



July 13, 2022

Mr. Michael Regan  
Administrator  
Environmental Protection Agency  
Mail Code 28221T  
1200 Pennsylvania Ave. NW  
Washington, DC 20460

**VIA ELECTRONIC SUBMISSION**

**RE:** Proposed Rule - Asbestos Part 1: Chrysotile Asbestos; Regulation of Certain Conditions of Use Under Section 6(a) of the Toxic Substances Control Act, [87 FR 21706](#), Docket ID No. EPA-HQ-OPPT-2021-0057

Dear Administrator Reagan,

The American Water Works Association (AWWA), Association of Metropolitan Water Agencies (AMWA), and National Rural Water Association (NRWA) are filing comments on the U.S. Environmental Protection Agency (EPA) proposal to ban the use of chrysotile asbestos diaphragms in chlor-alkali production facilities. These facilities are an essential link in the United States' chemical supply chain for the production of chlorine, sodium hypochlorite and caustic soda. EPA's economic analysis describes this action as impacting nearly 30 percent of domestic chlorine production of these treatment chemicals, which are critical to the water sector. A rulemaking that disrupts the supply of chlor-alkali products used by the water sector will adversely impact the continuity of operations at public water systems and wastewater treatment facilities across the nation and as result, the health protections provided to consumers. Further, while EPA's analysis does not capture these impacts on the water systems, as proposed this action will generate a shocking cost burden that is 119,000 to 287,000 times greater than the expected health benefits.

The collective membership of AWWA, AMWA, and NRWA serve more than 80 percent of the U.S. population. The primary mission of our associations and our members is the protection of public health. We support over 50,000 community water systems nationwide in maintaining an essential lifeline service, safe drinking water. Safe drinking water is critical to both public health and the economic vitality of individual communities across the nation. The majority of community water systems are part of municipal government, while some are independent authorities, not-for-profit organizations, or investor-owned utilities. No matter the type of ownership, there are three common denominators: 1) they provide a critical infrastructure service, 2) their operations are financially supported by the rate payers in the communities they serve and 3) they are required to comply with regulations promulgated under the Safe Drinking Water Act (SDWA). Many of our members also provide wastewater treatment

for the communities they serve and must comply with regulations promulgated under the Clean Water Act (CWA).

SDWA regulations specifically require 1) any water system that relies on surface water or ground water under the influence of surface water (GWUDI) to meet disinfection requirements using chlorine, chlorine/chloramines, ozone, or chlorine dioxide, 2) these same systems must also maintain a chlorine disinfectant residual in the distributed drinking water supply, and 3) primary disinfection at groundwater systems at the direction of state primacy agencies. All these provisions are designed to protect the public from pathogens. However, our collective capacity to fulfill this obligation to protect public health would be threatened by the proposed rule's prohibition on uses of chrysotile asbestos in chlor-alkali process within two years. AWWA, AMWA, and NRWA have significant concerns that this proposed action will curtail domestic chlorine production and adversely impact the continuity of operations at water systems across the nation and therefore threaten the public health and the operation of businesses, hospitals, and other commerce dependent on these essential lifeline functions.

AWWA, AMWA and NRWA welcome the opportunity to work with the Agency to ensure that this proposed action is developed in a manner that does not negatively impact the affordability of drinking water or wastewater service and ensure that those systems are able to sustain continuity of service that is a foundation of our national security and economy. If you have any questions, please feel to contact our staff: Kevin Morley (AWWA) at 202-326-6124 or [kmorley@awwa.org](mailto:kmorley@awwa.org); Brian Redder (AMWA) at 202-331-2820 #108 or [redder@amwa.net](mailto:redder@amwa.net); Mike Keegan (NRWA) at 202-294-4785 or [keegan@nrwa.org](mailto:keegan@nrwa.org).

Yours Sincerely,



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**Who is AWWA**

*The American Water Works Association (AWWA) is an international, nonprofit, scientific and educational society dedicated to providing total water solutions assuring the effective management of water. Founded in 1881, the Association is the largest organization of water supply professionals in the world. Our membership includes more than 4,000 utilities that supply roughly 80 percent of the nation's drinking water and treat almost half of the nation's wastewater. Our 50,000-plus total membership represents the full spectrum of the water community: public water and wastewater systems, environmental advocates, scientists, academicians, and others who hold a genuine interest in water, our most important resource. AWWA unites the diverse water community to advance public health, safety, the economy, and the environment.*

**Who is AMWA**

*The Association of Metropolitan Water Agencies (AMWA) is an organization of the largest publicly owned drinking water systems in the United States. AMWA's membership serves more than 156 million people – from Alaska to Puerto Rico – with safe drinking water. Member representatives to AMWA are the general managers and CEOs of these large water systems. The association represents the interests of these water systems by working with Congress and federal agencies to ensure federal laws and regulations protect public health and are cost-effective. In the realm of utility management, AMWA provides programs, publications, and services to help water suppliers be more effective, efficient and successful.*

**Who is NRWA**

*The National Rural Water Association is a non-profit organization dedicated to training, supporting, and promoting the water and wastewater professionals that serve small and rural communities across the country. NRWA provides training and technical assistance through 50 affiliated State Rural Water Associations that currently have over 31,000 utility system members. Rural Water training and technical assistance covers every aspect of operating, managing and financing water and wastewater utilities.*

**Joint Comments**  
**On**  
**Proposed Rule - Asbestos Part 1: Chrysotile Asbestos; Regulation of Certain Conditions of Use Under**  
**Section 6(a) of the Toxic Substances Control Act, 87 FR 21706, Docket ID No. EPA-HQ-OPPT-2021-**  
**0057**

Submitted by  
American Water Works Association, Association of Metropolitan Water Agencies, and National Rural  
Water Association

The American Water Works Association (AWWA), Association of Metropolitan Water Agencies (AMWA), and National Rural Water Association (NRWA) are filing comments on the U.S. Environmental Protection Agency (EPA) proposal to ban the use of chrysotile asbestos diaphragms in chlor-alkali production facilities. These facilities are an essential link in the United States' chemical supply chain for the production of chlorine, sodium hypochlorite and caustic soda. EPA's economic analysis describes this action impacting nearly 30 percent of domestic production of these treatment chemicals, which are critical to the water sector. A rulemaking that disrupts the supply of chlor-alkali products used by the water sector will adversely impact the continuity of operations at public water systems and wastewater treatment facilities across the nation and as result, the health protections provided to consumers.

AWWA, AMWA, and NRWA recommend that EPA:

1. Revise and significantly expand the economic analysis to support the proposed rule, incorporating consideration of impacts on chlor-alkali product users, particularly the community water systems and wastewater systems.
2. Continue to pursue the eventual elimination of all commercial sale and use of asbestos, but impose implementation timelines for phase out use of asbestos diaphragms in chlor-alkali production facilities at a pace that does not disrupt the available domestically produced chlor-alkali product supply – especially chlorine, nor lead to increases in the price of chlor-alkali products on the merchant market.

***Affordability***

EPA's economic analysis make no effort to consider the current economic burden that this rulemaking will have on public water systems. Water systems are already experiencing price increases and supply chain challenges that are impacting system operations since early 2021. The current financial burden and supply disruptions have significantly impacted water system budgets, in many cases the cost of chlorine per ton delivered has increased 4-5 times since the first quarter of 2021.

Of direct interest to AWWA, AMWA, and NRWA are the facilities in the chlor-alkali sector that use chrysotile asbestos diaphragms in the production of chlorine gas, sodium hypochlorite and caustic soda (see Table 1). In 2019, there were ten facilities in the US using this method that accounted for approximately 30 percent of all U.S. production capacity as of early 2021. Two of these facilities ceased production in late 2021, Olin's facility in McIntosh, AL and Occidental's facility in Niagara Falls. Together the facilities represented approximately 11 percent of production from this class of chlor-alkali facilities.

**Table 1. Chlor-Alkali Plants Using Asbestos Diaphragms<sup>1</sup>**

Firm	Location	Estimated 2021 Asbestos Diaphragm Cell Capacity		
		Production (1,000 m. tons)	Percent by Location	Percent by Firm
Occidental Chemical Corporation	Wichita, KS	171	3.4%	43.8%
	Convent, LA	398	7.9%	
	Oxy - Taft (Hahnville), LA	323	6.4%	
	Niagara Falls, NY	170	3.4%	
	La Porte (Battleground), TX	527	10.5%	
	Gregory (Ingleside), TX	607	12.1%	
Olin Corporation	Plaquemine, LA	768	15.3%	47.7%
	McIntosh, AL	400	8.0%	
	Freeport, TX	1,227	24.5%	
Westlake Chemical Corporation	Plaquemine, LA	427	8.5%	8.5%
<b>Total</b>		<b>5,018</b>		

The noted closures, recent force majeure and inflationary market pressures are driving up the cost of chlorine – costs that water systems must pass on to their ratepayers. AWWA gathered information from the sector about the cost of chlorine over the last 18 months and anticipated increases. According to AWWA’s recent national survey, on average the cost for each ton of chlorine delivered has increased over 120%. The lowest reported cost in the second quarter of 2022 was \$700/ton up from \$221/ton in the first quarter of 2021. The highest reported cost in the second quarter of 2022 was \$7,000/ton.

Impact is Greater on Small Systems

Higher unit costs often fall disproportionately on smaller communities. These water systems do not have bulk volume purchasing power. Small systems will use smaller volumes of (e.g., chlorine, sodium hypochlorite) packaged and delivered appropriate to the volume of water they are treating (e.g., 150-pound chlorine containers). Currently, even larger systems that are high volume purchasers have experienced 300-600% increases in the unit cost of chlorine over the same 18-month period. In many cases these dramatic price increases represent millions of dollars in unbudgeted operating expenses that must be absorbed by the water system.

The rapid escalation in the cost of critical treatment chemicals represents a significant opportunity cost to ratepayers. Water systems are already being forced to reallocate limited, available funds away from operational and maintenance needs. Deferred investments in treatment facilities, distribution and collection system repair/replacement are direct and real-world consequences of the escalatory cost pressure on chlorine. EPA failed to consider impacts on water systems and their customers in preparing the proposal; EPA did not evaluate either 1) the direct impacts the proposed ban would have on critical

<sup>1</sup> Derived from EPA EIA Table 2-2 in “EPA-HQ-OPPT-2021-0057-0008\_content”

infrastructure users of chlor-alkali products or 2) the cumulative effect of this proposed ban in combination with other price pressures. Additional loss or disruption to U.S. chlor-alkali production capacity will compound existing supply issues and cost pressure that will ultimately impact the affordability of drinking water and wastewater service.

### ***Economic Burden on Nation***

EPA estimated that the three firms using asbestos diaphragms will need to invest at least \$1.8 billion to replace existing production equipment with one of two alternative production processes. As proposed the rule requires this investment be made over two years (EPA's preferred option) or five years (EPA's alternative option) so that each of the remaining eight facilities make the transition to an alternative production method. While our membership does not typically operate this type of chlor-alkali production facility that must comply, our sector is very familiar with construction of treatment facilities; complying with applicable local, state, and federal regulatory processes; and integrating regulatory requirements into ongoing capital improvement plans, operations, and budgets. This transition timeframe and economic burden is simple unrealistic. Both Canada and Germany asbestos bans provide chlor-alkali facilities longer timeframes (e.g., 10 years) for this transition.

### **Record Supporting Rule Is Incomplete**

EPA notes that life-cycle cost analysis will show affected chlor-alkali facilities gaining energy savings over decades. More importantly, the economic analysis did not consider the possibility that the nation may simply lose some or all of the chlor-alkali production capacity affected by this rulemaking. EPA suggested that "potential supply disruptions could be addressed in the shorter term through increased importing . . . and over time with increased production at existing non-asbestos diaphragm or membrane-based chlor-alkali plants." EPA provides no supply chain capacity analysis to support a finding that importing chlor-alkali products is feasible or that sufficient excess capacity exists in foreign markets. Servicing the water sector requires committing to more than building with EPA regulations—investments must be fiscally sound and in this instance that means considering all of the costs associated with delivering produced products to a distribution network that reaches throughout the entire U.S.

### **Economic Analysis is Not Consistent with OMB Guidance**

The economic analysis states that changing chlor-alkali processes will require an investment of at least \$1.8 billion to change processes. This is estimated by EPA to generate a benefit in reduced cancer risk that totals \$271 and \$710 per year (7% and 3% discount rate respectively, 2020 dollars).<sup>2</sup> Consequently, the total national health benefit generated from chlor-alkali sector over 20 years is \$5,420– \$14,200. If the health benefits are expanded to include co-benefits expected from a reduction in priority air pollutants that range increases marginally to \$6,280 - \$15,150. That is to say over 20 years (actually over two to five years) the proposed rule will generate a cost burden that is 119,000 to 287,000 times greater than the expected health benefits.

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<sup>2</sup> EPA EIA, Table 4-19: Total Annualized Benefits from Reduced Cancer Risks: Proposed Option in "EPA-HQ-OPPT-2021-0057-0008\_content"

These benefit-cost ratios defy the principles of good governance per E.O. 12866 and OMB Circular A-4 on economic impact assessment. It is clear that OMB advises agencies to capture the “distributional effects” of a regulatory action. The impacts to public health associated with the fiscal and operational stress likely to be imposed on the water sector through this action are significant. Estimating the cascading economic impacts on water systems that are dependent on a reasonable supply of essential treatment chemicals from the chlor-alkali sector is a critical element that is absent from the economic analysis prepared for this rulemaking.

#### Match Policy Solution to Objectives

Our associations recognize that there is a global commitment to the elimination of asbestos from ongoing commercial uses. Realizing that commitment can be achieved through policies that do not 1) create new unacceptable risks to public health, 2) recognize that eliminating the remaining *de minimus* uses requires serious consideration of why those uses remain, and 3) matching the speed of action to that anticipated accrual of benefits. A more reasoned transition period would be prudent to mitigate foreseeable economic disruption and better assure preservation of public health, including national security interests.

#### ***National Security Interest***

Consideration for sustaining a national security interest is authorized in TSCA 6(g). EPA has opted to not exercise that authority which fails to recognize that the water sector is critically dependent on chlorine, sodium hypochlorite and caustic soda to ensure public health and safety. Exercising this provision would be a prudent means to provide a more reasonable time period for these facilities to design, build and commission alternate production processes. Such action would help ensure continuity of service, relieve pressure on an already stressed market and protect public health.

#### ***Reasonable Availability***

As recent chlor-alkali facility shutdowns due to weather and equipment failures demonstrate the fragility of the existing chlorine supply chain -- tightening domestic chlorine production capacity exacerbates an existing and serious likelihood of inadequate supply with severe repercussions for public health and safety.

#### SDWA §1441

Under SDWA §1441 is intended to ensure that certain chemicals or substances, including chlorine and caustic soda, that are necessary “for the purpose of treating water in any public water system or in any public treatment works” are “reasonably available.”<sup>3</sup> This provision requires EPA, in collaboration with the Department of Commerce, to ensure that critical treatment chemicals like chlorine are reasonably available to water systems. This provision, to date, has focused on determining if there is an adequate quantity of chemicals available. The water sector has asked EPA to revisit this policy and also consider

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<sup>3</sup> EPA. undated. Application to Request Action Under SDWA Section 1441 to Address a Shortage of a Water Treatment Chemical

cost as a factor impacting availability of a chemical to water systems. Simply put, with constrained supply the associated price escalation makes access to any available supply fiscally challenging if not impossible. Public water systems, as regulated entities, must meet their regulatory obligations, yet they must also function within the constrained budgets allowed by local government oversight and importantly ratepayer's capacity to pay. In this rulemaking EPA has a duty to assure chlor-alkali product supply, such as chlorine, are available to public water systems. A complete analysis would consider both the available supply quantity and pricing-driven shortfalls in the accessible supply. It would be ill-considered for such an analysis to be premised on either (1) significant dependency on international sources of chlor-alkali products or 2) the assumption that captive chlor-alkali production capacity would transition to the merchant market.

### Environmental Justice

EPA's SDWA and CWA program offices are deeply concerned about affordable access to safe and adequate water services. This concern is particularly acute where water systems face ongoing technical, managerial and/or financial challenges due to historic or ongoing injustices due race or income. An available supply must be one that is accessible logistically and financially by systems of all sizes but in particular small systems which face higher chemical commodity prices.

### EPA Administrative Capacity

If the final Part 1 rule leads to a loss of chlorine production capacity, the potential for supply shortfalls would impact water systems nationwide. To-date, EPA's administrative procedures have not been adequate to provide timely evaluation of SDWA §1441 petitions or subsequent relief. Supply shortfalls in the wake of a TSCA Section 6(a) decision could be much more widespread, further straining administration with multiple water systems seeking relief under SDWA §1441. This provision is designed to ensure that certain chemicals or substances, including chlorine and caustic soda, that are necessary "for the purpose of treating water in any public water system or in any public treatment works" are "reasonably available." It is not clear that the Administration could meet this obligation under SDWA §1441 in an environment of reduced chlorine production due to the asbestos ban. Clearly, the implications for public health could be profound.

We are also concerned that EPA's economic analysis for the proposed rule made no substantive effort to examine the impact on "reasonable availability" and downstream consequences on water system operations. EPA suggested that "potential supply disruptions could be addressed in the shorter term through increased importing . . . and over time with increased production at existing non-asbestos diaphragm or membrane-based chlor-alkali plants." EPA provides no supply chain capacity analysis to support a finding that importing chlor-alkali products is feasible or that sufficient excess capacity exists. In addition, we do not believe that shifting the supply chain towards greater foreign dependency, even if short-term, is in our strategic national interest.

Recent incidents, including Winter Storm Uri and Hurricane Laura, directly impacted chlor-alkali production and availability. However, in responding to those incidents EPA lacked the data necessary to properly examine "reasonable availability" under §1441. We recommend that Agency conduct a full supply chain analysis to develop an understanding of how production incidents may impact the availability of chemicals and substances essential to proper water treatment. In addition, we believe §1441 could be more anticipatory of emergency conditions. The current process requires a lengthy



notice and comment period that is not responsive to emergency conditions such as those observed in the past year. In light recent experience and prospect of supply chain issues related to this ban on asbestos uses, EPA should leverage the authority under §1441 to be more anticipatory of challenges that may impact continuity of service.

Over the past 18 months water systems across the nation have reported multiple instances of inadequate availability for treatment chemicals, including chlorine and sodium hypochlorite. There have been multiple instances where water systems have been within a few days of running out of these disinfectants. A 30-day supply of essential chemicals in the recommended best practice<sup>4</sup> for resilience and continuity of service.

**Table 2 – Impacts on Utility Operations**

Supplier has notified us that they can no longer deliver for the contracted price	29%
Supplier has notified us of delivery issues	27%
Supplier has notified us of limited chemical availability issues	23%
Our utility has experienced operational concerns due to chemical availability	14%
Disinfection chemical storage at our plant has reached less than 1 week in the last 12 months	6%
Supplier has backcharged the utility at a higher price for chemicals already delivered	2%

The noted impact on utility operations creates significant stress on water systems’ ability to assure adequate treatment. Should a system not have adequate disinfectant, SDWA regulations appropriately require public notification, and state primacy agencies would typically require a boil water notification. The lack of adequate disinfection disrupts the entire community for no reason other than chemical supply disruption. Our members have worked diligently to avoid such outcomes. The proposed regulation unnecessarily places communities at greater risk of experiencing such a disruption and the associated economic consequences.

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<sup>4</sup> Ten States Standard,  
<https://www.health.state.mn.us/communities/environment/water/tenstates/standards.html>