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LEAD-WRAPPED TELECOM CABLES: A Case Study in Media Sensationalism vs. Credible Scientific Review

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EXECUTIVE SUMMARY

Background:

- On July 9, 2023, the *Wall Street Journal* (*WSJ*) posted an eye-catching article entitled "America is Wrapped in Miles of Toxic Lead Cables," followed by a series of related reports and articles in subsequent editions of the newspaper.
- This series was the culmination of investigations examining the prevalence of legacy lead telecommunication cables, connecting them to alleged human health risks from exposure to these cables.
- The reporting demonstrates a broader, troubling pattern in which the media presents testing performed by agenda-driven environmental activists as authoritative; in fact, the testing was not representative of credible scientific testing on lead in the environment. The testing results became a catalyst for unwarranted public fear, spurious attacks on corporations by politicians, new lawsuits, and the waste of public funds by agencies that investigated and ultimately discredited the sensationalist findings.
- Like similar news exposés, in this instance the *WSJ* presented findings on lead cables in a manner seemingly calculated to alarm readers about a "sprawling network" of hidden hazards causing a "significant problem."
- Based on the limited information the *WSJ* has made available, our analysis finds that the approach was designed to overstate potential health risks, and therefore is not a reliable indicator of the actual health risks related to the presence of lead cables.
- The legal community assessing contamination risks should take these views into consideration, as should policymakers and media outlets who might wish to avoid similar errors.

Critique of the *WSJ*'s Approach:

- The WSJ series on lead cables bore six of the usual marks of sensationalist reporting based on non-standard scientific testing:
    - *Conflicts of Interest*: Researchers from Marine Taxonomic Services (MTS) collected samples at the *WSJ*'s request. The Environmental Defense Fund (EDF), a nonprofit environmental advocacy group, partly funded and directed MTS's work.
    - *Lack of Disclosure*: There are no statements in the final report that suggest that MTS's work was independent of its funder. Typically, 'conflict of interest' or 'competing interest' statements are required for publication in peer-reviewed scientific journals.
    - *Unclear Methodology*: MTS's report states that sampling was collected in six regions, but the actual number of samples taken in

each location is not presented by the *WSJ*, nor is any rationale provided for why the 130 sampled sites were chosen.

- *Sampling Bias*: While the *WSJ* series suggested widespread lead concerns due to the presence of more than 2,000 lead-covered cables, they do not mention the bias built into that the sampling. The collection, on average, of only 1.5 samples per site—near the cables themselves—inevitably resulted in a higher incidence of lead detections in the sample set, therefore overstating cause for concern.
    - For example, in Louisiana, MTS collected water in nine places along Bayou Teche and sampled sediment in three, but only presents the highest lead levels among the group.
- *No Raw Data*: The *WSJ* does not describe the methods used to evaluate the lead levels in the water, and the MTS report notes that the samples were all provided to an analytical laboratory selected by the *WSJ* to conduct the analysis. However, neither the actual laboratory test results nor the methodology used to evaluate lead levels have been made available, as consistent with standard scientific practice.
    - For example, in Lake Tahoe, the *WSJ* identified Pace Analytical Services as the lab that evaluated the lead content, but did not make available either the actual laboratory test results or the methodology used to evaluate lead levels,
- *No Modeling Data*: The *WSJ* also refers to predictive analysis conducted by Professor Jack Caravanos to assess the impact of measured lead in children's blood. The details of the modelling are not described.

State and Federal Responses to *WSJ* Reports:

- Non-credible scientific review led to the waste of public resources in debunking the erroneous conclusions from the misleading test results:
    - *EPA Guidance*: EPA acknowledges that, due to the natural occurrence of lead, citizens can expect to find lead in soils around their homes. EPA recently updated residential soil screening levels and recommends a value of 200 ppm be used for screening. EPA recognizes that contact with the soil is an important predictor of risk. EPA also recognizes that there are many ways to protect people from lead exposures, including cleaning, removal, or covering of lead contaminated soils or paints. The proper abatement protocol will depend on the individual situation. In the case of lead cables, it is possible that removing and disturbing the cables could create more of an opportunity for exposure than

simply leaving them in place, a possibility EDF has acknowledged.
  - *Pennsylvania*: Reporting suggested significant health problems in California, Pennsylvania and Coal Center, Pennsylvania caused by buried lead cables. In response to the *WSJ* report, EPA sampled the soil, finding "no threats to the health of people nearby that would warrant an immediate EPA response action."
  - *New York:* Reporting suggested that in Wappinger Falls, New York, children were being exposed to unsafe lead levels at a park. In response, the governor of New York closed the park and undertook an evaluation. Based on the state's analysis, EPA determined that "there are no immediate threats to the health of people nearby."
  - *New Jersey*: Reporting suggested that in West Orange, New Jersey, lead contamination from overhead cables was a concern for children attending an elementary school. Based on the state's analysis, EPA determined that "there are no immediate threats to the health of people nearby."

Conclusion:

- The *WSJ*'s series and its aftermath offers a case study of how sensationalist reporting based on unrepresentative testing leads to reactionary measures such as regulatory investigations, proposed legislative initiatives by lawmakers, litigation, and further media sensationalism. The media, policymakers, and elected officials must take far greater care in questioning the accounts of professional activists and the results-oriented studies they promote. Society can avoid the waste of public resources necessary to debunk results by learning from this case:
  - *Non-credible Scientific Approach*: Given the design of the sampling program on which it was based, the *WSJ* evaluation at best represents a screening-level analysis. The sampling approach was biased toward locations where lead was most likely to be detected and the risk analysis conflated the presence of lead in soils with actual exposure, regardless of whether exposures were expected at the sites where sampling was conducted.
  - *Sensationalistic Language:* Unfortunately, the *WSJ* series of investigative reports does not acknowledge the limitations of its approach, instead using sensationalistic language to create the impression of a serious nationwide health tragedy.
  - *Lack of Fitness for Scholarly Publication*: The analysis presented by the *WSJ* does not meet today's scientific standards and would not be fit for publication in a highly ranked scientific journal and therefore would not appear to provide a sound scientific basis for legal action.

LEAD-WRAPPED TELECOM CABLES: A Case Study in Media Sensationalism vs. Credible Scientific Review

INTRODUCTION

On July 9, 2023, the *Wall Street Journal* (*WSJ*) posted an eye-catching report entitled "America is Wrapped in Miles of Toxic Lead Cables."[1] The paper released seven subsequent news reports on other aspects of lead cables associated with telecommunications companies. In addition to each headline were sub-headings that trumpeted a current "hidden health hazard," stated the telecom companies "have known" about the hazards, and alleged that some workers have "illnesses that can be linked to exposure." At some point, the *WSJ* added a correction/amplification to the first report and its companion article noting that the Environmental Defense Fund (EDF) had made financial contributions to support the collection of lead, soil, and water samples.

It is unusual to see sensationalistic headlines in the *WSJ* based on biased testing funded by an environmental advocacy group. Unfortunately, though, this incident is among the latest example of a broader, troubling pattern in which the media uncritically presents professional environmental activists' testing as "scientific." The consequences were unwarranted public fear, spurious attacks on corporations by politicians, and the waste of public funds

[1] Susan Pulliam, Shalini Ramachandran, John West, Coulter Jones and Thomas Gryta, *America Is Wrapped in Miles of Toxic Lead Cables*, WALL ST. J., July 9, 2023.

government officials expended when debunking the sensationalist findings.

Flawed testing methodologies led to opportunistic, public outcry from Members of Congress—most prominently including New York Congressman Pat Ryan,[2] Illinois Congressman Raja Krishnamoorthi,[3] and Massachusetts Senator Ed Markey.[4] Senator Markey went further and convened a public roundtable and a lead-sampling testing exercise in Massachusetts in February.[5] Federal Communications Commission Chairwoman Jessica Rosenworcel responded to joint letters signed by ten members of the House of Representatives, and fourteen members of the Senate.[6] These developments touched off further media reports, an investigation by New York Governor Kathy Hochul[7] and other state attorneys general investigations,[8] and a number of shareholder and negligence class action lawsuits against telecom providers

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[2] Press Release, *Congressman Pat Ryan Demands Congressional Hearing on Lead Cable Crisis*, July 28, 2023.

[3] Press Release, *Congressman Raja Krishnamoorthi, Senators Durbin and Duckworth Lead 9 Members of the Illinois Congressional Delegation in Inquiry to Federal Agencies Regarding the Potential Risk of Toxic Lead-Sheathed Telecommunications Cables to Illinois Families*, Sept. 12, 2023.

[4] Press Release, *Senator Markey Demands Answers from Telecom Industry Following Reports of Lead Contamination from Aging Infrastructure*, July 12, 2023.

[5] Press Release, *Senator Markey Hosts Roundtable in Western Massachusetts On Threat of Lead Contamination from Degrading Telecommunications Cables, Finds Unsafe Levels of Lead after Testing Cables Today in Chicopee*, Feb. 5, 2024.

[6] Responses of FCC Chairwoman Jessica Rosenworcel to Members of Congress, Dec. 21, 2023.

[7] Press Releases, *Governor Hochul Directs State Agencies to Investigate Old Lead-Covered Cables Left in Communities by Telecommunication Companies*, July 20, 2023.

[8] Press Release, *Attorney General Mayes Announces Investigation into Lead-Covered Cables*, Nov. 29, 2023.

named in the *WSJ* reports.[9] The reports also led to an Environmental Protection Agency (EPA) investigation at public expense.[10]

This *Working Paper* takes a deeper look into the testing that informed the *WSJ* series. The paper provides context missing from the series' testing methodology and results, describing the history of lead cables and presenting an overview of lead contamination in the US population. Our analysis finds that, based on the limited information the *WSJ* has made available, the approach and analysis appears designed to overstate potential health risks. The reports are thus not a reliable indicator of the actual health risks that may exist due to the presence of lead cables. The legal community assessing contamination risks should take these views into consideration, as should policymakers and media outlets who might wish to avoid similar errors.

I. HISTORY OF LEAD CABLE USE

The first telephone lines—single grounded wires made of iron or steel—were installed in Boston in 1877.[11] Iron or steel lines were noisy and prone to corrosion. In 1884 the first experimental long distance telephone line made of copper was set up between Boston and New York. After this, copper wires

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[9] Jon Styf, *AT&T falsely advertised focus on environment despite nationwide network of lead cables, lawsuit claims*, TOP CLASS ACTIONS, Aug. 7, 2023; Sydney Price, *AT&T Brass Hit with Shareholder Suit over Lead Cables*, LAW360, Jan. 12, 2024; and Aleeza Furman, *Report on Lead Cables Sparks Litigation Surge Against Verizon—and Other Companies Could Be Next*, LEGAL INTELLIGENCER, Sept. 13, 2023.

[10] David Shepardson, *US EPA says no immediate lead health threats from telecom cables*, REUTERS, Sept. 22, 2023.

[11] *See The Evolution of Telephone Cable*, Copper Development Ass'n, Inc.

became more common, and many telephone wires were contained in a single telephone cable. Lead alloys were used to cover and protect the copper wires that were used for telecom cables. At the time, lead was considered to be the best material available to protect the cables, and it also played an important role in eliminating electromagnetic noise in the telephone lines. As the technologies advanced, different metals were used in combination with lead, but lead remained critical for protecting the cables. In fact, it is the strength of lead protection that allows for lead-sheathed telecom cables to remain in use. Today, such cables still provide customer voice and data services, including connecting 911 service, fire alarms, and other central monitoring stations.[12] As the *WSJ* analysis found, some cables not currently used remain in place.

In the 1950s telecom companies phased out and replaced lead-sheathed cables. Today's fiber optic cables are coated with acrylates as well as other specialty fiber coatings which can include carbon, metals, nitrides, polyimides, and other polymers.[13] However, in some places, lead is still used.

II. STANDARDS FOR LEAD IN THE ENVIRONMENT

While lead occurs naturally in soils at low levels, beginning around 1922, millions of tons of lead were added to gasoline worldwide, and leaded gasoline subsequently became a major source of population lead exposure. EPA first

[12] U.S. Telecom, Telecom Cable Facts: What You Need to Know.

[13] Larry Donalds & Rick Tumminelli, *Optical Fiber Coatings Explained*, Fiber Optic Center, Aug. 1, 2023.

proposed to remove lead from gasoline in 1972, and, while phase-outs began and lead levels decreased, the ban was not effective until 1996. Under the Safe Drinking Water Act (SDWA) a standard of 0.05 mg/l (50 ppb) was set for lead in drinking water in 1974, and in 1986 lead-free solder, fittings, and pipes were required. In 1991, EPA established a new regulation that set an action level for lead in drinking water of 0.015 mg/l (15 ppb) that requires water systems to take additional steps to reduce lead levels.[14] Lead was banned from paints in 1978.[15] A 1998 EPA report identified lead-based paint, leaded gasoline emissions, and point source air emissions to be the major source of elevated soil lead levels in the US.[16] EPA defines a soil lead hazard as soil that contains lead at or above 400 ppm in a children's play area or 1200 ppm in other residential areas.[17] In January 2024, EPA updated its residential screening level for lead in soil to 200 ppm.[18]

III. LEAD IN CHILDREN

Over time the measured levels of lead in children's blood has continued to decline, and today the Center for Disease Control (CDC) uses a blood lead

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[14] EPA, Lead and Copper Rule.

[15] EPA, Protect Your Family from Sources of Lead.

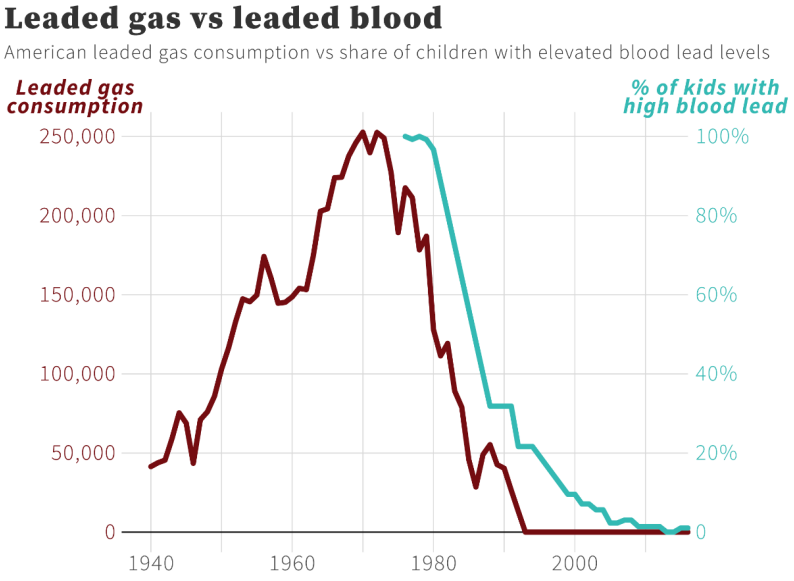
[16] Final Report, Sources of Lead in Soil: A Literature Review, EPA 747-R-98-001a, Feb. 1998.

[17] EPA Region III, Lead in Soil, Aug. 2020, https://www.epa.gov/sites/default/files/2020-10/documents/lead-in-soil-aug2020.pdf.

[18] Press Release, *Biden-Harris Administration Strengthens Safeguards to Protect Families and Children from Lead in Contaminated Soil at Residential Sites*, Jan. 17, 2024.

reference value of 3.5 ug/dL to identify children with blood lead levels that may be higher than average. CDC has stated that no safe blood lead level in children has been identified and seeks to prevent all childhood lead poisoning.

The decline in US children's blood lead levels has been one of the most stunning environmental success stories. As described by EPA, "[t]he median concentration of lead in the blood of children between the ages of 1 and 5 years dropped from 15 micrograms per deciliter (µg/dL) in 1976-1980 to 0.6 µg/dL in 2017-March 2020, a decrease of 96%. At the 95th percentile, blood lead levels dropped from 29 µg/dL in 1976-1980 to 2.1 µg/dL in 2017-March 2020, a decrease of 93%."[19] This decline has been predominantly credited to the removal of lead from gasoline as shown in figure 1[20] below.



[19] EPA, *Key Findings of America's Children and the Environment*.

[20] Christopher Ingraham, *Questions and answers about Gen X and lead*, The Why Axis Substack, May 22, 2022.

Children's blood lead levels continued to decline after leaded gasoline was phased out due to other lead reduction efforts, including the removal of lead-based paint in homes. These efforts have also played a role in decreasing the disparity between the blood lead levels in Black non-Hispanic children compared to other children. In 2023, EPA announced that the median blood lead level in Black non-Hispanic children ages 1 to 5 years in 2015-March 2020 was 0.8 µg/dL, compared to a level of 0.6 µg/dL in White non-Hispanic children and children of "all other races/ethnicities."[21] EPA is continuing to prioritize actions that prevent childhood lead exposure and is also focused on eliminating disparities in blood lead levels.[22]

IV. THE *WSJ* SERIES OF REPORTS

A. Background

The *WSJ* reported on investigations that examined the prevalence of legacy lead telecommunication cables and sought to relate these cables to the presence of lead in the environment and alleged human health risks that stem from supposed exposure to these cables. The reports were presented in a manner seemingly calculated to alarm readers about a "sprawling network" of hidden hazards causing a "significant problem." The reports garnered much attention, even leading Senator Markey to state that "corporate

[21] *Supra* note 19.

[22] *EPA Strategy to Reduce Lead Exposures and Disparities in U.S. Communities*, 540R22006, Oct. 27, 2022.

irresponsibility" was to blame.[23]

B. Partnering with EDF

As described in the first *WSJ* article in the series, the researchers that collected the samples, at the *WSJ*'s request, were from the firm Marine Taxonomic Services (MTS). The work by MTS was partly funded by EDF, a nonprofit environmental advocacy group. The investigation report provided by MTS to EDF[24] and information provided on the EDF webpage[25] show that EDF was more than just a funder of the work conducted by MTS. EDF played a role in directing the sampling program.

In a July 26, 2023, blog post, Tom Neltner, Senior Director at EDF, stated "MTS and EDF developed a sampling protocol to look for lead releases to the environment where they were most likely to be found – near the lead cable."[26] Notably, no statements in the final report suggest that MTS's work was independent of its funder. Peer-reviewed scientific journals require article authors to include a conflict-of-interest statement or a competing-interest statement.[27] These disclosures provide the public with the confidence that scientific researchers acted independently of funding sources. In this case, the

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[23] *Supra* note 4.

[24] MTS and Below the Blue, *Lead Cable Report to EDF: Lead Cable Investigation* (Lead Cable Report), June 30, 2023.

[25] Tom Nelter, *Lead Cables: 66,000 miles overhead or underwater*, EDF Health Blog, July 26, 2023.

[26] *Id.*

[27] *What Is a Conflict of Interest?*, Author Services, accessed May 20, 2024.

work of MTS was not independent of EDF.

C. Study Design

Even more importantly, while not mentioned in the *WSJ* article, the MTS study makes clear that sampling locations were selected "by their likelihood to show high lead levels."[28] The sampling protocol, unlike protocols EPA typically uses to evaluate exposures to children and adults, was designed not to evaluate the concentrations to which people actually may be exposed, but to simply find lead at places where it may occur. This is a very meaningful and important difference for evaluating risk. The *WSJ* series uses this sampling data, as is described in more detail below, to suggest that known, widespread health risks existed but were not appropriately addressed. The problems with this approach, and with the other analyses conducted, are described in additional detail below.

V. ANALYSIS OF THE *WSJ* APPROACH

At the *WSJ*'s request, MTS and the *WSJ* reporters visited about 300 cable sites and collected approximately 200 environmental samples from nearly 130 of those sites.[29] The MTS lead cable report states that researchers collected samples in six regions (South, Midwest, Northwest, Appalachia, Mid-Atlantic, and West). The *WSJ* did not present the actual number of samples

[28] *Supra* note 24 at 5; *see also* Marine Taxonomic Services, Inc., Lead Cable Investigation, June 30, 2023.

[29] *Supra* note 1.

taken in each location and offered no rationale for why the 130 sampled sites were chosen. No explanation is provided for why 170 sites were not sampled. It is possible that upon examination of the cables, based on physical appearance, MTS may have determined that finding lead was unlikely. EDF describes this type of approach as a "standard scientific protocol to screen for a problem to determine whether a full risk assessment is needed, and if so, how to best conduct it."[30] While this is standard for a screening analysis, it provides a biased result that is not intended to be representative of the entire universe of lead cables. While the *WSJ* reports suggest that there are widespread lead concerns due to the presence of more than 2,000 lead covered cables, the *WSJ* also does not mention that the sampling conducted was biased to detect lead.

Equally important, only 200 samples were collected. This means that, on average, only 1.5 samples were taken at each site. Such an approach is inconsistent with best scientific practices. EPA provides guidance on the sampling of soil and water for many different purposes. Agency documents describe how samples should be collected and analyzed. In particular, EPA provides specific guidance for sampling at lead-contaminated residential sites.[31] This guidance recommends that, for a residential yard, if the surface area is less than 5,000 square feet, then a minimum of five composite samples

[30] *Supra* note 25.

[31] EPA, Superfund Lead-Contaminated Residential Sites Handbook, Aug. 2003.

should be collected from at least three different locations within the yard.[32] This means a total of 15 individual samples would be collected and analyzed. For larger areas, a greater number of samples is required. Standardized methods are provided to ensure the robustness and representativeness of the data collected. The collection, on average, of only 1.5 samples per site calls into question the robustness and representativeness of the sampling. While the MTS report acknowledges that the sampling protocol was designed to detect lead, and thus was biased to find a higher incidence of lead detections in the sample set, the *WSJ* reports imply that that the sampling was indicative of a widespread nationwide concern.

In Louisiana, MTS collected water in nine places along Bayou Teche and also sampled sediment in three areas.[33] The *WSJ* reports that eight samples showed elevated lead and specifically notes that one sediment sample was above EPA's threshold for children's play areas.[34] The *WSJ* also reports that, further downstream, a water sample from a pond that is not used for drinking water exceeds EPA's drinking water standard for lead. However, the *WSJ* report does not tell us what the range of lead levels were in these 12 samples and only presents the highest levels. Additionally, the MTS report describes

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[32] *Id.* at 21.

[33] John West, Peter Champelli, Juanje Gómez, Susan Pulliam and Shalini Ramachandran, *Bayou Teche Is an Epicenter of America's Lead Cable Problem*, WALL ST. J., July 10, 2023.

[34] *Id.*

four of the lead cables identified as being underneath a bridge. The report fails to provide sufficient information to understand where the samples were taken in relation to the bridge and if other sources of contamination might be responsible for the lead detections.

Researchers also collected water samples from Emerald Bay, an inlet in Lake Tahoe, at the ends of a severed cable. According to the methods described in the MTS report, water was collected within one centimeter of the cable. The *WSJ* series does not describe the methods used to evaluate the lead levels in the water, and the MTS report notes that the samples were all provided to an analytical laboratory the newspaper selected to conduct the analysis. Pace Analytical Services is identified as the lab that evaluated the lead content of all samples;[35] however, the *WSJ* has not made available the actual laboratory test results or the methodology used to evaluate lead levels.[36] This is not consistent with best scientific practices which require transparency in not only the methods used to collect samples, but also in describing the analytical methods used to evaluate the samples and in presenting those results. Furthermore, the "raw data," which represents the testing results before any calculations are

[35] *Supra* note 1.

[36] This is particularly concerning because previous MTS testing used non-standardized testing methods that have since been referred to as "kiddie-pool science." John A. Sheehan, *The* Wall Street Journal *Investigative Series on Lead Cables: A Surprising Swing and Miss, and a Cautionary Tale for the Plaintiffs' Bar*, N.Y. Law J., Sept. 17, 2023.

conducted, is typically shared.[37] The availability of raw data is critical because it allows for an independent evaluation. Until the *WSJ* makes the methods used to evaluate the water and soil samples and all the results available, conducting a robust evaluation of their findings is simply not possible.

Even if the reports presented a better understanding of the measurement methodology and results, concerns with the *WSJ* approach would remain. As noted above, the sampling was biased to detect the highest levels of lead in soil or water and was not designed to represent locations where adults and children may be exposed to lead. The *WSJ* refers to an analysis that was conducted by Professor Jack Caravanos to predict the impact that measured lead in environmental media has on increasing the lead levels in children's blood. However, the details of the modelling used, including the inputs and assumptions, are not described, and there is no way to replicate the findings as they were presented.

In addition, as shown in a picture in the *WSJ* report, Professor Caravanos used an X-ray fluorescence analyzer to measure the lead levels on the ground abutting what appears to be a telephone pole on the side of a sidewalk.[38] Other measurements were taken at the corner of a playground or

[37] Exceptions to sharing data are made when the data are collected from human subjects, and the potential sharing of the results may compromise the confidentiality of any individual who was part of the study.

[38] *Supra* note 1.

"next to a smashed cable."[39] There is no information in the report to suggest that these are areas where children would actually be present, though perhaps children may play near these areas. In another example, the *WSJ* describes a lead cable that is across the street from a park.[40] It is well accepted that for most contaminants, including lead, the further away one moves from a contaminated area, the lower the exposure will be. Thus, if a child is not likely to access a remote corner of a park or is unlikely to play in the small area of soil that is just below a telephone pole which is on the sidewalk, that child is not likely to have an exposure that is commensurate to the contaminant levels in the measured areas. Considering this basic exposure-science concept, the modelling Professor Caravanos conducted represents a level of exposure children are not likely to experience in the real world unless they can be expected to play in these specific areas over an extended period.

VI. STATE AND FEDERAL RESPONSES TO THE *WSJ* REPORTS

In addition to providing guidance on the sampling of lead in different environments, as noted earlier, EPA also has guidance on the safe levels of lead in soil.[41] EPA acknowledges that, due to the natural occurrence of lead, citizens can expect to find lead in soils around their homes. EPA recognizes that

[39] *Id.*

[40] *Id.*

[41] *Supra* note 17.

contact with the soil is an important predictor of risk. EPA also recognizes that there are many ways to protect people from lead exposures, including cleaning, removal, or covering of lead contaminated soils or paints.[42] The proper abatement protocol will depend on the individual situation.

Just recently, EPA announced it was lowering screening levels for lead in residential areas from 400 ppm to 200 ppm, while noting that "screening levels are not cleanup standards," and that any cleanup decisions are made by EPA specific to each site and its risk factors.[43]

In the case of lead cables, it is possible that removing and disturbing the cables could create more of an opportunity for exposure than simply leaving them in place. EDF staff has acknowledged this reality.[44]

In response to the *WSJ* reports, EPA and state governments have conducted follow-up evaluations to see if the concerns the *WSJ* identified could be confirmed. Follow-up evaluations have been conducted in three areas, and the results thus far show that the *WSJ* findings are not supported by more robust evaluations.

First, *WSJ* sampling and analysis suggested that buried lead cables in California, Pennsylvania and Coal Center, Pennsylvania posed hazards. In

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[42] EPA, Lead Regulations.

[43] *Supra* note 18.

[44] Tom Netler of EDF has recognized that disturbing some lead cables in underwater environments may lead to a bigger problem. *There is no safe level of exposure to lead, says Environmental Defense Fund's Tom Nelter*, CNBC video, July 20, 2023.

response to the *WSJ* report, EPA sampled soils, and the agency's review and evaluation found that "there are no threats to the health of people nearby that would warrant an immediate EPA response action."[45] Unlike the *WSJ*, EPA made all its data and test results available, including comparisons of screening levels to validated laboratory test results.[46] In addition, EPA's analysis also took into account the likelihood of exposure to the soil samples, based on their location and the presence of natural barriers, including grass. EPA stated that "[t]he results do show that some soil samples have lead concentrations above an EPA screening level of 400 parts per million. All areas tested were primarily from areas covered with grass. Well maintained grass provides a natural barrier to reduce exposure and a good cover to prevent soil dust from being easily kicked up. EPA's assessment of the data considers that most of the areas sampled are covered with grass and are not where children gather for long periods of time."[47]

Second, the *WSJ* reports suggested that in Wappinger Falls, New York, cables were exposing children to unsafe lead levels at a park. In response, the governor of New York closed the park and undertook an evaluation.[48] In its final report, the New York Department of Health and Department of

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[45] EPA, California and Coal Center Lead.

[46] *Id.*

[47] *Id.*

[48] Press Release, *Governor Hochul Announces Temple Park Will Reopen After Comprehensive Soil Testing Reveals Park is Safe for Public Use*, Aug. 1, 2023.

Environmental Conservation found no evidence of elevated or widespread lead contamination, and the results suggest "there is no evidence of significant exposure or public health risk for those utilizing the park."[49] The New York agencies also recognized in their analysis that the location of the sample is an important determinant of whether or not there will be exposures. For instance, the agencies determined a lead level slightly above 400 ppm did not present a concern since the sample was taken on the side of a roadway and outside of a play area. As discussed, the *WSJ* analysis did not take location and exposure potential into account when presenting their results. Additionally, unlike the *WSJ*, the New York regulatory agencies made all their testing data publicly available when announcing the reopening of the park.

Third, the *WSJ* had suggested that in West Orange, New Jersey, lead contamination from overhead cables was a concern for children attending an elementary school. In response, EPA collected 192 samples underneath the cables across the street from the school and took 51 samples in front of the school.[50] EPA analyzed each of these samples and publicly released the testing results. Based on this analysis, including an evaluation of the presence of natural barriers, including grass, EPA has determined that "there are no immediate threats to the health of people nearby."[51]

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[49] *Id.*

[50] EPA, West Orange Lead Sampling.

[51] *Id.*

Fourth, EPA and the Louisiana Department of Environmental Quality conducted additional sampling in the St. Martin, Iberia, St. Mary, Ascension, Assumption, St. Charles, and Orleans Parishes in Louisiana. The sampling is complete, and EPA has determined "there are no immediate threats requiring prompt action to protect the health of people nearby."[52]

VI. UNANSWERED QUESTIONS

Unlike with the analyses EPA and New York officials conducted, the *WSJ* has not publicly shared the lab results it relied on for its reports. While some data are presented in the *WSJ* reports, it is impossible to determine how representative the presented data are. Professor Caravanos' conclusions cannot be tested because his analysis is simply not reproducible. This lack of transparency and reproducibility is not consistent with government science-integrity standards and commitments to open access for federally funded research.[53] The *WSJ*'s unwillingness to share the analyses the newspaper relied on for the series of reports raises significant concerns. This lack of transparency is not consistent with widely accepted standards for the publication of credible scientific research.[54]

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[52] EPA, Louisiana Lead Cable.

[53] *See*, *e.g.*, Executive Office of the President, Office of Science and Technology Policy, *Memorandum for the Heads of Executive Departments and Agencies, Increasing Access to the Results of Federally Funded Scientific Research*, Feb. 22, 2013.

[54] *See*, *e.g.*, journal data access policies such as Springer Nature, *Research Data Policy*; Nicholas R. Cozzarelli, *Making research accessible: National Institutes of Health (NIH) public access and PNAS open access policies*, Proceedings of the National Academy of Sciences, Apr. 4, 2005; and *Science* Journals: Editorial Policies.

CONCLUSION

The *WSJ*'s reporting and the aftermath is a case study of how sensationalist reporting based on unrepresentative science can inspire reactionary measures such as regulatory investigations, proposed legislative initiatives by lawmakers, litigation, and further media sensationalism. The media, policymakers, and elected officials must take far greater care in questioning accounts of professional activists and the results-oriented studies they promote. Three key errors led to unwarranted public fear and the waste of public resources.

First, given the design of the sampling program on which it was based, the *WSJ* evaluation at best represents a screening-level analysis. The sampling approach was biased toward locations where lead was most likely to be detected and the risk analysis conflated the presence of lead in soils with actual exposure, regardless of whether exposures were expected at the sites where sampling was conducted.

Second, the *WSJ* series of investigative reports unfortunately does not acknowledge the limitations of its approach, instead using sensationalistic language to create the impression of a serious nationwide health tragedy. Follow-up testing by EPA and New York state in three areas highlighted in the *WSJ* reports has shown that the lead levels are not of concern, and risks were overstated.

The sampling methods and lack of transparency regarding the analytical results lead to further doubts about the credibility of the *WSJ* reports. John Sheehan, a former EPA and Justice Department attorney, correctly referred to the *WSJ* report as a "swing and a miss" in a recent *New York Law Journal* column.[55]

Third and finally, the analysis presented by the *WSJ* does not meet today's scientific standards and would not be fit for publication in a highly ranked scientific journal and therefore would not appear to provide a sound scientific basis for legal action.

[55] *Supra* note 36.