

Declaration of Stephen Petty

1. My name is Stephen Petty. I am submitting this declaration freely and voluntarily, without any threats, inducements, or coercion, to Lesley Pacey, who has identified herself as the Senior Environmental Officer for the Government Accountability Project. I declare under penalty of perjury that the following is true and correct.

Background & Qualifications

2. I am the President and Owner of EES Group, Inc. since 1996, I have worked as a forensic engineering and expert witness as president of Engineering and Environmental Services (Ohio) and Engineering and Expert Services (Florida) in Pompano Beach, Florida. Currently I am the owner and president of Florida's EES Group operations. (Exhibits 1 - 3)
3. As a Certified Industrial Hygienist (CIH), Certified Safety Professional (CSP), and Professional Engineer (PE), I have performed environmental testing and sampling, analysis, and expert testimony on hundreds of forensic engineering and environmental contamination projects over more than four decades. (Exhibit 1.)
4. My understanding is that I am one of only a couple of hundred individuals in the U.S. who have all three (CIH, CSP, and PE) certifications. I am the author of a textbook on forensic engineering (Forensic Engineering: Damage Assessments for Residential and Commercial Structures 1st – 2013 and 2nd Edition - 2022). The textbook is based on nearly 10,000 projects completed over the past 25 years. The 2nd edition was endorsed by the International Codes Council. I was also an adjunct professor at Franklin University and am the holder of nine U.S. patents. (Exhibit 1.)
5. I have been selected to determine exposures and adequacy of warnings on hundreds of projects including but not limited to approximately ~50 Monsanto Roundup Cases, four forever chemicals cases (PFAS), and 100s of cases involving benzene, gasoline, paints, inks, solvent products, legionella, mold, bacteria, anthrax and other biotoxins. (Exhibits 1, 3.)
6. After a Norfolk Southern train derailed in East Palestine, Ohio, on February 3, 2023, I was hired by plaintiffs' attorneys Simmons Hanly Conroy; and later the other class law firms. Thus, I have independent information regarding contamination and other information regarding the incident. I'm precluded from providing this information under confidentiality and intend to honor that confidentiality unless otherwise ordered by the court.

Purpose of Declaration

7. I am speaking out today to make a record of my support for independent testing expert and Government Accountability Project whistleblower Scott Smith's work, who found elevated levels of dioxins, semi volatile organic compounds, and PAHs during multiple rounds of testing in and around East Palestine, Ohio following the train derailment, subsequent burns, and open detonation of five train cars containing vinyl chloride. (Exhibit 4.) Following my initial review of Smith's environmental data and testing methodologies, I have no reasons to question the validity of his environmental testing and sampling work he completed in and around East Palestine, Ohio.
8. The EPA/Norfolk Southern contractor Arcadis performed testing for dioxins within the ~1-mile wide by ~2-mile-deep evacuation zone southeast of East Palestine. This evacuation zone was based on wind directions on the morning of February 6, 2023. However, by early afternoon of this date the winds became calm and variable from the south to southwest. (Exhibits 5-6.) This has implications (described in more detail below) for why the "controlled burn" was allowed to take place as well as the focus on EPA-approved sampling plans proposed later that month with a focus on the evacuation zone.
9. I also was motivated to speak out at this time because toxicologist Dr. Arch Chip Carson, who was hired by plaintiffs' attorneys, told class members in a video shown at a town hall on August 1, 2024 that they can expect no long term health impacts due to the derailment, subsequent fires, and release of multiple chemicals in East Palestine.¹ He was basically saying that there was really nothing to see there. My opinion, based on my long-time knowledge as an exposure expert on hundreds of cases, and a review of publically available data and the lack of supporting analyses he provided, is that his opinions were in general, at best speculation, and at worst simply incorrect.

Too Early to Declare "No Long-Term Health Impacts."

10. Certainly, there's evidence from Scott Smith's work, and others, that show evidence of significant environmental contamination. But there are really two issues: i) environmental contamination and ii) potential personal injuries to residents. Mr. Smith's work has focused on the former.
11. Scott Smith, the EPA and contractors, have shown there is significant environmental contamination of the site. The open question is the extent of, and implications of, such contamination.

¹ Available at: <https://www.youtube.com/watch?v=gBT14cWtmTA>

12. As far as the comments on personal injury by Dr. Carson are concerned, his assurances are, in my opinion, premature and unsupported by any cited cumulative exposure analyses. It is like early on when Ohio Governor Mike DeWine gave us the “all clear” by taking a sip of water and saying there is no problem here. Such surface contamination would likely take months to years to reach the well-heads, and this single cup of water would not likely reflect residents’ exposures to drinking and being in contact with such waters. Reflecting back on Dr. Carson’s statements, to my knowledge, nobody has completed a cumulative exposure assessment for individuals to the cocktail mix of chemicals to which they were potentially exposed and will potentially continue to be exposed from this incident. Neither Mr. Smith’s, nor the EPA/Tetra Tech data suggest there is not environmental contamination above screening levels but more importantly, none of the information reviewed has revealed cumulative exposure analyses. Thus, his statements again are simply speculative.

Scott Smith’s Independent Testing is Sound

13. I am speaking out in this statement regarding Scott Smith’s independent testing in East Palestine, Ohio because Scott Smith asked me to do so. Scott was most interested in me vouching for him, given the criticism he has been receiving from a variety of sources criticizing the data he is taking as well as his own credentials.
14. To that extent, where available, I have reviewed both the EPA data that Scott Smith has reviewed, as well as Mr. Smith’s summary spreadsheets regarding his and EPA/Tetra Tech’s data and finally some of Mr. Smith’s Eurofins laboratory reports.
15. First, I want to point out that whether it be us on the plaintiff side, or whether it be the railroad or the EPA or Norfolk Southern contractors such as Arcadis, or Scott Smith, we are all using the same lab to my knowledge, which is Eurofins Labs.
16. When you submit samples to the lab, you are constantly interfacing with the lab both with respect on the front end for media, such as what method should be used for a specific analyte? What containers do I need for a specific analyte? How many of such containers do I need? How do I put the samples into containers? How do I store them and preserve the samples? Do I put them on ice or not? How do I fill out the chain of custody form? How do I seal the container if shipping, etc.? This is always an interactive process with the laboratory. Moreover, once the samples are received, the laboratory will provide feedback on the chain of custody or call you if something is wrong or needs to be corrected. Thus, if something has not been done properly, you almost always have comments coming back. These processes and interactions happen all the time to anyone submitting samples.
17. I asked Scott what he did between samples; whether he changed gloves, if he cleaned the sampling shovels or spoons, whether he used distilled water to clean equipment. He

indicated that these were his processes during sample collection, and I do not see any particular difference between what he did and what others do based on my 40+ years of experience in this area.

18. With respect to the criticism that he is not a scientist, I think that is rich coming from people who are lawyers who are, to my knowledge, not scientists themselves. The fact of the matter is that Mr. Smith has ~25 patents. The process of developing patent claims requires one to use the scientific method and requires one to have quite a bit of a science background in order to have a patent with commercially viable claims.
19. I know this because I was responsible for Columbia Gas's intellectual property, and I have nine patents of my own. I was a Senior Research Scientist/Engineer and Section Manager. Moreover, I was responsible for the entire R & D department's intellectual property (i.e., patents, patent maintenance, new patent submittals for US and non-US intellectual property).
20. Further, I believe that such criticisms of Mr. Smith are a bit shallow since in my experience many of the testing technicians in the field have much less experience than Mr. Smith. Often, field staff that actually sample in the field are very junior people, because senior people are relatively expensive and junior staff are more cost effective. I would be curious to know the backgrounds and experience of all the people that say, for instance, Norfolk Southern contractor Arcadis used for their sampling work in East Palestine.

Non-public Tetra Tech Creek Data Differs from Published Creek Data

21. I have reviewed the EPA/Norfolk Southern data summarized by Scott Smith. (Exhibit 7.) What is odd in the EPA data summaries is that they do not list the MDLs, the minimum detection limits (MDLs), which greatly misleads the reader as to what was actually produced. I am nearly certain that the EPA, or their surrogates, would have received their analytical results in the same laboratory report formats that Mr. Scott Smith, I, and others received from Eurofins.
22. For a given sample constituent, Eurofins reports the Actual Value (AV), the Reporting Limit (RL) and the Minimum Detection Limit (MDL) along with units of these values and any notes or flags regarding the actual value.
23. What the EPA appears to have done is combine or commingle two categories of data into a single category, which misleads the reader by obfuscating known additional information. An actual result for a given chemical sample will fall into one of three categories:
 1. The actual value (AV) is above both the RL, and the actual value is reported.

2. The actual value (AV) is below the RL but above the MDL; typically, one is advised to use the actual value.
 3. The actual value falls below the MDL and is reported as <MDL value.
24. However, what the EPA often did in their summary report was to report any values below the RL as less than the RL or <RL and leaves out the MDL value (which they almost assuredly were provided). Thus, the reader does not know if the actual value (AV) was between the RL and MDL where it would be reported or below the MDL where it would be reported as <MDL. This is important because screening levels can often be in the second category, between the RL and MDL, but since the AV is not listed (even though it is likely known) one cannot determine if the AV is above the screening level. This obfuscation by the EPA in terms of presenting the data is highly unusual and certainly not a transparent representation of the information they were likely provided by Eurofins.

So, let's take a hypothetical to illustrate what I am saying in the previous paragraph: Let's assume that the MDL is 100 and the RL is 1,000. Again, we have three scenarios for the actual data. The actual data could be 2,000 so it would be above the RL and above the MDL of 1000 and 100 respectively. So, the value (of 2000) would just be reported.

Under the second scenario, let's say the AV = 700. So, it's below our hypothetical RL of 1,000, but above the MDL of 100. The lab reports the AV of 700 and usually gives it a "J" flag, which means it is basically below the RL and above the MDL.

Under the last, or third scenario, let's say, the value is less than 100. In other words, the method cannot see any value below 100 and it reports it as less than 100 or <MDL. Also, it typically provides one with a note or "U" flag, which indicates that an AV was not able to be detected. However, that does not mean that the AV is zero. It means it is just below 100. Convention is you either use a 0 or a 50% of the MDL in subsequent analyses such as averages and other statistics.

25. But what the EPA did was they did not report the MDL in their summary. And using my hypothetical, just reported that the AV was less than 1,000, the RL. But what if they actually had a value of 700? That would be a value one could use to compare with screening values. But by not providing the MDL information, one cannot determine whether or not the actual value is between the two values (RL and MDL) or less than the MDL.
26. Thus, the EPA combined information from those two categories, the MDL and the RL, to blur out the actual data. The contractor Tetra Tech, which is the author of non-public data sheets Scott Smith obtained, did not do this blurring of these two categories. Their spreadsheets from Eurofins actually show the MDLs. It is the EPA that did this odd and unusual reporting of the data. I think if you had the actual Eurofins laboratory reports for

each of those EPA reported summaries, you would very likely see MDLs were provided to the EPA.

27. I have done hundreds of forensics/analytical projects over my career and in my reports, and always try to include the actual laboratory data reports that come from the laboratory in an Appendix so that a third party can always audit what I have done. This ensures full transparency of the basis of my work and lets the reader perform their own independent analyses should they desire to do so. EPA did not provide the underlying Eurofins reports to provide full transparency of the information they or their surrogates actually received.

East Palestine Evacuation Zone Should Have Been Redefined When Wind Shifted

28. Based on my very recent analyses, the wind rose data on the morning of February 6, 2023, the day of the “controlled burn” where the vinyl chloride tank cars were detonated and their contents burned, shows the winds coming out from northwest. Based on that, a decision was made to evacuate to the southeast two miles deep and one mile wide. The problem is that between noon to 1 p.m., the winds changed, becoming calm or coming from the south to southwest. In terms of actual wind speeds and direction during the “controlled burn,” two thirds of the time (~50 + ~16), the winds were either calm or from the west/southwest; the rest of the time (~1/3rd of the time) they were from the southeast/south. In no case were the winds during the burn from the northwest (0% of the time). (Exhibit 4.)
29. Given the changes in the wind directions, coupled with an incorrect evacuation zone, the burn should have been suspended/stopped by as early as noon that day given changing weather conditions to ensure evacuations were in the correct direction. Nevertheless, the “controlled burn” was conducted as scheduled at ~3:30 p.m. So, if you were the incident commander and you evacuated to the southeast, and all of a sudden you realize, hey wait a second, the winds aren’t going in that direction anymore, he or she needed to shut down the planned burn and say, “Look, we cannot go forward. Things have changed.” But that is not what happened. The burn occurred regardless of the fact that residents were evacuated in the wrong direction.

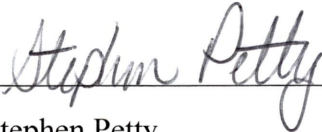
I should add that as a chemical engineer, it was always my opinion that the burn should never have moved forward given the situation was somewhat stabilized three days after the derailment, that the chemicals in the tank cars of concern could and should have been offloaded to tanker trucks (albeit it would have taken more time than placing explosive on the tank cars and burning their contents) and that the decision to do the “controlled burn” would predictably result in widespread contamination of the air, water, soils and sediments.

EPA/Norfolk Southern Contractor Dioxin Soil Sampling Plan Flawed

30. Eventually EPA decided to have Norfolk-Southern's contractor put a sampling program together for dioxins on/about the end of February 2023.
31. But that plan had the vast majority of data being taken in the evacuation zone to the southeast of the "controlled" burn, with some sprinkling of data being done in the other directions as background data.
32. The dioxin soil sampling plan is based on assuming the one-mile by two-mile evacuation zone to the southeast of the "controlled burn" was where the dioxins and furans and other pollutants deposited, and the other areas outside the evacuation area were treated as background for the Arcadis dioxin soil sampling plan. At least during the time of the controlled burn, this plan is backwards. The background areas, where the plume actually went, would likely have higher dioxin readings than the evacuation zone, where the plume did not go. Whether this was incompetence or intentional is not known. But either way, it would result in a conclusion that the levels in the evacuation zone were less than background. As shown in my wind rose plots, the evacuation zone was not in the direction of the plume during the February 6, 2023 open burn of five vinyl chloride train cars.
33. To my knowledge, to this day the EPA has not either recognized or acknowledged, these significant changes to wind speeds and directions during the times of the "controlled burn."
34. As shown in the wind rose data, the winds calm to light and not out of the northwest which served as the basis for the evacuation zone to the southeast. Given that this was the case, the decision to continue the "controlled burn" should have been stopped given the dramatic changes in the wind directions and evacuations in the wrong direction from the planned burn. Secondly, at least the major deposition from the plume during the period of the controlled burn would not have been to the southeast given actual wind speeds and directions at the time of the burn. Thirdly, I think the sampling that was done for dioxin for the EPA through Arcadis assumed that the deposition of the material was primarily in the evacuation zone to the southeast and the other areas were background. This is incorrect because, at least during the period of the "controlled" burn, since the winds were calm or from the south/southwest and not from the northwest to southeast.

I have read the foregoing seven-page statement, and declare that it is true, accurate, and complete to the best of my knowledge and belief.

Executed on SEPTEMBER 21, 2024.



Stephen Petty