

July 12, 2018

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**Re: Removal of Lead Containing Coatings from Outdoor Water Tanks by Dry Abrasive Blasting DNREC Regulations 1101, 1102, and Source Category Permit, Public Hearing July 12, 2018**

Thank you for accepting public comment on the proposed regulations for dry abrasive blasting of lead paint from water towers. We look forward to the implementation of a robust permit structure, as well as the future regulatory changes and permitting of all other outdoor structures.

**2017 Petition for Regulations**

These regulations are being promulgated in response to our petition, submitted on January 26, 2017 to DNREC Secretary David Small, and again in March 2017, which was signed by 140 individuals. The petition asked DNREC to “open Appendix A of Title 7, Natural Resources and Environmental Control of the Delaware Administrative Code (1100 Air Quality Management Section, 1102 Permits) as exempted in Section 2.2.3 for review and amendment.”

Appendix A of these regulations currently exempts “outdoor painting and sandblasting equipment” from air quality regulations. The removal of hazardous materials, such as lead paint from municipal and utility structures that are located adjacent to homes, schools and parks, currently occurs without any State oversight.

Our petition asked DNREC to “revise these regulations to ensure that projects that intend to remove and could potentially disperse particulates (such as lead\* or any other hazardous material) within a surrounding community be required to be fully permitted through the State Agency of DNREC” and “to protect public health by ensuring compliance with air quality protocols when hazardous materials are removed from outdoor structures.”

In a follow up to this petition, we met with DNREC Secretary Shawn Garvin on April 17, 2017, where we discussed Delaware’s unique history of lead paint contamination resulting from the sandblasting of outdoor structures, specifically St. George’s Bridge.

**St. George’s Bridge:** Delaware’s most infamous incident of lead paint exposure creating a public health risk occurred in 2000 during the sandblasting and repainting of

St. George's Bridge over the C&D Canal. The Department of Public Health (DPH) and the Department of Natural Resources and Environmental Control (DNREC) took emergency actions after wind blew lead paint chips beyond the reach of a protective tarp and onto the surrounding residential community.

DPH Officials began going door to door to warn residents about lead paint chipping from St. George's Bridge in February 2000, handing out information about the dangers of lead, a guide on foods that naturally fight lead poisoning, and providing residents with information on free blood testing.<sup>1</sup>

DNREC filed an enforcement action against the US Army Corps of Engineers in March 2000. DNREC required the USACE to 1) employ "state of the art technology" to contain falling paint chips, 2) set up a hotline for residents to report falling chips, 3) clean up fallen paint chips, 4) decontaminate soil tainted by fallen paint chips, and 5) conduct regular inspections around the bridge for any additional fallen paint chips.<sup>2</sup> In August 2000 DNREC called on USACE to remove the top foot of soil from contaminated areas in 37 yards that had lead levels of 400 or more parts per million.<sup>3</sup>

Following this incident, DNREC and DPH did not take any regulatory action to improve state oversight of projects that involved sandblasting of lead painted outdoor structures.

As a result of our January 2017 petition, and April 2017 meeting with Secretary Garvin, where we reiterated our concerns about the dry abrasive blasting of all outdoor structures, including bridges, we are surprised and disappointed that the proposed regulations under consideration by DNREC are limited to the dry abrasive blasting of water towers.

Upon the completion of these regulations on water towers, we hope that DNREC will act immediately to promulgate regulations for all outdoor structures.

### **Health Effects of Lead Exposure**

Lead (Pb) is a neurotoxin with irreversible side effects. Exposure to lead paint chips, grit and dust from weathering outdoor structures is dangerous to public health, causes neurological damage, behavioral and learning disabilities among children, as well as anemia, high blood

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<sup>1</sup> O'Sullivan, Sean. St. Georges Residents Get Lead Warning. The News Journal. Page A1.

<sup>2</sup> O'Sullivan, Sean. Army Corps Directed to Contain Falling Paint Chips. The News Journal. March 12, 2000, page 1B.

<sup>3</sup> Montgomery, Jeff. State may Replace Corps for St. Georges Cleanup. The News Journal. Oct 29, 2001, page 1A.

pressure, kidney damage and reproductive effects (including miscarriage, stillbirths and premature births) among adults.<sup>4</sup>

There are no safe levels of exposure to lead and there is no way to reverse the damage caused by lead exposure. The harmful effects of lead exposure can also take years to develop. For example, the half-life of lead in human bone is 27 years. Girls who are exposed to lead today will store the lead in their bones, and then pass that lead exposure on to their children when they become pregnant. Because of the extremely long half-life of lead in the body, and the bioavailability of lead stored in bones to become mobilized during fetal development, lead poisoning has multi-generational impacts.<sup>5</sup>

The *Journal of the American Medical Association* has reported that “the total IQ loss in young children that is attributable to current exposures to lead still exceeds that attributable to many pediatric conditions, including brain tumors, congenital heart disease, and traumatic brain injury.”<sup>6</sup>

The long-term effects of childhood lead exposure have high social and behavioral costs. Those who experience childhood lead poisoning have greater needs for special education, long-term health effects, lower lifetime earnings, and a greatly increased tendency to engage in violent criminal activity. In addition to depriving children with the opportunities to have fulfilling and productive lives, lead poisoning burdens the education, health care, and criminal justice systems.<sup>7</sup>

### **DNREC has Failed to Act to Protect Public Health by Enforcing Existing Regulations**

As stated on the DNREC website, “The mission of the Department of Natural Resources and Environmental Control is to ensure the wise management, conservation, and enhancement of the State’s natural resources, **protect public health** and the environment, provide quality outdoor recreation, improve the quality of life and **educate the public** on historic, cultural, and natural resource use, requirements and issues.”<sup>8</sup>

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<sup>4</sup> Centers for Disease Control and Prevention, National Institute for Occupational Health and Safety, Lead: Information for Workers. <https://www.cdc.gov/niosh/topics/lead/health.html>; US Environmental Protection Agency, Learn About Lead. <https://www.epa.gov/lead/learn-about-lead#effects>

<sup>5</sup> International Society for Environmental Epidemiology (ISEE), 2015. Call to action for global control of lead exposure to eliminate lead poisoning. *Epidemiology* 26 (5) 774-777.

<sup>6</sup> Bellinger, D.C. (2017, March 28). Childhood lead exposure and adult outcomes. *Journal of the American Medical Association*, 317(12), 1219-1220. <http://jamanetwork.com/journals/jama/article-abstract/2613136>

<sup>7</sup> Gould, Elise. 2009. Childhood Lead Poisoning: Conservative Estimates of the Social and Economic Benefits of Lead Hazard Control. *Environmental Health Perspectives*, Jul; 117(7): 1162–1167; Nevin, Rick. 2007. Understanding international crime trends: The legacy of preschool lead exposure. *Environmental Research*, 104(3): 315-336.

<sup>8</sup>

<http://www.dnrec.delaware.gov/Info/Documents/Department%20Vision%20Mission%20Values%2010-09.pdf>

Unfortunately, DNREC has failed to protect public health by refusing to enforce existing regulations when lead paint chips, grit and dust contaminated neighboring yards during the City of Newark's sandblasting of the Windy Hills Water Tower. DNREC also failed educate the neighboring public about the risks of the toxic exposure to lead paint chips grit and dust.

DNREC Regulations 1106 Particulate Emissions From Construction And Materials Handling §5.0 Sandblasting states:

No person shall cause or allow sandblasting or related abrasion operations unless sufficient contaminant measures are taken to prevent the sand or abrasive material from traveling beyond the property line where the operation is being conducted.

In April 2016 the City of Newark's contractor Ionion released lead paint chips, grit and dust over neighboring yards during a storm. The breach of containment was discovered by a neighbor's children. Ionion used a rented street sweeper to vacuum one neighbor's yard. In June 2017, following our Freedom of Information Act request, we discovered the breach of containment and the extent of the contamination. In September 2017 the City of Newark collected deep soil samples (3-12' in depth), which showed no contamination. Newark provided this information to DNREC as evidence that there was no issue of concern. However, the resident also collected his own surface soil samples, which were processed at the University of Delaware's Soil Lab. These surface samples showed contamination above 600 and 700 parts per million. The City has recently contracted with Lewis Environmental to clean up one yard. We are not aware of any efforts to remediate additional yards, even though paint chips were reported in at least one other yard.

DNREC made no effort to educate the public by alerting the neighbors that the paint chips, grit and dust that coated their children's playground equipment contained lead. There were never recommendations made to have blood levels of neighboring children tested.

We hope that these regulations and source category permit, once codified into law, will actually be enforced by DNREC, along with all other regulations currently on the books, which are intended to protect public health from irresponsible polluters.

### **DNREC Regulations 1101 Definitions and Administrative Principles**

We support the proposed definition of dry abrasive blasting:

"Dry abrasive blasting" means propelling an abrasive material under dry, pressurized conditions against a surface to remove coatings or contaminants or to prepare for subsequent coating. Dry sandblasting is included within this definition.

We support the proposed definition of lead-containing coating:

“Lead-containing coating” means a coating that contains lead or lead compounds.

We support the proposed definition of water tank:

“Water tank” means a storage vessel, elevated or at ground level, that holds potable or non-potable water for use in including, but not limited to, a potable water system, a manufacturing process or other type of process, or for fighting fires.

## **DNREC Regulations 1102 Permits**

We support the following change to DNREC Regulations 1102 Appendix A 15.0 to remove the current exemption for dry abrasive blasting of lead paint from water towers.

15.0 Outdoor painting and sandblasting equipment except for the removal of lead-containing coatings from outdoor water tanks by dry abrasive blasting.

### **Source Category Permit**

#### 1.0 General Provisions

We support the provisions in this section.

#### 2.0 Emission Limitations

We support the provisions in this section.

#### 3.0 Operational Limitations

The permit should specify that dry abrasive blasting should be halted whenever wind speeds render the curtain and above ground cover ineffective in containing particulate matter on the site.

This section relies heavily on SSPC guidelines, yet those guidelines have not been made available to the public as part of the permit package. In the name of full transparency about what the details permit mean in this section, those guidelines should have been made available.

#### 4.0 Site Emergency and Release Response Plan

The water tank owner should submit a Site Emergency and Release Response Plan a minimum of 60 days before the start of work, instead of 30 days. This additional time will provide DNREC

and the public with adequate time to review the plan and for any necessary changes to be made prior to the beginning of work on the site.

The Site Emergency and Release Response Plan should include:

1. the immediate notification of the public likely to be impacted of the risks of lead exposure
2. a coordinated effort between the water tower owner, DNREC, and the Delaware Division of Public Health to protect the health of area residents, including blood lead testing of all children within the adjacent area (paid for by the permit-holder),
3. personal precautions that can be taken by individuals,
4. a person to contact for questions/concerns at DNREC, and
5. a proposed response timeline.

All dry abrasive blasting work at the water tower should stop when a breach occurs, and should not commence until the Site Emergency and Release Response Plan is fully implemented.

Correct spelling error:

4.1.9 Post-incident report to be submitted ~~ei~~ to the Department

## 5.0 Monitoring Requirements

Requests to use a different method of air monitoring (5.1) must be just as rigorous as those described in this section.

The permit should require the air monitors to operate daily (5.3.2). Currently, daily monitoring is left out of the permit, creating vague language that is subject to interpretation.

Analysis of air filters should be conducted as soon as practical (5.3.4). Currently, there is no timeline for when the filters should be tested, which could lead to the filters not being tested until well after the project is completed.

Surface soil sampling should be required prior to and upon completion of the dry abrasive blasting to establish a baseline of lead contamination in the soil, and data points to compare following dry abrasive blasting. We recommend soil sampling within a 100' perimeter from the water tower. Such sampling is the best assurance for the public that a breach of containment did not occur during dry abrasive blasting, and that surrounding community, outdoor play areas, vegetable gardens, and lawns are safe to use.

## 6.0 Recordkeeping and Reporting Requirements

All records should be turned over to DNREC, and preferably scanned and put on the DNREC website, and should be subject to the public records requirements of the Freedom of Information Act. Doing so will preserve the ability of the public to review the records of dry abrasive blasting operations after they occur, should any doubts arise in the months or years following the project.

To prevent delays in the reporting of lead levels in air monitoring results above background levels, and to protect public health in the event of a breach of containment, Section 6.2 should be amended as follows:

Analytical results of the filters from air monitoring, as required by condition 5.3 of this permit, shall be maintained on-site for the duration of the project. Test results showing the presence of lead above the background level shall be reported to the Department ~~within two business days~~ immediately. If lead above background levels is detected in the samples, dry abrasive blasting shall be shut down immediately until the cause is determined and corrected, unless such action has already been taken.

#### 7.0 Public Notification and Reporting Requirements

We support the provisions in this section, especially 7.1 that requires that the “public located within one-thousand feet of the water tank, including, but not limited to, residences, schools, child care facilities, businesses and social service providers.”

The information that is required on the notice should also include a public health statement, such as the following:

“Exposure to lead paint chips, grit and dust from dry abrasive sandblasting is dangerous to public health. Ingesting lead causes neurological damage, behavioral and learning disabilities among children, as well as anemia, high blood pressure, kidney damage and reproductive effects (including miscarriage, stillbirths and premature births) among adults. There are no safe levels of exposure to lead and there is no way to reverse the damage caused by lead exposure.”

The notification should be ADA accessible and should be made available in Spanish (or other languages).

A copy of the notification should also be mounted in an easily visible area at the works site for the duration of the project.

#### 8.0 Administrative Conditions

The source category permit should make clear that subcontractors are held to the same standard as water tank owners and operators in the terms of the permit.

The permit is not clear about the outcomes or alternatives for those who do not comply with the conditions of the permit (8.2). More specific information should be included about what would occur during suspension or revocation of a permit.

## 9.0 Completion of Dry Abrasive Blasting

The post-project checklist should be accompanied by all records verifying the project was completed according to the terms of the permit, including air monitoring results, soil monitoring results, and daily inspection reports.

### Additional Provisions

DNREC should draft a Lead and Health Fact Sheet that must be made available to each person who files a complaint about a dry abrasive blasting project, whether via the 800-number, or any another format. This Lead and Health Fact Sheet should include details about dangers of exposure to lead, steps that can be taken to reduce the likelihood of exposure (don't cut grass, don't run air conditioners), and information about how and where to have their blood tested.