



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

US EPA RECORDS CENTER REGION 5



494773

REPLY TO THE ATTENTION OF:

MEMORANDUM

DATE:

SUBJECT: ENFORCEMENT ACTION MEMORANDUM – Determination of Threat to Public Health, Welfare or the Environment, Town of Pines Groundwater Plume Site, Town of Pines, Porter County, Indiana.

FROM: Jacob S. Hassan, On-Scene Coordinator *JH*
Emergency Response Branch 2 – Removal Section 4

THRU: Samuel F. Borries, Chief *SB*
Emergency Response Branch 2

TO: Richard C. Karl, Director
Superfund Division

I. PURPOSE

The purpose of this memorandum is to document the determination of an imminent and substantial threat to public health, welfare, or the environment posed by the presence of uncontrolled hazardous substances, and document your approval of the time-critical removal action to be performed at the Town of Pines Groundwater Plume Site (Site) located in the Town of Pines, Porter County, Indiana.

The proposed time-critical removal action herein will mitigate threats to public health, welfare and the environment posed by the presence of arsenic, thallium, and lead contamination from coal combustion residuals at residential and other properties in or near the Town of Pines by the proper excavation and off-site disposal of contaminated soils. There are no nationally significant or precedent setting issues associated with the proposed response at this Superfund Alternative site. The presence of the above hazardous substances at the Site has been documented by Northern Indiana Public Service Company (NIPSCO) as a part of the on-going Remedial Investigation for the Town of Pines Groundwater Plume Site.

The response actions proposed herein include the following: developing and implementing a Removal Work Plan, including but not limited to a Health and Safety Plan, Site Security Plan, Air Monitoring Plan, Traffic Management Plan and Site Emergency Contingency Plan; identifying, consolidating, and ultimately excavating, transporting, and disposing of the hazardous substances, pollutants and contaminants to an approved disposal facility in accordance with Environmental Protection Agency's Off-Site Rule (40 C.F.R. § 300.440).

This time-critical removal action will be conducted in accordance with Section 104(a)(1) of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), 42 U.S.C. § 9604(a)(1), and 40 C.F.R. § 300.415 (Removal Action) of the National Oil and Hazardous Substances Pollution Contingency Plan (NCP) to abate or eliminate the immediate threat posed to public health, welfare or the environment by the presence of the hazardous substances at the Site. The uncontrolled conditions of the hazardous substances present at the Site and the potential threats they present require that this action be classified as a time-critical removal action.

EPA is currently negotiating an Administrative Order on Consent (AOC) with NIPSCO, the Potentially Responsible Party (PRP). NIPSCO has indicated that it is willing to conduct the response actions with EPA oversight.

II. SITE CONDITIONS AND BACKGROUND

CERCLIS ID: INN000505593
RCRA ID: None
STATE ID: None
Category: Time-Critical Removal

A. Site Description

1. Removal site evaluation

In September 2001, the Indiana Department of Environmental Management (IDEM) conducted groundwater sampling at several private drinking wells throughout the Town of Pines, Indiana. The analytical results showed elevated levels of boron and molybdenum in some residential wells. In May 2002, EPA sampled more than 100 drinking water wells in the Town of Pines. Laboratory analysis of these samples showed that drinking water wells at 30 homes and businesses in the Pines community were contaminated with elevated levels of boron and/or molybdenum that exceeded removal action levels (standard used prior to Removal Management levels or RMLs). An alternative water supply was provided for these homes. A subsequent groundwater investigation identified the source of the contamination to be from a state-permitted landfill located in the Town of Pines. The landfill, Yard 520, received coal ash from the power generation plant in Michigan City, Indiana that was and is owned and operated by NIPSCO (Michigan City Power Generation Station). As a result, NIPSCO and the other Potential Responsible Parties (PRP's) entered into an Administrative Order on Consent (AOC I) with EPA to install a municipal waterline for the residents with impacted drinking water. In April 2004, a second AOC (AOC II) was signed by the PRPs that required a Remedial Investigation and Feasibility Study (RI/FS for AOC II or RI/FS) for the Town of Pines Groundwater Plume Site, which is currently on-going.¹

¹ There have been two preceding AOCs for this site. AOC I (January 20, 2003) required the installation of municipal water to residential properties with impacted well water from the Yard 520 Landfill. AOC II (April 5, 2004) required respondents to develop and conduct a RI/FS.

Utilizing town records from the 1970s, anecdotal information from residents, visual inspections conducted during the municipal water line installation, among other means, dozens of residential and municipal properties located at the Site have been identified as having accepted fly ash, bottom ash, or other coal combustion byproducts or residuals (coal combustion residuals) from the Michigan City Power Generation Station for use as fill material. Due to concerns about the historical use of such materials and as a part of the RI/FS under AOC II, NIPSCO's contractor conducted a residential radiation survey and supplemental soil sampling in November 2014 at nine of these properties, including residential properties and properties owned by the Town of Pines. Soil samples were collected and analyzed under an EPA approved sampling plan (the Supplemental Soil Characterization Work Plan) and Quality Assurance Project Plan (QAPP). Soil sample results indicated elevated levels of arsenic and thallium. In total, seven of nine properties have arsenic levels above background, but only five of those have arsenic levels exceeding the RML of 67 mg/kg. In addition, several properties had thallium levels exceeding the RML of 2.3 mg/kg. Preliminary lead data collected at four of the nine properties have lead levels above the RML of 400 mg/kg.

Beginning in Spring 2015, NIPSCO's contractor has been conducting additional soil sampling under an EPA approved sampling plan (the Expanded Properties Sampling and Analysis Plan) and QAPP at additional properties at the Site that were identified in the sampling plan as having used coal combustion residuals for fill. The Expanded Properties Sampling and Analysis Plan also requires NIPSCO to sample soil for owners of properties at the Site who request such sampling.

Arsenic, thallium and lead can be constituents of coal combustion residuals. See, e.g., "Hazardous and Solid Waste Management System; Disposal of Coal Combustion Residuals from Electric Utilities," 80 Fed. Reg. 21302, 21449 (April 17, 2015; Final Rule Effective October 15, 2015)(preamble describes EPA's identification of numerous metals and other constituents - including arsenic, thallium and lead - as constituents of potential concern in coal combustion residuals when developing the final rule for disposal of CCRs from electric utilities).

2. Physical location

The Town of Pines Groundwater Plume Site² generally encompasses the area located in and near the Town of Pines in Porter County, Indiana, and includes all locations where hazardous substances, pollutants or contaminants from the Town of Pines Groundwater Plume Superfund Site related to coal combustion residuals have or may have come to be located.

An environmental justice ("EJ") analysis was performed and is contained in Attachment 1. Screening of the surrounding area used Region 5's EJ Screen Tool (which applies the interim version of the national EJ Strategic Enforcement Assessment Tool (EJSEAT)). Region 5 has reviewed environmental and demographic data for the area surrounding the Town of Pines, Indiana, and determined there is a low potential for EJ concerns at this location.

² "Site" is generally defined in AOC II

3. Site Characteristics

The Town of Pines bounds about 330 homes, a small number of parks, a playground, open space as a part of the railroad right-of-way, schools, and public buildings. Some properties in or near the town have levels of arsenic and/or thallium elevated above EPA RMLs and preliminary data indicate that some properties also have levels of lead elevated above EPA RMLs. The source for the arsenic, thallium, and lead contamination is coal combustion residuals used as fill materials around the Town of Pines during (but possibly not limited to) the 1970's. The coal combustion residuals were generated by the Michigan City Power Generation Station was owned and operated by NIPSCO.

The Town of Pines has a population of roughly 700 people and is primarily a residential community with some commercial (e.g., restaurants, gas stations, motels, etc.) and industrial (e.g., Illiana Block) land use, in addition to undeveloped and/or open space areas such as parks/playgrounds, wetland/swamp areas, wooded areas, ponds, and drainage ditches. Until 2004, drinking water for the residences and businesses in the Town of Pines was supplied through domestic (private) wells located on individual properties which pumped groundwater from the shallow surficial aquifer and/or the deeper confined aquifers. Additionally, there is no sewer service in the Town of Pines, so all septic wastes are presumed to be discharged to individual, subsurface septic systems.

In 2004, roughly 260 homes were put on municipal water due to elevated levels of Boron and Molybdenum in private wells.

The Indiana Department of Environmental Management (IDEM) referred the Site to the EPA removal program in February 2015.

4. Release or threatened release into the environment of a hazardous substance, or pollutant or contaminant

The threat is exposure to elevated levels of arsenic, thallium and lead from coal combustion residuals that were used as fill material. Arsenic, thallium and lead are hazardous substances as defined in Section 101(14) of CERCLA, 42 U.S.C. § 101(14), and as designated in 40 CFR § 302(4) and Table 302.4.

5. NPL status

This Site is within the Town of Pines Groundwater Plume Site, a Superfund Alternative Site.

6. Maps, pictures and other graphic representations

See Attachment 3—Properties with arsenic and thallium above the RMLs in Soil 0-60,” as of April 2015

See Attachment 4 – Properties identified (as of May 18, 2015) for additional sampling and screening

B. Other Actions to Date

1. Previous actions

EPA performed a removal action at the Town of Pines Groundwater Plume Site in 2002 to address groundwater concerns from a nearby landfill in which coal combustion residuals from the Michigan City Power Generation Station were used as fill. At the time, 263 homes in and near the Town of Pines were connected to municipal water by NIPSCO.

2. Current actions

A RI/FS under AOC II is ongoing at the Town of Pines Groundwater Plume Site pertaining to the landfill and contaminated groundwater.

C. State and Local Authorities' role

1. State and local actions to date

On September 20, 2000, IDEM's Site-Investigation Section conducted residential well sampling of the Town of Pines to confirm area ground water contamination previously reported by IDEM's Drinking Water Section. Subsequent groundwater and drinking water sampling events revealed elevated levels of heavy metals and volatile organic compounds.

On July 17, 2001, IDEM conducted a fly ash visual inspection of several residential properties in the Town of Pines, IN. IDEM confirmed the presence of fly ash and other coal combustion byproducts or residuals.

2. Potential for Continued State/Local Response

Not applicable.

III. THREAT TO PUBLIC HEALTH OR THE ENVIRONMENT, AND STATUTORY AND REGULATORY AUTHORITIES

Conditions at the Site include the actual or substantial threat of release of hazardous substances that may present an imminent and substantial endangerment to public health or welfare or the environment, based upon factors set forth in the National Contingency Plan (NCP), 40 Code of Federal Regulations (CFR) Section 300.415 (b)(2). These conditions include:

Actual or potential exposure to nearby human populations, animals, or the food chain from hazardous substances or pollutants or contaminants.

Analytical results from the supplemental soil sampling effort conducted pursuant to an EPA approved QAPP, as a part of the Remedial Investigation for the Town of Pines

Groundwater Plume Site, identified seven properties with elevated arsenic levels at or near the surface, and several properties with elevated thallium levels at or near the surface. Of the seven properties that have elevated arsenic levels, five have arsenic levels exceeding the arsenic RML of 67 mg/kg and several properties have thallium levels exceeding the thallium RML level of 2.3 mg/kg. The source of the arsenic and thallium is coal combustion residuals generated by the Michigan City Power Generation Station that were used at these and other properties as fill material. The vertical extent of arsenic and/or thallium contamination varies depending on the amount of fill material used on the property. However, analytical results show that the arsenic levels exceeding the RML are present at the surface (0-6"), near surface (6-18") and at depth (18-60"). The highest samples found had arsenic levels of 888 mg/kg at depth, more than 13 times the RML. Preliminary lead data collected at four of the nine properties have lead levels above the RML of 400 mg/kg at and near the surface.

Many of the properties that have arsenic levels above the RML have gardens and playgrounds which increases the potential exposure to the residents or pets through direct contact or inhalation. Removing the fly ash, bottom ash, or other coal combustion byproducts or residuals from these properties will reduce the exposure risk to the residents. Also, the Town of Pines is located near the Indiana Dunes National Lakeshore which serves as a refuge for wildlife. The proximity of these properties to Indiana Dunes National Lakeshore increases the potential risk of migrating or foraging wildlife coming in contact with exposed soil.

EPA, the National Toxicology Program, and the International Agency for Research on Cancer all consider inorganic arsenic a known human carcinogen. Inorganic arsenic exposure through inhalation has been associated with lung cancer, and ingestion of arsenic is associated with cancer of the skin, bladder, lung, and liver. Inorganic arsenic is toxic to many organ systems, causing cardiovascular effects, irritation and hemorrhaging of the gastrointestinal tract, pigmentation changes in the skin, liver fibrosis, reproductive abnormalities, and neurological effects. Acute ingestion of very high levels of inorganic arsenic can result in death. It is highly soluble in water and is readily absorbed through the gastrointestinal tract. Direct contact with arsenic-contaminated soil can also absorb across the skin into the bloodstream.

Thallium is a naturally-occurring metal found in small amounts in the earth's crust. The main route of exposure for most humans is through ingestion, via the gastrointestinal tract from food consumption contaminated with thallium, but can also enter the human body through inhalation and dermal exposure. When humans are exposed to high acute doses of thallium, it has been shown to cause gastrointestinal distress (i.e. abdominal pain, nausea/vomiting, diarrhea and hemorrhage), followed with a sequel of neurologic manifestations (i.e. peripheral neuropathy, ascending paralysis), kidney damage and alopecia as a near constant hallmark. Death can arise when 0.5 to 1 g or more of thallium is ingested. Animal studies have demonstrated evidence of developmental toxicity from exposure during pregnancy. Chronic effects of thallium exposure include alopecia, fatigue, weakness and dementia.

Lead is a naturally occurring bluish-gray metal found in small amounts in the earth's crust and affect almost every organ and system in your body. The main target for lead toxicity is the nervous system, both in adults and children. Long-term exposure of adults can result in decreased performance in some tests that measure functions of the nervous system. It may also

cause weakness in fingers, wrists, or ankles. Lead exposure also causes small increases in blood pressure, particularly in middle-aged and older people and can cause anemia. Exposure to high lead levels can severely damage the brain and kidneys in adults or children and ultimately cause death.

High levels of hazardous substances or pollutants or contaminants in soils largely at or near the surface that may migrate.

There are elevated levels of hazardous substances present in soils at numerous sampled properties. Of the seven properties that have elevated arsenic levels, five have levels above the removal management level of 67 mg/kg. The highest value found for arsenic at the surface (0-6") strata was 501 mg/kg. The highest value found for arsenic at a depth of 18-60" was 888 mg/kg. Thallium levels were above the removal management level of 2.3 mg/kg on six of the sampled properties with the highest value found in the near surface strata (6-18") at 12.1 mg/kg. Preliminary lead data collected at four of the nine properties have lead levels above the RML of 400 mg/kg at the surface.

Weather conditions that may cause hazardous substances or pollutants or contaminants to migrate or be released.

The supplemental soil sampling conducted under the RI/FS documented surface soil (0-6") samples with elevated arsenic concentrations of up to 501 mg/kg ppm and thallium of up to 9.8 mg/kg. Preliminary data also indicates the presence of lead above the RML in surface soil. Heavy rains may cause further migration of contaminants off site through surface water runoff into storm sewers or into neighboring properties. Furthermore, there is the potential for increased leaching potential of the arsenic into the shallow groundwater. Winds could cause dust particles containing heavy metals to continue to migrate into the surrounding community. These weather conditions could result in a continued release of the hazardous substances described herein to the surrounding soil, air and surface water.

The availability of other appropriate federal or state response mechanisms to respond to the release.

IDEM and the Town of Pines do not have the resources to conduct the potential response action for the Site, thus illustrating the need for federal involvement to address the imminent endangerment posed by the Site.

IV. ENDANGERMENT DETERMINATION

Given the Site conditions, the nature of the known and suspected hazardous substances on Site, and the potential exposure pathways described in Sections II and III above, actual or threatened releases of hazardous substances from this Site, if not addressed by implementing the response actions selected in this Memorandum, may present an imminent and substantial endangerment to public health, welfare, or the environment.

V. PROPOSED ACTIONS

A. Proposed Actions

1. Proposed Action Description

PRP removal action activities at this Site will include, but are not limited to, excavation of soils contaminated with arsenic, thallium, and lead at levels in excess of the RML soil cleanup criteria at properties that have been sampled or will be sampled under AOC II as described in Section II.A.1 above, and the off-site disposal of such excavated soils. Dozens of properties have, as of the date of this Action Memorandum, already been sampled under AOC II as described in Section II.A.1 above and EPA expects that additional properties will be sampled after the approval date of this Action Memorandum. Such excavation and disposal of contaminated soils may be conducted concurrently with the screening of additional properties under AOC II.

The response actions described in this memorandum directly address the actual or substantial threat of releases of hazardous substances on Site, which may pose an imminent and substantial endangerment to public health or welfare or the environment. Removal activities on Site will include:

- 1) Developing and implementing Site planning documents (e.g. Removal Work Plan, including but not limited to a Health and Safety Plan, Site Security Plan, Air Monitoring Plan, Traffic Management Plan, and Site Emergency Contingency Plan), decontamination procedures, and necessary staging/support areas;
- 2) Conducting land surveying and title search activities to the extent necessary to locate all property boundaries, easements, special features (pipes, storage tanks, etc.), utilities, sample locations and other pertinent features and to identify real property owners.
- 3) Conducting sampling, resampling, and/or confirmatory sampling and analysis for arsenic, thallium and lead in fly ash, bottom ash, or other coal combustion byproducts or residuals at properties sampled or to be sampled under AOC II as described in Section II.A.1 above.
- 4) At each property sampled under AOC II as described in Section II.A.1 above, excavating and staging soils contaminated with arsenic, thallium and lead at levels above the soil clean-up criteria set forth in V.A.1(5) below; and transporting excavated soils for off-Site disposal at a RCRA/CERCLA approved disposal facility in accordance with the EPA Off-Site Rule, as set forth at 40 C.F.R. § 300.440.
- 5) The basic removal soil clean-up criteria for arsenic, thallium and lead are the Removal Management Levels, 67 mg/kg arsenic, 2.3 mg/kg thallium, and 400 mg/kg lead. However, excavation of contaminated soils at or above RMLs will leave residual

contamination in place, and long-term remedial action will likely be necessary to fully address the threat posed by the release of such metals. In accordance with 40 C.F.R. § 300.415(d), and (g), the removal action under this Action Memorandum shall ensure an orderly transition from removal activities to remedial activities and shall contribute to the efficient performance of a future long-term remedial action by setting soil clean-up criteria to the extent practicable – within the meaning of 40 C.F.R. § 300.415(d) and (g) - for arsenic, thallium and lead at likely remedial soil cleanup levels, if such values are more stringent than the basic removal soil clean-up criteria.

- 6) Placing a permanent, permeable visual barrier in the excavation area before backfilling to demarcate where clean fill and soils end and soils with residual contamination begin, as necessary or appropriate; backfilling excavated areas with clean material and topsoil.
- 7) Documenting the condition of each real property prior to commencing cleanup activities; and restoring property damaged by the response actions described above to a condition at, or near, the condition of the property prior to commencement of the response actions. Restoration activities shall include but not be limited to backfilling excavated areas with clean fill material and topsoil; laying sod or planting other appropriate ground cover, shrubs, trees, or other vegetation; repairing or replacing concrete or other paved areas; and repairing damage to structures.
- 8) Ensuring that restoration and re-vegetation is successful, and
- 9) Taking any necessary response action to address any Site-related release or threatened release of a hazardous substance, pollutant, or contaminant that the U.S. EPA determines may pose an imminent and substantial endangerment to the public health, welfare or the environment.

The removal action will be conducted in a manner not inconsistent with the NCP. The OSC has initiated planning for provision of post-removal Site control consistent with the provisions of Section 300.415(l) of the NCP and the response actions proposed herein are consistent with any long-term remedial actions that may be required. However, removal of the immediate threat presented by hazardous substances in the vicinity of the residences is expected to minimize the need for post-removal Site controls.

Off-Site Rule

All hazardous substances, pollutants, or contaminants removed off-site pursuant to this removal action for treatment, storage, and disposal shall be treated, stored, or disposed of at a facility in compliance, as determined by U.S. EPA, with the U.S. EPA Off-Site Rule, 40 C.F.R. § 300.440.

2. Contribution to Remedial Performance

The proposed action will not impede future responses based upon available information.

3. Engineering Evaluation/Cost Analysis (EE/CA)

Not Applicable.

4. Applicable or Relevant and Appropriate Requirements (ARARs)

All applicable or relevant and appropriate requirements (ARARs) of Federal and State law will be complied with to the extent practicable considering exigencies of the Site. The OSC submitted a letter to IDEM on March 16, 2015, requesting State ARARs for the Site, and IDEM responded on March 17, 2015. Any state ARARs identified in a timely manner will be complied with to the extent practicable given the exigencies of the site.

5. Project Schedule

Not Applicable.

B. Estimated Costs

Not available, since this is an Enforcement Action Memorandum.

The response actions described in this memorandum directly address actual or threatened releases of hazardous substances, pollutants or contaminants at the facility which may pose an imminent and substantial endangerment to public health and safety, and to the environment. These response actions do not impose a burden on the affected property disproportionate to the extent to which that property contributes to the conditions being addressed.

VI. EXPECTED CHANGE IN THE SITUATION SHOULD ACTION BE DELAYED OR NOT TAKEN

Given the Site conditions, the nature of the hazardous substances and pollutants or contaminants documented on Site, and the potential exposure pathways to nearby populations described in Sections II, III and IV above, actual or threatened release of hazardous substances and pollutants or contaminants from the Site, failing to take or delaying action may present an imminent and substantial endangerment to public health, welfare or the environment, increasing the potential that hazardous substances will be released, thereby threatening the adjacent population and the environment. Delayed or non-action may result in increased likelihood of external exposure, inhalation, ingestion or direct contact to human populations accessing and working on the Site.

VII. OUTSTANDING POLICY ISSUES

None.

VIII. ENFORCEMENT

For Administrative purposes, information concerning confidential enforcement strategy for this Site is contained in the Enforcement Confidential Addendum.

IX. RECOMMENDATION

This decision document represents the selected removal action for the Town of Pines Groundwater Plume Site, Pines, Porter County, Indiana. It has been developed in accordance with CERCLA, as amended, and is not inconsistent with the NCP. This decision is based upon the Administrative Record for this Site (Attachment 2). Conditions at the Site meet the NCP Section 300.415(b)(2) criteria for a removal action and I recommend your approval of the proposed removal action. You may indicate your decision by signing below.

APPROVE:  DATE: 10-15-15
Director, Superfund Division

DISAPPROVE: _____ DATE: _____
Director, Superfund Division

Enforcement Addendum

Figure:

1. Site Location Map

Attachments

1. Environmental Justice Analysis
2. Index to the Administrative Record
3. Properties with Arsenic and Thallium above RMLs
4. Properties identified for additional sampling and screening

cc: Doug Petroff, IDEM, **w/o Enf. Addendum**
M. Chezik, U.S. DOI, **w/o Enf. Addendum**
(email: michael_chezik@ios.doi.gov)
Rex Osborn, IDEM, **w/o Enf. Addendum**
(email: rosborn@idem.in.gov)

BCC PAGE HAS BEEN REDACTED

**NOT RELEVANT TO SELECTION
OF REMOVAL ACTION**

ENFORCEMENT ADDENDUM

HAS BEEN REDACTED – THREE PAGES

ENFORCEMENT CONFIDENTIAL

NOT SUBJECT TO DISCOVERY

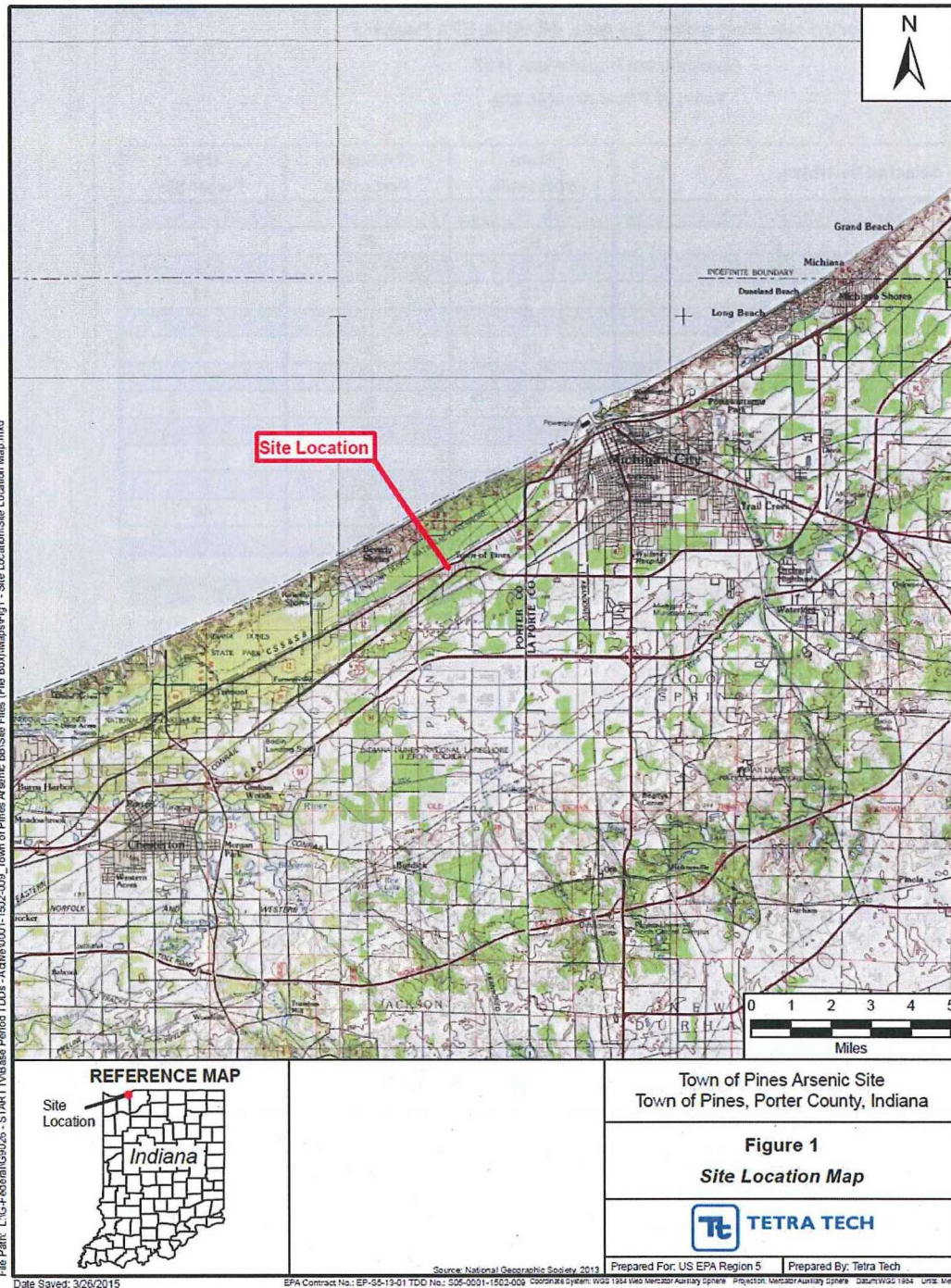
FOIA EXEMPT

NOT RELEVANT TO SELECTION

OF REMOVAL ACTION

FIGURE 1
TOWN OF PINES GROUNDWATER PLUME SITE
TOWN OF PINES, PORTER COUNTY, INDIANA
APRIL 2015

SITE LOCATION MAP



ATTACHMENT 1

ENVIRONMENTAL JUSTICE ANALYSIS

TOWN OF PINES, PORTER COUNTY, INDIANA

APRIL 2015



EJSCREEN Report

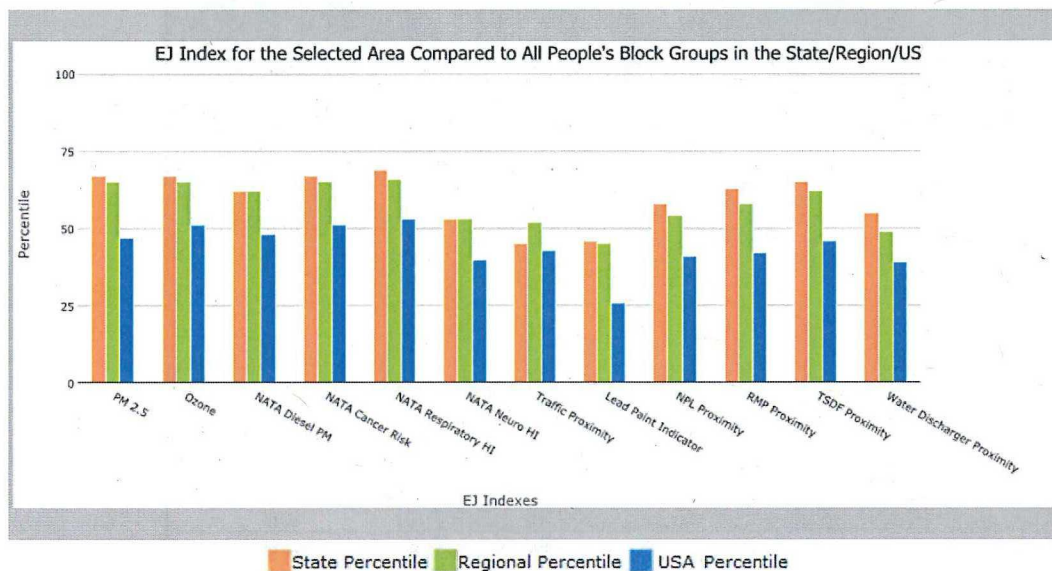


for 0.5 mile Ring around the Area, INDIANA, EPA Region 5

Approximate Population: 1187

Town of Pines Arsenic Site

Selected Variables	State Percentile	EPA Region Percentile	USA Percentile
EJ Indexes			
EJ Index for PM2.5	67	65	47
EJ Index for Ozone	67	65	51
EJ Index for NATA Diesel PM	62	62	48
EJ Index for NATA Air Toxics Cancer Risk	67	65	51
EJ Index for NATA Respiratory Hazard Index	69	66	53
EJ Index for NATA Neurological Hazard Index	53	53	40
EJ Index for Traffic Proximity and Volume	45	52	43
EJ Index for Lead Paint Indicator	46	45	26
EJ Index for Proximity to NPL sites	58	54	41
EJ Index for Proximity to RMP sites	63	58	42
EJ Index for Proximity to TSDFs	65	62	46
EJ Index for Proximity to Major Direct Dischargers	55	49	39



This report shows environmental, demographic, and EJ indicator values. It shows environmental and demographic raw data (e.g., the estimated concentration of ozone in the air), and also shows what percentile each raw data value represents. These percentiles provide perspective on how the selected block group or buffer area compares to the entire state, EPA region, or nation. For example, if a given location is at the 95th percentile nationwide, this means that only 5 percent of the US population has a higher block group value than the average person in the location being analyzed. The years for which the data are available, and the methods used, vary across these indicators. Important caveats and uncertainties apply to this screening-level information, so it is essential to understand the limitations on appropriate interpretations and applications of these indicators. Please see EJSCREEN documentation for discussion of these issues before using reports.

February 26, 2015

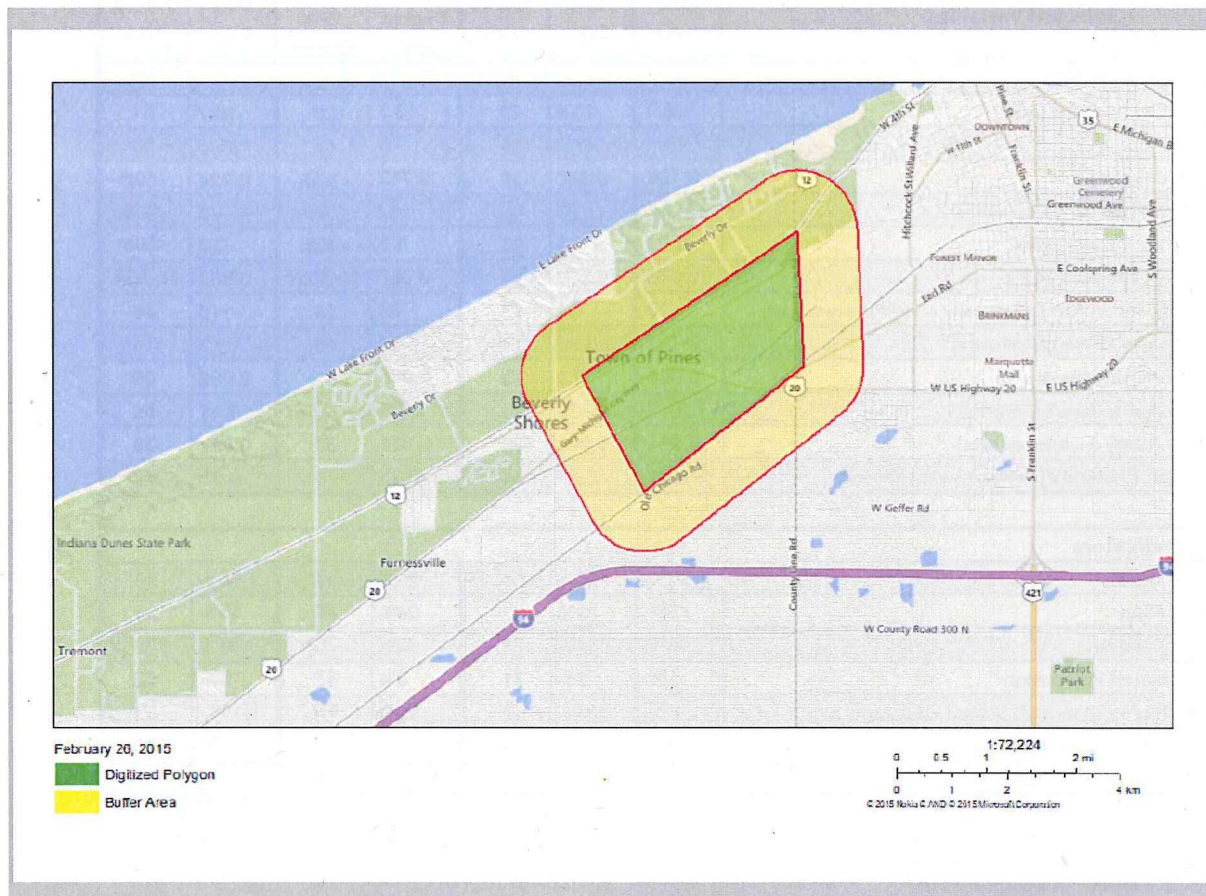
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EJSCREEN Report

for 0.5 mile Ring around the Area, INDIANA, EPA Region 5

Approximate Population: 1187

Town of Pines Arsenic Site



EJSCREEN Report

for 0.5 mile Ring around the Area, INDIANA, EPA Region 5

Approximate Population: 1187

Town of Pines Arsenic Site



Selected Variables	Raw Data	State Avg.	%ile in State	EPA Region Avg.	%ile in EPA Region	USA Avg.	%ile in USA
Environmental Indicators							
Particulate Matter (PM 2.5 in $\mu\text{g}/\text{m}^3$)	12.9	13.4	22	13.3	29	10.7	81
Ozone (ppb)	43.7	47.2	14	45	43	46.3	33
NATA Diesel PM ($\mu\text{g}/\text{m}^3$)*	0.196	0.341	37	0.712	<50th	0.824	<50th
NATA Cancer Risk (lifetime risk per million)*	33	36	40	42	<50th	49	<50th
NATA Respiratory Hazard Index*	0.73	1.1	27	1.5	<50th	2.3	<50th
NATA Neurological Hazard Index*	0.078	0.059	84	0.067	70-80th	0.063	80-90th
Traffic Proximity and Volume (daily traffic count/distance to road)	30	24	77	69	54	110	45
Lead Paint Indicator (% Pre-1960 Housing)	0.5	0.35	71	0.39	65	0.3	74
NPL Proximity (site count/km distance)	0.048	0.1	49	0.085	55	0.096	50
RMP Proximity (facility count/km distance)	0.17	0.35	51	0.33	54	0.31	58
TSDF Proximity (facility count/km distance)	0.014	0.042	33	0.051	30	0.054	38
Water Discharger Proximity (facility count/km distance)	0.21	0.26	64	0.23	70	0.25	70
Demographic Indicators							
Demographic Index	27%	26%	64	28%	63	35%	46
Minority Population	8%	19%	42	24%	38	36%	21
Low Income Population	46%	34%	73	32%	76	34%	72
Linguistically Isolated Population	1%	2%	71	3%	67	5%	52
Population With Less Than High School Education	14%	13%	62	12%	69	15%	59
Population Under 5 years of age	4%	7%	26	6%	29	7%	28
Population over 64 years of age	13%	13%	56	13%	54	13%	57

* The National-Scale Air Toxics Assessment (NATA) is EPA's ongoing, comprehensive evaluation of air toxics in the United States. EPA developed the NATA to prioritize air toxics, emission sources, and locations of interest for further study. It is important to remember that NATA provides broad estimates of health risks over geographic areas of the country, not definitive risks to specific individuals or locations. More information on the NATA analysis can be found at: <http://www.epa.gov/ttn/atw/natamain/index.html>.

For additional information, see: www.epa.gov/environmentaljustice

EJSCREEN is a screening tool for pre-decisional use only. It can help identify areas that may warrant additional consideration, analysis, or outreach. It does not provide a basis for decision-making, but it may help identify potential areas of EJ concern. Users should keep in mind that screening tools are subject to substantial uncertainty in their demographic and environmental data, particularly when looking at small geographic areas. Important caveats and uncertainties apply to this screening-level information, so it is essential to understand the limitations on appropriate interpretations and applications of these indicators. Please see EJSCREEN documentation for discussion of these issues before using reports. This screening tool does not provide data on every environmental impact and demographic factor that may be relevant to a particular location. EJSCREEN outputs should be supplemented with additional information and local knowledge before taking any action to address potential EJ concerns.

February 26, 2015

3/3

ATTACHMENT 2

U.S. ENVIRONMENTAL PROTECTION AGENCY REMOVAL ACTION

ADMINISTRATIVE RECORD FOR THE TOWN OF PINES ARSENIC SITE PINES, PORTER COUNTY, INDIANA

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**ORIGINAL
SEPTEMBER, 2015**

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15	917586	11/21/14	AECOM	U.S. EPA	Supplemental Soil Characterization Validate Inorganics Results	26
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21	917587	1/29/15	AECOM	U.S. EPA	Comparison of Unvalidated Quadrant Sampling Inorganics Data to PRGs and BTVs	5
22	917592	1/29/15	AECOM	U.S. EPA	November 2014 Metals Analysis Sampling Data Validation Report - ALS SDG R1409386	6
23	917594	1/29/15	AECOM	U.S. EPA	November 2014 Metals Analysis Sampling Data Validation Report - ALS SDG R1409434	6
24	917596	2/2/15	AECOM	U.S. EPA	November 2014 Metals Analysis Sampling Data Validation Report - ALS SDG R1409459	5
25	917583	2/3/15	Gebien, C., U.S. EPA	Hassan, J., U.S. EPA	Email re: Referral for a Removal Action at the Town of Pines Arsenic Site	3
26	917590	2/3/15	AECOM	U.S. EPA	November 2014 Metals Analysis Sampling Data Validation Report - ALS SDG R1409330	7
27	917591	2/5/15	AECOM	U.S. EPA	November 2014 Metals Analysis Sampling Data Validation Report - ALS SDG R1409381	8
28	917582	3/16/15	Hassan, J., U.S. EPA	Osborn, R., IDEM	Letter re: Request for ARARs for the Town of Pines Arsenic Site	2
29	917581	3/17/15	Petroff, D., IDEM	Hassan, J., U.S. EPA	Letter re: ARARs for the Town of Pines Arsenic Site	3
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31	918160	3/30/15	Ferry, J., NISource	Hassan, J., U.S. EPA	Email re: NIPSCO Ownership of Power Station	1
32	920846	5/5/15	AECOM	U.S. EPA	Supplemental Soil Characterization Work Plan - Appendix B: Quality Assurance Project Plan Addendum	324
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34	920850	5/8/15	Hardin, E., U.S. EPA	Bradley, L., AECOM	Email re: Approval of Expanded SSC Work Plan	5

35	920845	5/29/15	Lynch, J., AECOM	Hardin, E., U.S. EPA	Memo re: Pines Area of Investigation CCB Fill Locations Summary	2
36	920849	6/12/15	Layne, W., U.S. EPA	Hardin, E., U.S. EPA	Email re: Approval of QAPP Addendum	1
37	920843	9/14/15	Tetra Tech	U.S. EPA	Town of Pines Site Soil Property Map Key (<i>This document has been withheld to protect personally identifying information</i>)	3
38	920833	2004-05	Unknown	Unknown	Town of Pines Ash Map	1
39	-	-	Hassan, J., U.S. EPA	Karl, R., U.S. EPA	Action Memorandum re: Request for a Time-Critical Removal Action at the Town of Pines Arsenic Site (<i>PENDING</i>)	-

ATTACHMENT 3

**PROPERTY MAP WITH ELEVATED ARSENIC AND THALLIUM LEVELS
HAS BEEN REDACTED – ONE PAGE**

MAP CONTAINS POSSIBLE PERSONALLY IDENTIFYING INFORMATION

ATTACHMENT 4

PROPERTIES IDENTIFIED FOR SAMPLING

HAS BEEN REDACTED – ONE PAGE

MAP CONTAINS POSSIBLE PERSONALLY IDENTIFYING INFORMATION