

10.23.19. Exhibit E

**"THE VARIANCE WILL NOT BE CONTRARY TO THE PUBLIC INTEREST"**

Packet Contents:

General Information .....	1 – 4
Information on Asphalt Safety – Fires – Explosions – Accidents .....	5 – 8
NOAA CAMEO Information and Data .....	9 – 12
Emission Graphs and Information .....	13 – 24
Decibel Scale .....	25
Aquifer Map .....	27



**(A) The variance will not be contrary to the public interest**

It is surprising that Bill Belanger, salesman for the asphalt plant, was able to say at the 1988 ZBA hearing that “to his knowledge there have been no explosions or fires involving this equipment”. A Google search of asphalt plant fires/explosions in the US in the past 5 years found 31 newsworthy events while a Google search for fires/explosions at construction aggregates facilities found 3. The construction aggregates industry reports 10,000 operations while it is reported that there are about 3,500 asphalt mix production sites operate across the United States. This strongly suggests that asphalt mix operations are at least 31 times more likely to experience a newsworthy fire/explosion event than operations that quarry and process stone, sand and gravel.

According to the Asphalt Chemical Data sheet from United States Oceanic and Atmospheric Administration’s CAMEO database of hazardous materials: “These products have a very low flash point and if a tank, rail car or tank truck is involved in a fire it should be isolated for 1/2 mile in all directions”. When combating an asphalt fire, unmanned hose holders are to be used and the containers must be cooled with “flooding quantities of water until well after the fire is out”. They go on to state that “for a massive fire, use unmanned hose holders or monitor nozzles; if this is impossible, withdraw from the area and let the fire burn.” We wonder how long and how far the fire would go on for if the “let the fire burn” option had to be taken. We are also wondering if our town’s emergency responders have the capacity to evacuate areas 1/2 mile in all directions while also combating a dangerous and potentially explosive situation.

Contrary to what Quinn properties asserted in their 6/21/2019 variance application, operating an asphalt batch plant should not be considered “an extension of the existing sand and stone extraction operation.” Is is an entirely different industry - one of the “undesirable industries” that the residents of Wilton have been guarding against with their zoning ordinances, since 1981. The North American Industry Classification System (NAICS) code for asphalt mixing is 324121. This is a petroleum industry code *not* a quarrying and mining industry code.

All of the industries in the NAICS 324 Petroleum & Coal Products code are covered by the EPA’s Toxics Release Inventory (TRI) program. “TRI is a publicly available database that contains information on toxic chemical releases and other waste management activities reported annually by certain covered industry groups as well as federal facilities. (United States Department of Health and Human Services). The TRI program requires facilities in certain industries which manufacture, process, or use significant

amounts of toxic chemicals, to report annually on their releases of these chemicals. The reports contain information about the types and amounts of toxic chemicals that are released each year to the air, water, land and by underground injection, as well as information on the quantities of toxic chemicals sent to other facilities for further waste management.” (United States Department of Health and Human Services). Although smaller asphalt mixing plants don’t have to complete TRI reports for the EPA due to their size, they are still engaging in an industry that is known to release toxins into the environment but, owing to their smaller size, are regulated at the state level.

Three New England asphalt plants that are large enough to have TRI reports (Pike Williston, VT; Pike Wells, ME; Pike Hooksett, NH) report releases of the of the following: POLYCYCLIC AROMATIC COMPOUNDS (more specifically polycyclic aromatic hydrocarbons), BENZO(G,H,I)PERYLENE and LEAD. In addition, there are a host of other EPA documented emissions from “typical batch mix” operations, including from storage tanks, dryer, screens and mixer and load out that are too numerous to list here but are listed in the written documentation that we are submitting to the Board. Perhaps even more concerning is the fact that the asphalt industry has recently begun experimenting with using a variety of waste products, such as shredded plastics, printer toner and incinerator waste as “filler” so there is really no telling what might be trucked in and cooked up on the site.

The December 28, 1988 minutes record the testimony of Bill Belanger as he cited Wells Maine as an example of “this plant” as follows: “does not believe that it would have been approved by that town if it did not meet all criteria for public and environmental safety.” The past ten years of the EPA’s TRI reports from Wells Maine note 32 pounds of Polycyclic Aromatic Compounds released from 2009-2018 and one pound of lead transferred off site from the plant. Bill Belanger also testified to the ZBA that, “what comes from the stack is basically steam”. If POLYCYCLIC AROMATIC COMPOUNDS were “basically steam” they would not be regulated by the EPA.

The World Health Organization has this to say about BENZO(G,H,I)PERYLENE:

“Upon heating, toxic fumes are formed.”

“This produces toxic fumes”

“This substance may be hazardous to the environment.”

“Special attention should be given to air quality and water quality.”

“Do NOT let this chemical enter the environment.”

“The substance can be absorbed into the body by inhalation of its aerosol and through the skin.”

“ Evaporation at 20°C is negligible; a harmful concentration of airborne particles can, however, be reached quickly.”

The NIH has this to say about POLYCYCLIC AROMATIC COMPOUNDS:

Non-cancer health effects associated with exposure to PAH mixtures include skin dermatitis, respiratory diseases (emphysema), impaired immune system function, decreased fertility, and adverse birth outcomes (reduced birth weight, altered growth and development). Multiple studies have reported an increased risk of cancer in occupations with exposure to PAH mixtures, such as aluminum production, chimney sweeping, coal gasification, coal-tar distillation, coke production, iron and steel founding, paving and roofing with coal tar pitch. Lung and skin cancer were the primary cancers observed, but there is also evidence of increased risk for bladder, mouth and throat, and blood cancers.

As for lead, according to the World Health Organization, “There is no known level of lead exposure that is considered safe.”

The New Hampshire Rivers Management and Protection Program came into effect June 29, 1988. The Souhegan River is protected under this program and the Stony Brook is considered a ‘major tributary’ of the Souhegan. The possibility of this plant brings with it concerns about potential nonpoint source pollution for our region’s water resources. Are we really going to grant a variance that will allow an industry like this to bring potential toxic run-off to our Stony Brook and to allow trucks, laden with hazards, to drive right over and alongside a major tributary of the protected Souhegan?

Although we consider freedom from fear of fires and explosions, clean, safe air and unpolluted water of primary importance, we are also concerned about other factors such as noise pollution.

When providing evidence for both appeals in 1988 and 2019 Quinn representatives offered assurances such as “no noise to speak of” and “you can stand next to the unit and conduct normal voice conversations.”

<https://www.youtube.com/watch?v=O6GMPIZctJo>

If you watch this video, you will notice that you can’t hear the sound of the trucks moving around near the plant, and can barely hear the sound of the car that passes right in front of the camera over the noise of the plant. This video was taken about 300 feet from the plant. A one minute sound sample taken from about 220 feet averaged 85dB. One of the ‘pops’ from the plant measured at 90dB. Normal household conversation is in the 50 dB range. The quarrying operations currently operating in our industrial

district as a grandfathered nonconforming use are easily heard from up to  $\frac{3}{4}$  of a mile away. It is hard to imagine that the noise from a plant such as this could go unnoticed.

Road hazards will also increase if this variance is granted. Propane and reclaimed asphalt will be trucked in and product trucked out. Huge trucks will be traveling over and next to regionally protected waterways on small bridges and narrow, winding roads on their way in and out of town. This is an environmental disaster waiting to happen.

Unfortunately, because B-10 is owned by an LLC it is not clear who would be responsible for paying for environmental cleanup or fire/explosion damages if any were to occur.



The construction aggregates industry reports “5,400 mining companies that manage more than 10,000 operations” and there are “roughly 3,500 asphalt mix production sites operate across the United States”.

A Google Search of asphalt plant fires/explosions in the US in the past 5 years found 33 news worthy events while a Google search for fires/explosions at construction aggregates facilities found 3. This suggests that it is 31 times more likely that an asphalt plant will have a newsworthy fire event than a construction aggregates facility

**Asphalt Plant Fires/Explosions in the US in the past 5 years  
(excluding known acts of arson)  
(6 truck events also listed as noted but not considered in calculations)**

**August 13, 2019, Gainesville, FL (plant)**

<https://www.wcjb.com/content/news/Structure-fire-at-asphalt-plant-in-Gainesville-under-investigation-538704151.html>

**August 5, 2019 Statesville, NC (plant)**

<https://www.wsocv.com/news/local/13-agencies-respond-to-major-fire-in-statesville/973246419>

**August 1, 2019 Tiffin OH (plant)**

<https://www.advertiser-tribune.com/news/local-news/2019/08/m-b-asphalt-company-facility-damaged-by-fire-thursday/>

**August 1, 2019 Plano, TX (truck)**

<https://www.wfaa.com/article/news/local/asphalt-truck-fire-closes-eastbound-bush-turnpike-service-road-at-coit/287-3763c1c2-8dad-43c5-a9af-7d42652f2a98>

**June, 20 2019 Rockaway Township, NY (plant)**

<https://www.dailyrecord.com/story/news/local/2019/06/25/morris-county-night-blast-traced-explosion-tilcon-asphalt-plant/1558688001/>

**May 15, 2019 Pioria, IL (truck)**

<https://www.youtube.com/watch?v=Y4xg7ntyek>

**April 30, 2019 North Salt Lake, Utah (truck)**

<https://fox13now.com/2019/04/30/truck-full-of-asphalt-catches-fire-in-north-salt-lake/>

**April, 2019, Bridgeport, CT (plant)**

<http://connect-bridgeport.com/connect.cfm?func=view&section=News&item=Bridgeport-Fire-Department-One-of-Many-Responding-to-Fire-at-JF-Allen-Companys-Saltwell-Location34501>

**April 4, 2019 Leesburg FL (plant)**

<https://www.clickorlando.com/news/explosion-reported-at-asphalt-plant-in-lake-county>

**April, 2019 Cleveland OH (plant)**

<https://fox8.com/2019/04/06/firefighters-extinguish-blaze-at-asphalt-plant-in-cleveland/>

**April, 2019 Frederick, MD (plant)**

[https://www.fredericknewspost.com/public/fire-breaks-out-at-asphalt-plant-near-frederick/article\\_c3ffeefe-635f-516f-9bfb-9e952e0dab98.html](https://www.fredericknewspost.com/public/fire-breaks-out-at-asphalt-plant-near-frederick/article_c3ffeefe-635f-516f-9bfb-9e952e0dab98.html)

**March, 18, 2019 Union County SC (plant)**

[https://www.foxcarolina.com/news/officials-firefighters-back-at-southeast-emulsions-in-union-county-after/article\\_foddfcb6-48ea-11e9-8d19-7f4a583c9b2d.html](https://www.foxcarolina.com/news/officials-firefighters-back-at-southeast-emulsions-in-union-county-after/article_foddfcb6-48ea-11e9-8d19-7f4a583c9b2d.html)

**January 31, 2019 Beaver County, PA (plant)**

<https://triblive.com/local/regional/large-fire-burning-at-beaver-county-paving-company/>

**October 13, 2018 Redding CA (plant)**

<https://www.actionnewsnow.com/content/news/North-State-Asphalt-Plant-Fire-Causes-300000-of-Damage-497492421.html>

**June, 2018 Green Bay, WI (plant)**

<https://www.greenbaypressgazette.com/story/news/2018/06/12/northeast-asphalt-conveyor-fire-caused-explosion/693433002/>

**June 7, 2018 Cranston, RI (plant)**

<https://www.aggman.com/fire-erupts-in-wash-tower-at-p-j-keating-quarry-and-asphalt-plant/>

**April 23, 2018 Ennis, TX (plant)**

<https://www.nbcdfw.com/news/local/Contractor-Injured-When-Storage-Tank-at-Asphalt-Plant-Explodes-480599341.html>

**March, 2018 Berkley CA (plant)**

<https://www.youtube.com/watch?v=Zo7tM6BjdRs>

**February 1, 2018 Burton, OH (plant)**

<https://www.news5cleveland.com/news/local-news/oh-geauga/several-fire-departments-responding-to-fire-at-asphalt-paving-company-in-village-of-burton>

**February, 2018 Ennis, TX (plant)**

<https://www.wfaa.com/article/news/local/explosion-at-us-polyco-plant-in-ennis/287-514036124>

**February 19, 2018 Adams County, CO (plant)**

<https://denver.cbslocal.com/2018/02/19/explosion-fire-asphalt-commerce-city/>

**October, 2017 Glenville, NY (plant)**

<https://dailygazette.com/article/2017/10/05/official-asphalt-plant-blast-fire-caused-by-heater>

**March 27, 2017 Greenville, TN (plant)**

<https://www.wjhl.com/news/fire-at-summers-taylor-asphalt-plant-in-greenville-contained/>



**February, 2017 Thompson, NH (plant)**

<https://www.recordonline.com/news/20170209/fire-destroys-concreteasphalt-plant>

**October, 2016 Glenville, NY (plant)**

<https://dailygazette.com/article/2016/10/17/fire-follows-apparent-explosion-glenville>

**October 14, 2016 Fort Dodge IA (plant)**

<https://whotv.com/2016/10/14/fire-destroys-fort-dodge-asphalt-company/>

<https://www.radioiowa.com/2016/10/14/fire-destroys-fort-dodge-company/>

**September 28, 2016 Burnett, TX (truck)**

<https://www.burnetbulletin.com/articles/2016/10/12/asphalt-truck-destroyed-due-human-error>

**July 6, 2016 Burnet, TX (plant)**

<https://www.kxan.com/news/burnet-asphalt-fire-blamed-on-operator-error/>

**July 15, 2016 Fairview, TN (plant)**

<https://www.youtube.com/watch?v=57DoibFecbA>

**June 27, 2016 Tampa, FL (truck)**

<http://www.fox13news.com/news/local-news/truck-overturms-catches-fire-on-i-4>

**May 13, 2016 Sherwood, MI ( truck )**

[https://docs.google.com/document/d/1R6cp\\_PNeFTtXVfNdJqbrTGF4FSAS7zespGsSSNzQm6U/edit#](https://docs.google.com/document/d/1R6cp_PNeFTtXVfNdJqbrTGF4FSAS7zespGsSSNzQm6U/edit#)

**March 22, 2016 Marshville, OH (plant)**

<https://www.the-daily-record.com/article/20160322/NEWS/303229353>

**March 4. 2016 Hopewell, VA (plant)**

<https://www.nbc12.com/story/31388819/crews-working-hopewell-fire-at-asphalt-plant-hazmat-concerns/>

**August 3, 2105 Northfield, MA (plant)**

<https://whmp.com/news/160061-fire-burns-at-northfield-asphalt-plant/>

**September, 2015 Adams, WI, (plant)**

[https://lacrossetribune.com/community/jacksoncochronicle/news/local/fire-damages-portable-asphalt-plant/article\\_eb649761-015b-532a-9658-f91f12aaee5b.html](https://lacrossetribune.com/community/jacksoncochronicle/news/local/fire-damages-portable-asphalt-plant/article_eb649761-015b-532a-9658-f91f12aaee5b.html)

**March 19, 2015 Youngstown, OH (plant)**

<https://www.youtube.com/watch?v=IxskHiqBgb4>

<https://www.thejambar.com/the-youngstown-asphalt-solutions-fire-in-photos/>

**October 2015, Owasso OK (plant)**

<https://www.newson6.com/story/30243708/injured-firefighters-expected-to-be-ok-after-battling-owasso-quarry-fire>

**January 30, 2015 Central Point, Ore (plant)**

<https://kobi5.com/news/local-news/emergency-crews-respond-to-explosion-at-knife-river-9099/>

**November 13, 2014 Missouri City, TX (plant)**

<https://www.click2houston.com/news/one-injured-in-asphalt-plant-fire-in-missouri-city-2015112315172921>

**Construction Aggregates Industry fires/ explosions past 5 years (excluding know acts of arson)**

**Jan. 22, 2019 York City, PA (truck)**

<https://www.aggman.com/fire-causes-1-million-in-damage-to-york-sand-facility/>

**May 7, 2018 Sunderland, MA (structure)**

<https://www.gazettenet.com/Multiple-units-respond-to-pit-fire-in-Sunderland-17348205>

**October, 2016, Greensburg OH**

[https://www.sent-trib.com/news/fire-handled-at-stone-quarry/article\\_68f4d460-95fe-11e6-97f7-5f568bb44d9a.html](https://www.sent-trib.com/news/fire-handled-at-stone-quarry/article_68f4d460-95fe-11e6-97f7-5f568bb44d9a.html)

**“ construction aggregates industry 5,400 mining companies that manage more than **10,000 operations**”**

[https://www.aggman.com/the-nations-top-25-construction-aggregates-producers-3/#targetText=The%20U.S.%20Geological%20Survey%20\(USGS,manage%20more%20than%2010%20C000%20operations.](https://www.aggman.com/the-nations-top-25-construction-aggregates-producers-3/#targetText=The%20U.S.%20Geological%20Survey%20(USGS,manage%20more%20than%2010%20C000%20operations.)

**National Asphalt Paving Association**

**“Roughly **3,500 asphalt mix production sites operate across the United States**”**

[https://www.asphaltpavement.org/images/stories/napa\\_fast\\_facts\\_09-28-2010.pdf#targetText=The%20U.S.%20has%20about%203%20C500,million%20metric%20tons%20in%202009.&targetText=There%20are%20over%2014%20C000%20paving,asphalt%20in%20the%20United%20States.](https://www.asphaltpavement.org/images/stories/napa_fast_facts_09-28-2010.pdf#targetText=The%20U.S.%20has%20about%203%20C500,million%20metric%20tons%20in%202009.&targetText=There%20are%20over%2014%20C000%20paving,asphalt%20in%20the%20United%20States.)

$(3/10,000) \times 100 = .03\%$ ,  $(33/3,500) \times 100 = .94\%$ ,  $94/3=31.33\%$



# CAMEO Chemicals



## Chemical Datasheet

### ASPHALT



#### Chemical Identifiers

<b>CAS Number</b>	<b>UN/NA Number</b>	<b>DOT Hazard Label</b>	<b>USCG CHRIS Code</b>
8052-42-4	1999	Flammable Liquid	ARF

**NIOSH Pocket Guide**  
Asphalt fumes

**International Chem Safety Card**  
ASPHALT

#### NFPA 704

Diamond	Hazard	Value	Description
1 0 0	Health	0	No hazard beyond that of ordinary combustible material.
	Flammability	1	Must be preheated before ignition can occur.
	Instability	0	Normally stable, even under fire conditions.
	Special		

(NFPA, 2010)

#### General Description

A dark-brown to black solid or semisolid complex mixture of aliphatic and aromatic hydrocarbons and organic compounds. Contains sulfur, nitrogen and oxygen. Obtained as a residue in petroleum refining. Combustible.

#### Hazards

#### Reactivity Alerts

none

#### Air & Water Reactions

Insoluble in water.

#### Fire Hazard

Excerpt from ERG Guide 130 [Flammable Liquids (Water-Immiscible / Noxious)]:

**HIGHLY FLAMMABLE:** Will be easily ignited by heat, sparks or flames. Vapors may form explosive mixtures with air. Vapors may travel to source of ignition and flash back. Most vapors are heavier than air. They will spread along ground

and collect in low or confined areas (sewers, basements, tanks). Vapor explosion hazard indoors, outdoors or in sewers. Those substances designated with a (P) may polymerize explosively when heated or involved in a fire. Runoff to sewer may create fire or explosion hazard. Containers may explode when heated. Many liquids are lighter than water. (ERG, 2016)

### Health Hazard

Inhalation of vapors from semi-solid materials causes moderate irritation of nasal and upper respiratory tract passages. Aspiration causes slow onset and low degree of chemical pneumonitis with clinical symptoms of lower respiratory tract irritation. Ingestion produces irritation of gastrointestinal tract. (USCG, 1999)

### Reactivity Profile

ASPHALT may be incompatible with strong oxidizing agents like nitric acid. Charring may occur followed by ignition of unreactive material and other nearby combustibles. In other settings, mostly unreactive. Not affected by aqueous solutions of acids, alkalis, most oxidizing agents, and most reducing agents. If heated sufficiently or ignited in the presence of air, oxygen or strong oxidizing agents, can burn exothermically. May be ignited by strong oxidizing agents.

### Belongs to the Following Reactive Group(s)

- Hydrocarbons, Aromatic
- Hydrocarbons, Aliphatic Unsaturated
- Hydrocarbons, Aliphatic Saturated

### Potentially Incompatible Absorbents

Use caution: Liquids with this reactive group classification have been known to react with the absorbent listed below.

- Dirt/Earth

Response Recommendations
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### Isolation and Evacuation

Excerpt from ERG Guide 130 [Flammable Liquids (Water-Immiscible / Noxious)]:

As an immediate precautionary measure, isolate spill or leak area for at least 50 meters (150 feet) in all directions.

LARGE SPILL: Consider initial downwind evacuation for at least 300 meters (1000 feet).

FIRE: If tank, rail car or tank truck is involved in a fire, ISOLATE for 800 meters (1/2 mile) in all directions; also, consider initial evacuation for 800 meters (1/2 mile) in all directions. (ERG, 2016)

### Firefighting

Excerpt from ERG Guide 130 [Flammable Liquids (Water-Immiscible / Noxious)]:

CAUTION: All these products have a very low flash point: Use of water spray when fighting fire may be inefficient.

SMALL FIRE: Dry chemical, CO<sub>2</sub>, water spray or regular foam.

LARGE FIRE: Water spray, fog or regular foam. Do not use straight streams. Move containers from fire area if you can do it without risk.

FIRE INVOLVING TANKS OR CAR/TRAILER LOADS: Fight fire from maximum distance or use unmanned hose holders or monitor nozzles. Cool containers with flooding quantities of water until well after fire is out. Withdraw immediately in case of rising sound from venting safety devices or discoloration of tank. ALWAYS stay away from tanks



engulfed in fire. For massive fire, use unmanned hose holders or monitor nozzles; if this is impossible, withdraw from area and let fire burn. (ERG, 2016)

### Non-Fire Response

Excerpt from ERG Guide 130 [Flammable Liquids (Water-Immiscible / Noxious)]:

ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). All equipment used when handling the product must be grounded. Do not touch or walk through spilled material. Stop leak if you can do it without risk. Prevent entry into waterways, sewers, basements or confined areas. A vapor-suppressing foam may be used to reduce vapors. Absorb or cover with dry earth, sand or other non-combustible material and transfer to containers. Use clean, non-sparking tools to collect absorbed material.

LARGE SPILL: Dike far ahead of liquid spill for later disposal. Water spray may reduce vapor, but may not prevent ignition in closed spaces. (ERG, 2016)

### Protective Clothing

Skin: Wear appropriate personal protective clothing to prevent skin contact.

Eyes: Wear appropriate eye protection to prevent eye contact.

Wash skin: The worker should wash daily at the end of each work shift.

Remove: No recommendation is made specifying the need for removing clothing that becomes wet or contaminated.

Change: Workers whose clothing may have become contaminated should change into uncontaminated clothing before leaving the work premise. (NIOSH, 2016)

### DuPont Tychem® Suit Fabrics

No information available.

### First Aid

Eye: If this chemical contacts the eyes, immediately wash the eyes with large amounts of water, occasionally lifting the lower and upper lids. Get medical attention immediately. Contact lenses should not be worn when working with this chemical.

Breathing: If a person breathes large amounts of this chemical, move the exposed person to fresh air at once. If breathing has stopped, perform mouth-to-mouth resuscitation. Keep the affected person warm and at rest. Get medical attention as soon as possible. (NIOSH, 2016)

### Physical Properties

Chemical Formula: data unavailable

**Flash Point:** greater than 400 ° F (NFPA, 2010)

Lower Explosive Limit (LEL): data unavailable

Upper Explosive Limit (UEL): data unavailable

Autoignition Temperature: data unavailable

**Melting Point:** 110 ° F (USCG, 1999)

Vapor Pressure: data unavailable

Vapor Density (Relative to Air): data unavailable

**Specific Gravity:** 1.11 at 122 ° F (est.) (USCG, 1999)



Boiling Point: data unavailable

Molecular Weight: data unavailable

Water Solubility: data unavailable

Ionization Potential: data unavailable

**IDLH:** As asphalt fumes; A potential occupational carcinogen. (NIOSH, 2016)

### **AEGLs (Acute Exposure Guideline Levels)**

No AEGL information available.

### **ERPGs (Emergency Response Planning Guidelines)**

No ERPG information available.

### **PACs (Protective Action Criteria)**

Chemical	PAC-1	PAC-2	PAC-3
Petroleum asphalt; (Bitumen) (8052-42-4)	30 mg/m3	330 mg/m3	2000 mg/m3

(DOE, 2016)

## Regulatory Information

### **EPA Consolidated List of Lists**

No regulatory information available.

### **DHS Chemical Facility Anti-Terrorism Standards (CFATS)**

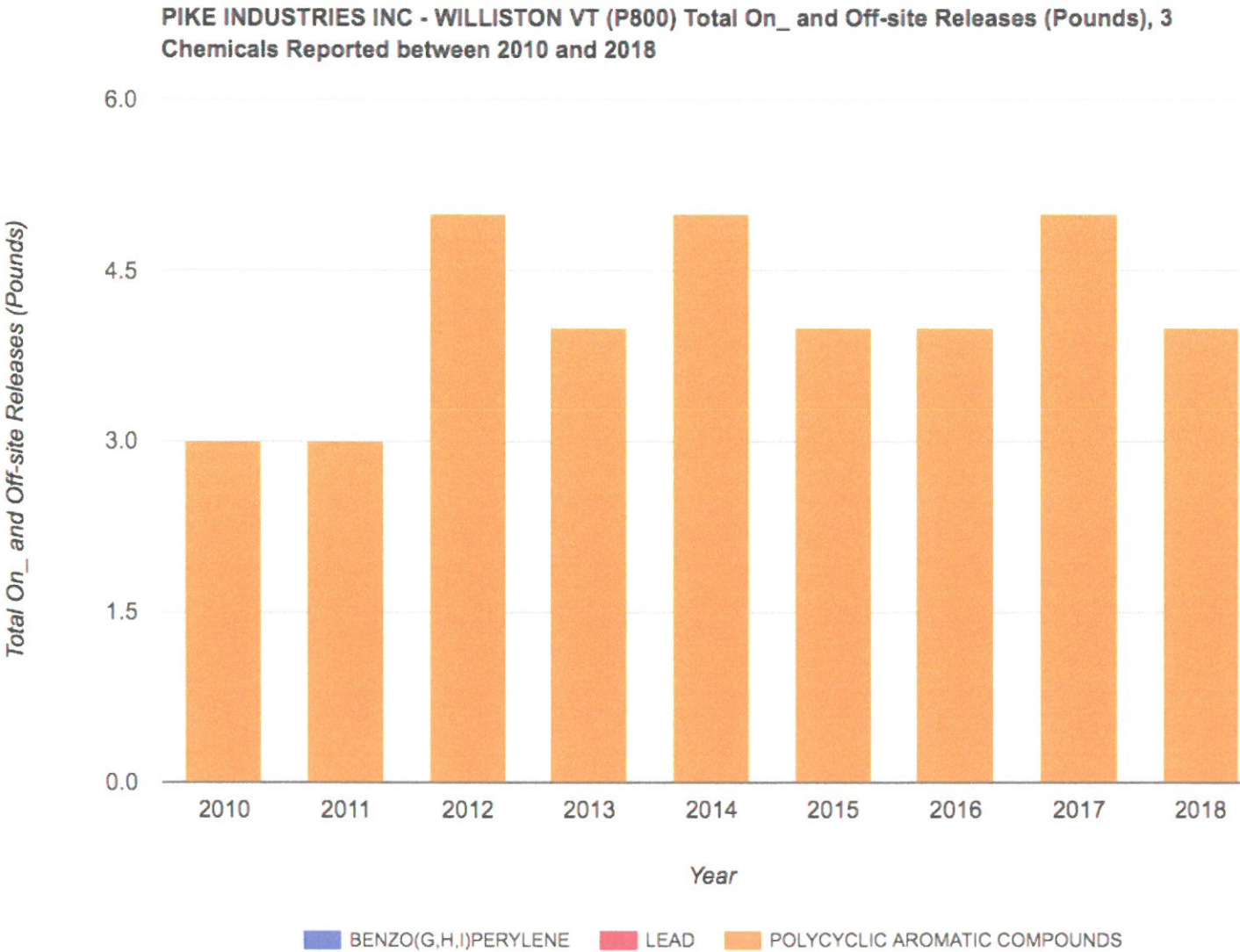
No regulatory information available.

### **OSHA Process Safety Management (PSM) Standard List**

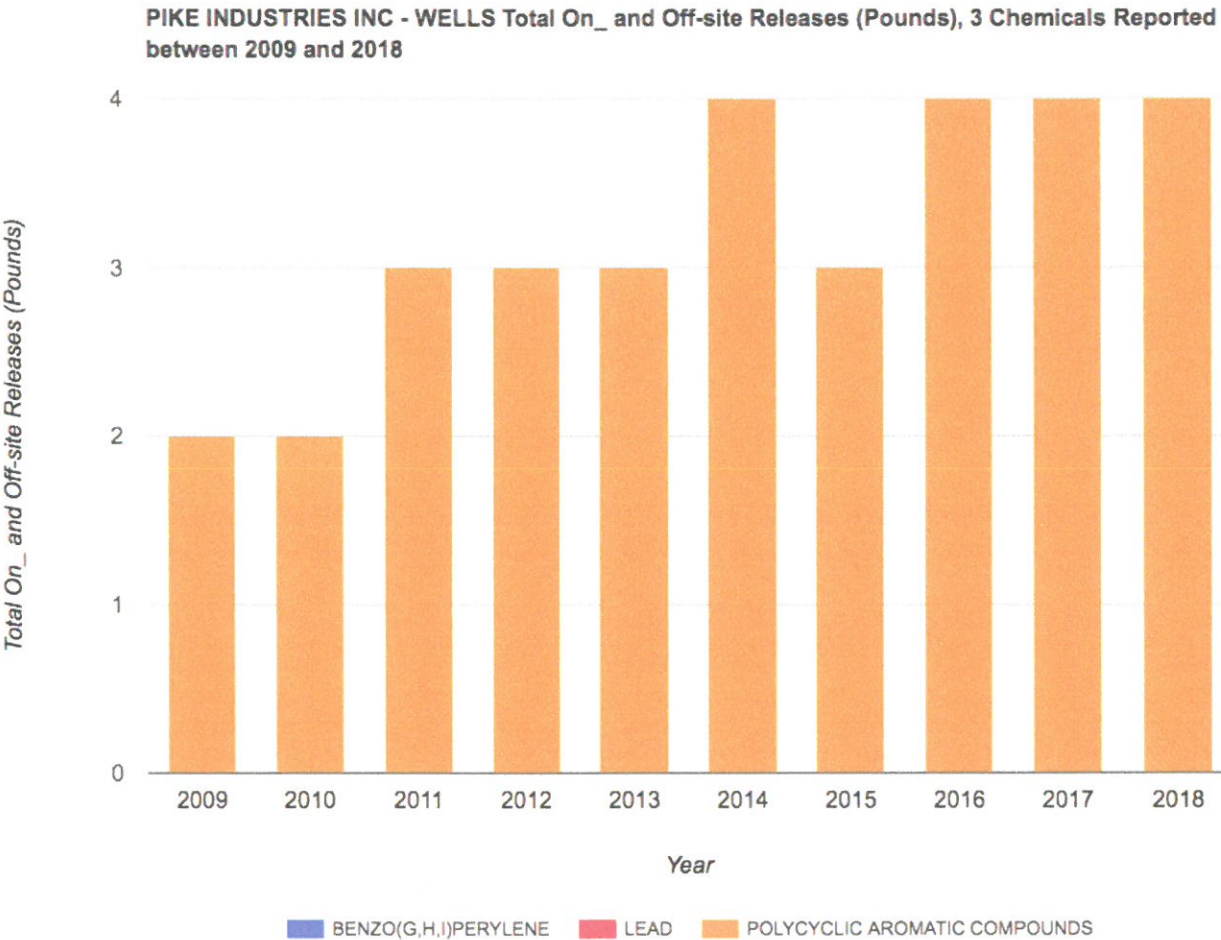
No regulatory information available.

## Alternate Chemical Names

- AC 10
- AC 10 (ASPHALT)
- AC 20
- AC 20 (ASPHALT)
- AC 3
- AC 3 (ASPHALT)
- AC 8
- AC 8 (ASPHALT)
- AQUA BROWN B-A
- AQUA BROWN B-K
- AR 1000
- ASPHALT
- ASPHALT (TYPICAL)
- ASPHALT BLENDING STOCKS: ROOFERS FLUX
- ASPHALT BLENDING STOCKS: STRAIGHT RUN RESIDUE
- ASPHALT CEMENTS
- ASPHALT FUMES
- ASPHALT: ASPHALTUM
- ASPHALTIC BITUMEN
- ASPHALTUM
- ASPHALTUM OIL
- ASRO 150
- ASRO 85

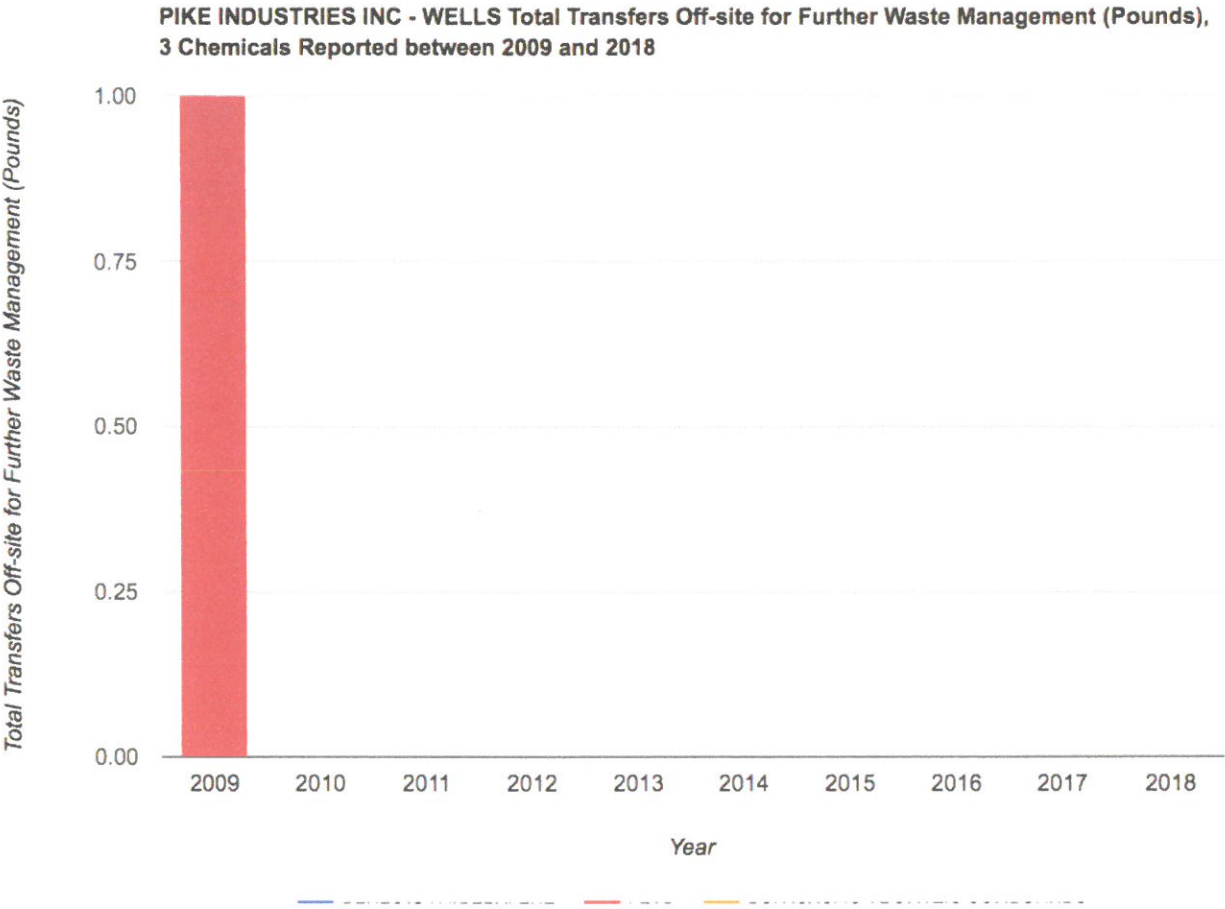




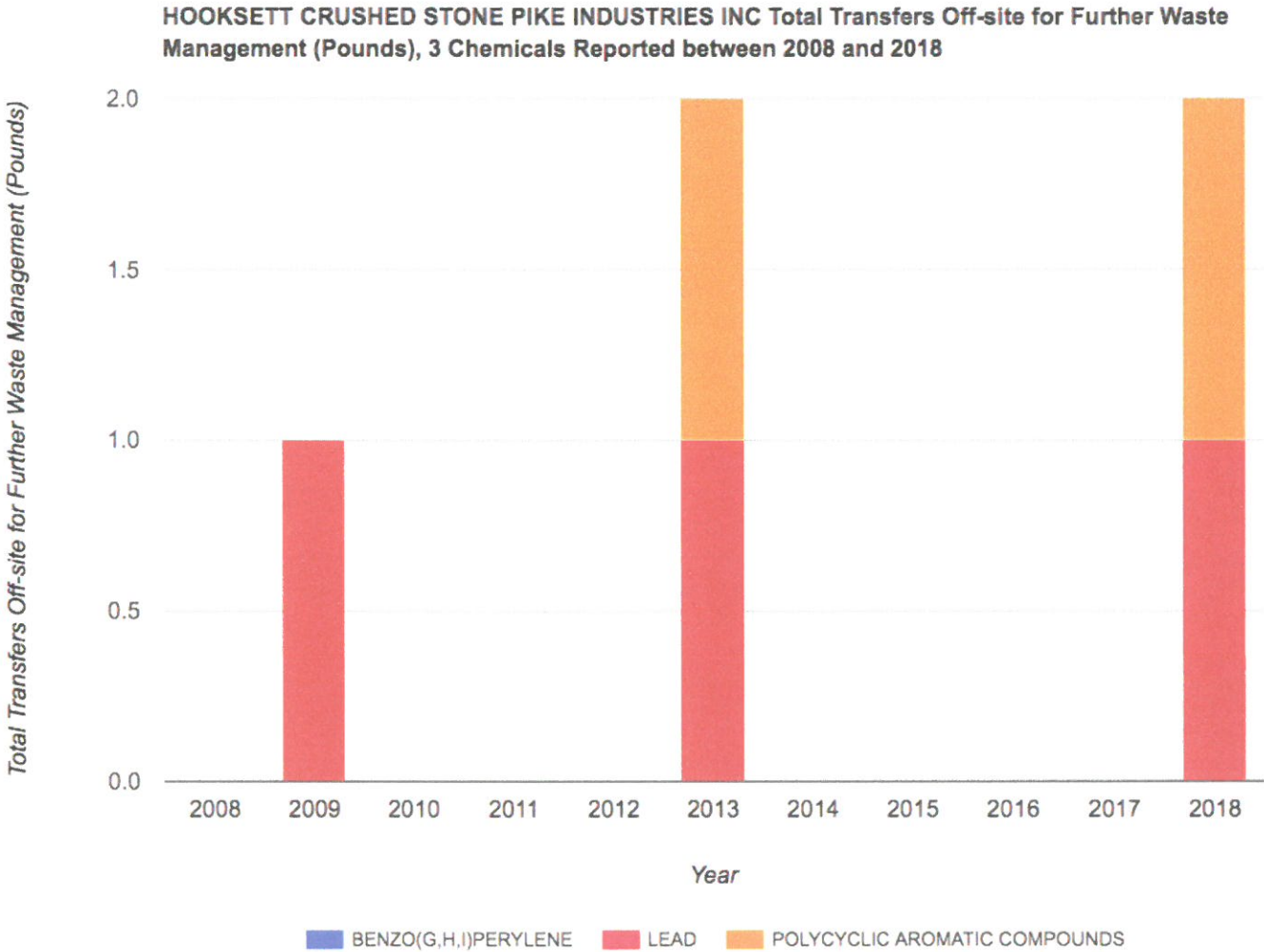




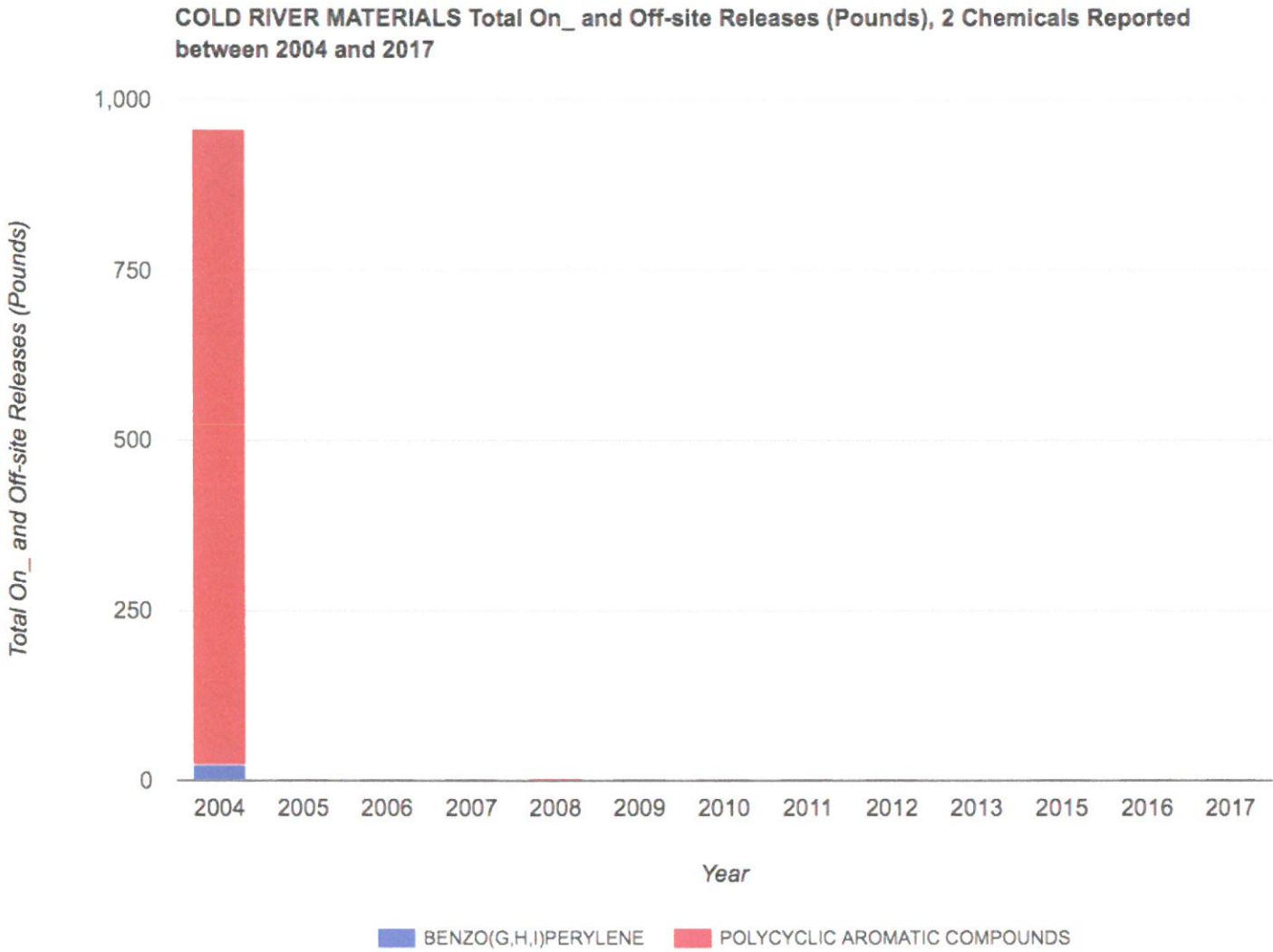








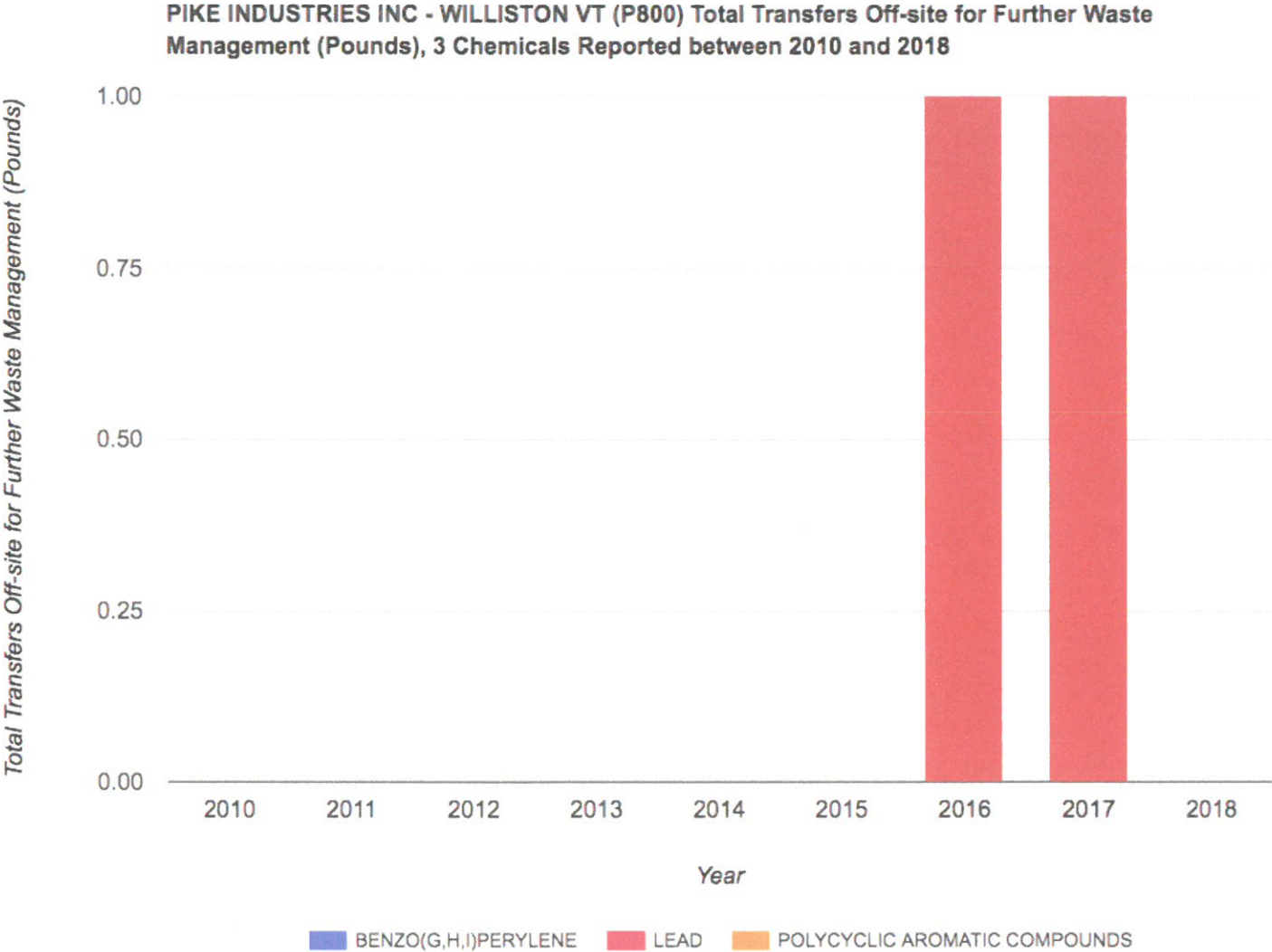








<https://mail.yahoo.com/d/folders/1>





forecast.weather.gov/MapClick.php?lat=42.84...

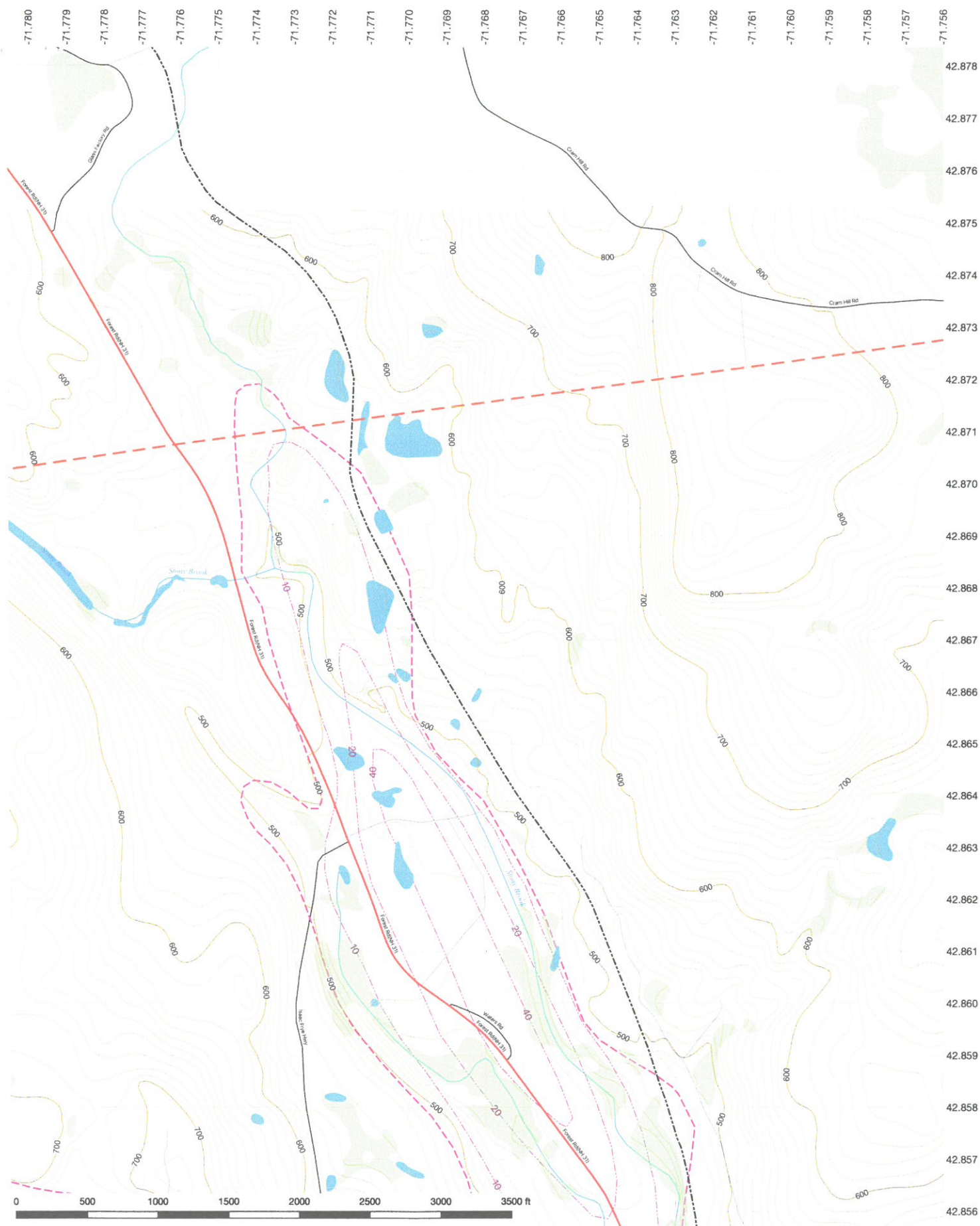
Noise Source	Decibel Level	comment
Jet take-off (at 25 meters)	150	Eardrum rupture
Aircraft carrier deck	140	
Military jet aircraft take-off from aircraft carrier with afterburner at 50 ft (130 dB).	130	
Thunderclap, chain saw. Oxygen torch (121 dB).	120	Painful. 32 times as loud as 70 dB.
Steel mill, auto horn at 1 meter. Turbo-fan aircraft at takeoff power at 200 ft (118 dB). Riveting machine (110 dB); live rock music (108 - 114 dB).	110	Average human pain threshold. 16 times as loud as 70 dB.
Jet take-off (at 305 meters), use of outboard motor, power lawn mower, motorcycle, farm tractor, jackhammer, garbage truck. Boeing 707 or DC-8 aircraft at one nautical mile (6080 ft) before landing (106 dB); jet flyover at 1000 feet (103 dB); Bell J-2A helicopter at 100 ft (100 dB).	100	8 times as loud as 70 dB. Serious damage possible in 8 hr exposure
Boeing 737 or DC-9 aircraft at one nautical mile (6080 ft) before landing (97 dB); power mower (96 dB); motorcycle at 25 ft (90 dB). Newspaper press (97 dB).	90	4 times as loud as 70 dB. Likely damage 8 hr exp
Garbage disposal, dishwasher, average factory, freight train (at 15 meters). Car wash at 20 ft (89 dB); propeller plane flyover at 1000 ft (88 dB); diesel truck 40 mph at 50 ft (84 dB); diesel train at 45 mph at 100 ft (83 dB). Food blender (88 dB); milling machine (85 dB); garbage disposal (80 dB).	80	2 times as loud as 70 dB. Possible damage in 8 h exposure.
Passenger car at 65 mph at 25 ft (77 dB); freeway at 50 ft from pavement edge 10 a.m. (76 dB). Living room music (76 dB); radio or TV-audio, vacuum cleaner (70 dB).	70	Arbitrary base of comparison. Upper 70s are annoyingly loud to some people.
Conversation in restaurant, office, background music, Air conditioning unit at 100 ft	60	Half as loud as 70 dB. Fairly quiet
Quiet suburb, conversation at home. Large electrical transformers at 100 ft	50	One-fourth as loud as 70 dB.
Library, bird calls (44 dB); lowest limit of urban ambient sound	40	One-eighth as loud as 70 dB.
Quiet rural area	30	One-sixteenth as loud as 70 dB. Very Quiet
Whisper, rustling leaves	20	
Breathing	10	Barely audible

Plan from 10-20-2019

modified from <http://www.wenat.net/~hpb/dblevels.html> on 2/2000. SOURCES: Temple University Department of Civil/Environmental Engineering ([www.temple.edu/departments/CET/Environment10.html](http://www.temple.edu/departments/CET/Environment10.html)), and Federal Agency Review of Selected Airport Noise Analysis Issues, Federal Interagency Committee on Noise (August 1982). Source of the information is attributed to Outdoor Noise and the Metropolitan Environment, W.C. Branch et al., Department of City Planning, City of Los Angeles, 1970.







Quarry at 50 Quinn Drive, Wilton, NH  
 DOT 2018 transport, NWPlusNH wetlands; 5' contours  
 Magenta lines: heavy - - = stratified drift aquifer; light - - - = contours of saturated thickness (water table to bottom)  
 (source: USGS, March 2000, as GRANIT files aqunr.e00, satnr.e00 )

Map projection: EPSG:3614, NAD83(NSRS2007) / New Hampshire (ftUS); GPS Grid: EPSG:4326 WGS84

