Administrator Michael Regan
U.S. Environmental Protection Agency
Washington, D.C.
cc: EPA region 5 PIO

April 12, 2023

Dear Administrator:

As you know, I have been leading a Purdue University volunteer scientific support team to help households impacted by the Norfolk Southern Chemical Spill and Chemical Fires response since February. I have 20 years of experience helping agencies and communities respond to and recover from chemical incidents related to wildfires and chemical spills.

I am notifying you about a recent development because your agency is Incident Commander, which I was told by USEPA Region 5 directly when I visited East Palestine a few weeks ago.

A household in East Palestine Ohio contacted us asking for help. They received a three page document sent from Stantec, on Norfolk Southern's behalf. This document contained lab results about their drinking water. This household, as may likely be the case with others, is unable to understand the results because they are not subject matter experts and the information provided is deficient. This household is extremely concerned that the results indicate their drinking water is unsafe for use.

I reviewed the Stantec document and have become concerned that this letter, and likely others like it to other households, is yet another example and evidence of substandard and poorly thought out execution in response to this disaster. I encourage you to rapidly exert oversight of the testing and standardize the communications. Households impacted deserve sound science, and clear and responsible communication about their health and safety. The following are the concerns:

1. There were more than 200 chemical names listed on 2 pages of Tables, making it barely readable even to scientists and engineers skilled in water analysis and reporting.
2. There were 29 compounds where the analytical detection limit was much higher than the "Regulatory Standard" noted in the table. This indicates that Stantec and Norfolk Southern were unable to confirm that 29 chemicals are NOT present in the home owner's drinking water.
3. The basis of the "Regulatory Standard" is unstated. Each published limit should have a footnote indicating what regulatory standard the limit came from.
4. For those compounds that have "Regulatory Standard" noted by "n/v", it would be more appropriate to list health effects limit standards that are generally accepted by health and toxicity experts. Notably, the DDT, DDD, and other congeners, as well as some polycyclic aromatic hydrocarbons (PAH) are listed as "n/v", however, references from the scientific community should be used as a benchmark if no regulatory standard exists.
5. It seems that less than 8 point font size was used to cram in all the information into the Tables.

6. There was no QA/QC data provided with the test results. This is a serious red flag and indicates that proper sample collection and analysis methods may not have been applied.
7. At a minimum, the manifest/bill of lading should be cross-referenced to this list of chemicals to ensure the chemicals being transported that were involved in the spill have the acceptable detections that were below the regulatory limits. Any chemicals that were not analyzed, or with detection limits greater than the regulatory limits or health effects/toxicity limits, makes this sampling and analysis effort incomplete to assess impacts to household drinking water. The above is notwithstanding the additional chemicals that may have been transformed as a result of the combustion effort, a universe of chemicals that may be analyzed and recognizable, but some (perhaps many) not.

Based on the information provided to the homeowner I have advised them to use bottled water as a result of the ongoing failure of Stantec, Norfolk Southern, and others to appropriately test and report results.

The public has a right to the supporting information and such information being provided in a clear and understandable way. This activity fails to achieve that goal.

I urge you to initiate an investigation and exert oversight of testing and communication.

Please do not hesitate to contact me. I can be reached at awhelton@purdue.edu.

Sincerely,

Andrew Whelton, Ph.D.

Enclosures

Stantec Consulting Services Inc.
600 Grant Street, Suite 4940
Pittsburgh, PA 15219-2722

VIA CERTIFIED MAIL AND EMAIL

[redacted]

April 6, 2023

[redacted]

Subject: Private Supply Water Sampling Results

Dear [redacted]

Stantec Consulting Services Inc. (Stantec), a contractor to Norfolk Southern, is providing analytical results for the potable water sample collected on your property located at [redacted] collected by Stantec or another Norfolk Southern contractor. The water sample was collected on [redacted] as part of a response to the East Palestine Derailment. Your sample is designated as [redacted] in this program. The sample was collected in accordance with the Sampling Plan, which includes Standard Operating Procedures for sample collection, that was developed with the cooperation of federal, state and local regulatory agencies.

The sample was sent to an analytical laboratory for analysis. The data obtained from the laboratory was reviewed for quality assurance purposes. A table of the final data is enclosed. If you would like the full analytical report, you may contact NSTaggartRoad@stantec.com or 330-849-3919. The data has been evaluated, and the results were less than the applicable drinking water standards and not detected above the laboratory reporting limits.

Additional assessment of your water may be performed, and you may be contacted after further evaluation with Columbiana County Health Department (CCHD).

In addition, should you wish to receive additional information about your potable water sample or have any questions, you may contact the CCHD at 330-424-0272 or review information on CCHD's website, (https://www.columbiana-health.org/). Please note, CCHD will also provide the results for the sample(s) that they also collected from your property.

Sincerely,

STANTEC CONSULTING SERVICES INC.

cc: Columbiana County Health District, Norfolk Southern

Enclosure

Private Supply Water Sampling Results

			Sample Location Collection Date	
Chemical Name	**CAS#**	**Units**	**Regulatory Standard**	
1,1,1,2-Tetrachloroethane	630-20-6	µg/L	0.57	<0.50
1,1,1-Trichloroethane	71-55-6	µg/L	200	<0.50
1,1,2,2-Tetrachloroethane	79-34-5	µg/L	0.076	<0.50
1,1,2-Trichloroethane	79-00-5	µg/L	5	<0.50
1,1-Dichloroethane	75-34-3	µg/L	2.8	<0.50
1,1-Dichloroethylene	75-35-4	µg/L	7	<0.50
1,1-Dichloropropene	563-58-6	µg/L	n/v	<0.50
1,2,3-Trichlorobenzene	87-61-6	µg/L	7	<0.50
1,2,3-Trichloropropane	96-18-4	µg/L	0.00075	<0.50
1,2,3-Trimethylbenzene	526-73-8	µg/L	55	<0.50
1,2,4-Trichlorobenzene	120-82-1	µg/L	70	<0.50
1,2,4-Trimethylbenzene	95-63-6	µg/L	56	<0.50
1,2-dibromo-3-chloropropane (DBCP)	96-12-8	µg/L	0.2	<0.20
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	µg/L	0.05	<0.20
1,2-Dichlorobenzene	95-50-1	µg/L	600	<0.50
1,2-Dichloroethane	107-06-2	µg/L	5	<0.50
1,2-Dichloropropane	78-87-5	µg/L	5	<0.25
1,3,5-Trimethylbenzene	108-67-8	µg/L	60	<0.50
1,3-Butadiene	106-99-0	µg/L	0.071	<5.0
1,3-Dichlorobenzene	541-73-1	µg/L	n/v	<0.50
1,3-Dichloropropane	142-28-9	µg/L	370	<0.50
1,3-Dichloropropene (total)	542-75-6	µg/L	0.47	<0.50
1,4-Dichlorobenzene	106-46-7	µg/L	75	<0.50
1,4-Dioxane	123-91-1	µg/L	0.46	<5.0
1-Chlorobutane	109-69-3	µg/L	640	<5.0
1-Methylnaphthalene	90-12-0	µg/L	1.1	<0.10
2,2-Dichloropropane	594-20-7	µg/L	n/v	<0.50
2,4'-DDD	53-19-0	µg/L	n/v	<0.10
2,4'-DDE	3424-82-6	µg/L	n/v	<0.10
2,4'-DDT	789-02-6	µg/L	n/v	<0.10
2,4-Dinitrotoluene	121-14-2	µg/L	0.24	<0.51
2,6-Dinitrotoluene	606-20-2	µg/L	0.049	<0.10
2-Butanone (MEK)	78-93-3	µg/L	5,600	<5.0
2-Butoxyethyl acetate	112-07-2	µg/L	1,200	<0.10
2-Butyloxyethanol	111-76-2	µg/L	2,000	<3.9
2-Chlor-1,3-Butadiene (Chloroprene)	126-99-8	µg/L	0.019	<5.0
2-Chlorotoluene	95-49-8	µg/L	240	<0.50
2-Ethylhexyl acrylate	103-11-7	µg/L	500	<0.50
2-Methylnaphthalene	91-57-6	µg/L	36	<0.10
2-Nitropropane	79-46-9	µg/L	0.0097	<2.0
4,4'-DDD	72-54-8	µg/L	0.032	<0.10
4,4'-DDE	72-55-9	µg/L	0.046	<0.10
4,4'-DDT	50-29-3	µg/L	0.23	<0.10
4-CHLOROTOLUENE	106-43-4	µg/L	250	<0.50
4-Methyl-2-Pentanone (MIBK)	108-10-1	µg/L	6,300	<2.0
Acenaphthene	83-32-9	µg/L	530	<0.10
Acenaphthylene	208-96-8	µg/L	n/v	<0.10
Acetochlor	34256-82-1	µg/L	350	<0.10
Acetone	67-64-1	µg/L	18,000	<5.0
Acrylonitrile	107-13-1	µg/L	0.052	<1.0
Alachlor	15972-60-8	µg/L	2	<0.10
Aldrin	309-00-2	µg/L	0.00092	<0.10
Allyl chloride (3-Chloro-1-propene)	107-05-1	µg/L	0.73	<5.0
alpha-BHC	319-84-6	µg/L	0.0072	<0.10
alpha-Chlordane (cis-Chlordane)	5103-71-9	µg/L	3.6	<0.10
Anthracene	120-12-7	µg/L	1,800	<0.10
Atrazine	1912-24-9	µg/L	3	<0.10
Benzene	71-43-2	µg/L	5	<0.50
Benzo(a)anthracene	56-55-3	µg/L	0.03	<0.10
Benzo(a)pyrene	50-32-8	µg/L	0.2	<0.020
Benzo(b)fluoranthene	205-99-2	µg/L	0.25	<0.10
Benzo(g,h,i)perylene	191-24-2	µg/L	n/v	<0.10
Benzo(k)fluoranthene	207-08-9	µg/L	2.5	<0.10
Benzyl Butyl Phthalate	85-68-7	µg/L	16	<1.0
Benzyl chloride	100-44-7	µg/L	0.089	<0.50
beta-BHC	319-85-7	µg/L	0.025	<0.10
bis(2-Chloroethyl)ether	111-44-4	µg/L	0.014	<2.0
bis(2-Ethylhexyl)phthalate	117-81-7	µg/L	6	<0.61
Bromacil	314-40-9	µg/L	n/v	<0.10
Bromobenzene	108-86-1	µg/L	62	<0.50
Bromodichloromethane (Dichlorobromomethane)	75-27-4	µg/L	80	<0.50
Bromoethane (Ethyl Bromide)	74-96-4	µg/L	n/v	<0.50
Bromoform	75-25-2	µg/L	80	<0.50
Bromomethane	74-83-9	µg/L	7.5	<0.50
Butachlor	23184-66-9	µg/L	n/v	<0.10
Caffeine	58-08-2	µg/L	n/v	<0.051 UJ
Carbon Disulfide	75-15-0	µg/L	810	<0.50
Carbon Tetrachloride	56-23-5	µg/L	5	<0.50
Chlordane	57-74-9	µg/L	2	<0.051
Chloroacetonitrile	107-14-2	µg/L	n/v	<5.0
Chlorobenzene	108-90-7	µg/L	100	<0.50
Chlorobenzilate	510-15-6	µg/L	0.31	<0.10
Chlorobromomethane	74-97-5	µg/L	83	<0.50
Chlorodibromomethane (Dibromochloromethane)	124-48-1	µg/L	80	<0.50
Chloroethane	75-00-3	µg/L	8,300	<0.50
Chloroform	67-66-3	µg/L	80	<0.50
Chloromethane	74-87-3	µg/L	190	<0.50
Chloroneb	2675-77-6	µg/L	n/v	<0.10
Chlorothalonil	1897-45-6	µg/L	4	<0.10
Chlorpyrifos	2921-88-2	µg/L	8.4	<0.051
Chrysene	218-01-9	µg/L	25	<0.10
cis-1,2-Dichloroethene	156-59-2	µg/L	70	<0.50
cis-1,3-Dichloropropene	10061-01-5	µg/L	n/v	<0.50
cis-Permethrin	54774-45-7	µg/L	n/v	<0.10
Cyanazine	21725-46-2	µg/L	0.088	<0.10
Cyclohexanone	108-94-1	µg/L	1,400	<5.0
Deisopropylatrazine	1007-28-9	µg/L	n/v	<1.0
delta-BHC	319-86-8	µg/L	n/v	<0.10
Desethylatrazine	6190-65-4	µg/L	n/v	<1.0
Di(2-ethylhexyl)adipate	103-23-1	µg/L	400	<0.61
Diazinon	333-41-5	µg/L	10	<0.10
Dibenz(a,h)anthracene	53-70-3	µg/L	0.025	<0.10
Dibromomethane	74-95-3	µg/L	8.3	<0.50

Private Supply Water Sampling Results

			Sample Location Collection Date	
Chemical Name	**CAS#**	**Units**	**Regulatory Standard**	
Dichlorodifluoromethane	75-71-8	µg/L	200	<0.50
Dichlorvos	62-73-7	µg/L	0.26	<0.051
Dieldrin	60-57-1	µg/L	0.0018	<0.10
Diethyl Phthalate	84-66-2	µg/L	15,000	<1.0
Diethylene Glycol	111-46-6	mg/L	n/v	<25
Diisopropyl Ether	108-20-3	µg/L	1,500	<0.50
Dimethoate	60-51-5	µg/L	44	<0.51
Dimethyl Phthalate	131-11-3	µg/L	n/v	<1.0
Di-n-butylphthalate	84-74-2	µg/L	900	<2.0
Di-n-octylphthalate	117-84-0	µg/L	200	<2.0
di-propylene glycol	25265-71-8	mg/L	n/v	<25
Endosulfan I	959-98-8	µg/L	n/v	<0.10
Endosulfan II	33213-65-9	µg/L	n/v	<0.10
Endosulfan Sulfate	1031-07-8	µg/L	110	<0.10
Endrin	72-20-8	µg/L	2	<0.010
Endrin Aldehyde	7421-93-4	µg/L	n/v	<0.10
Epichlorohydrin	106-89-8	µg/L	2.9	<1.0
EPTC	759-94-4	µg/L	750	<0.10
Ethanol (Ethyl Alcohol)	64-17-5	µg/L	n/v	<10
Ethyl acrylate	140-88-5	µg/L	140	<1.0
Ethyl ether	60-29-7	µg/L	3,900	<2.0
Ethyl methacrylate	97-63-2	µg/L	630	<1.0
Ethyl tert-butyl ether	637-92-3	µg/L	70	<2.0
Ethylbenzene	100-41-4	µg/L	700	<0.50
Fluoranthene	206-44-0	µg/L	800	<0.10
Fluorene	86-73-7	µg/L	290	<0.10
gamma-BHC (Lindane)	58-89-9	µg/L	0.2	<0.020
gamma-Chlordane	5103-74-2	µg/L	n/v	<0.10
Heptachlor	76-44-8	µg/L	0.4	<0.041
Heptachlor Epoxide	1024-57-3	µg/L	0.2	<0.020
Hexachloro-1,3-butadiene	87-68-3	µg/L	0.14	<0.25
Hexachlorobenzene	118-74-1	µg/L	1	<0.10
Hexachlorocyclopentadiene	77-47-4	µg/L	50	<0.10
Hexachloroethane	67-72-1	µg/L	0.33	<2.0
Hexazinone	51235-04-2	µg/L	640	<0.10
Indeno(1,2,3-cd)pyrene	193-39-5	µg/L	0.25	<0.10
Iodomethane (Methyl Iodide)	74-88-4	µg/L	n/v	<2.0
Isophorone	78-59-1	µg/L	78	<0.10
Isopropylbenzene	98-82-8	µg/L	450	<0.25
Malathion	121-75-5	µg/L	390	<0.10
Methoxychlor	72-43-5	µg/L	40	<0.10
Methyl acrylate	96-33-3	µg/L	42	<1.0
Methyl Methacrylate	80-62-6	µg/L	1,400	<1.0
Methyl n-butyl ketone (2-Hexanone)	591-78-6	µg/L	38	<5.0
Methyl tert-butyl ether	1634-04-4	µg/L	14	<0.50
Methylacrylonitrile	126-98-7	µg/L	1.9	<5.0
Methylene Chloride (Dichloromethane)	75-09-2	µg/L	5	<0.50
Metolachlor	51218-45-2	µg/L	2,700	<0.10
Metribuzin	21087-64-9	µg/L	490	<0.10
Molinate	2212-67-1	µg/L	30	<0.10
m-Xylene & p-Xylene	108383/106423	µg/L	n/v	<0.50
Naphthalene	91-20-3	µg/L	0.12	<0.10
Naphthalene	91-20-3	µg/L	0.12	<0.50
n-Butyl acrylate	141-32-2	µg/L	560	<1.0
n-Butylbenzene	104-51-8	µg/L	1,000	<0.50
n-Propylbenzene	103-65-1	µg/L	660	<0.50
o-Xylene	95-47-6	µg/L	190	<0.50
Parathion	56-38-2	µg/L	86	<0.51
Pendimethalin	40487-42-1	µg/L	1,400	<0.10
Pentachloroethane	76-01-7	µg/L	0.65	<2.0
Permethrin	52645-53-1	µg/L	1,000	<0.20
Phenanthrene	85-01-8	µg/L	50	<0.10
p-Isopropyltoluene (4-Isopropyltoluene)	99-87-6	µg/L	n/v	<0.50
Prometon	1610-18-0	µg/L	250	<0.10 UJ
Prometryn	7287-19-6	µg/L	600	<0.10
Propachlor	1918-16-7	µg/L	250	<0.10
Propionitrile	107-12-0	µg/L	n/v	<5.0
Propylene glycol	57-55-6	mg/L	400	<25
Pyrene	129-00-0	µg/L	120	<0.10
sec-Butylbenzene	135-98-8	µg/L	2,000	<0.50
Simazine	122-34-9	µg/L	4	<0.071
Styrene	100-42-5	µg/L	100	<0.50
Terbacil	5902-51-2	µg/L	250	<0.10
Terbuthylazine	5915-41-3	µg/L	n/v	<0.10
Tert-amyl methyl ether	994-05-8	µg/L	n/v	<3.0
tert-Butyl Alcohol (2-Methyl-2-propanol)	75-65-0	µg/L	150	<2.0
tert-Butylbenzene	98-06-6	µg/L	690	<0.50
Tetrachloroethene (PCE)	127-18-4	µg/L	5	<0.50
Tetrahydrofuran	109-99-9	µg/L	3,400	<5.0
Thiobencarb	28249-77-6	µg/L	160	<0.10
Toluene	108-88-3	µg/L	1,000	<0.50
Total Trihalomethanes[1]	TTHM	µg/L	80	<0.50
trans-1,2-Dichloroethene	156-60-5	µg/L	100	<0.50
trans-1,3-Dichloropropene	10061-02-6	µg/L	n/v	<0.50
trans-1,4-Dichloro-2-butene	110-57-6	µg/L	0.0013	<5.0
trans-Nonachlor	39765-80-5	µg/L	n/v	<0.10
trans-Permethrin	51877-74-8	µg/L	n/v	<0.10
Trichloroethylene (TCE)	79-01-6	µg/L	5	<0.50
Trichlorofluoromethane	75-69-4	µg/L	5,200	<0.50
Trichlorotrifluoroethane (Freon 113)	76-13-1	µg/L	10,000	<0.50
Trifluralin	1582-09-8	µg/L	2.6	<0.10
Vinyl acetate	108-05-4	µg/L	410	<5.0
Vinyl chloride	75-01-4	µg/L	2	<0.20
Xylene (Total)	1330-20-7	µg/L	10,000	<0.50

Notes:

[1] Includes the sum of detections for the following chemicals: chloroform, bromodichloromethane, dibromochloromethane, and bromoform

<0.03 Analyte was not detected at a concentration greater than the laboratory reporting limit.

n/v No standard/guideline value.

UJ Estimated non-detect

µg/L micrograms per Liter