provide EPA with specific and credible information that is essential to inform its final Part 1 rule for chrysotile asbestos and has not to date been submitted by the chlor-alkali industry.

We are confident that an expeditious ban of the use of chrysotile asbestos in chlor-alkali production will not only protect public health but achieve important economic and environmental benefits.

Thank you in advance for your leadership and tireless work on asbestos.

Sincerely,



CC: Dr. Michal Freedhoff  
Mark Hartman  
Brian Symmes  
Robert Courtnage  
Sharon Clark  
Peter Gimlin