



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

US EPA RECORDS CENTER REGION 5



494709

REPLY TO THE ATTENTION OF:

MEMORANDUM

SUBJECT: ENFORCEMENT ACTION MEMORANDUM —Determination of an Imminent and Substantial Threat to Public Health and/or the Environment at the Sangamon Street Right of Way Site located in Chicago, Cook County, Illinois (Site ID C54R)

FROM: Steve Faryan, On-Scene Coordinator *MWL*
Removal Response Section 3

THRU: Samuel Borries, Chief
Emergency Response Branch 2

TO: Richard C. Karl, Director
Superfund Division

I. PURPOSE

The purpose of this Action Memorandum is to document the determination of an imminent and substantial threat to public health and the environment at the Sangamon Street Right of Way Site (the Site) in Chicago, Cook County, Illinois. The response actions proposed herein are necessary in order to mitigate threats and potential threats to public health, welfare, and the environment posed by the presence of uncontrolled hazardous substances including high levels of lead in surface soils located on the Site. The Site is currently owned at least in part, and was operated by, Burlington Northern Santa Fe Railway (BNSF). This document details the time-critical removal action proposed for the Site.

Site assessment sampling has documented high levels of heavy metals in the surface and sub-surface soil at concentrations that exceed the threshold concentration for lead using the Environmental Protection Agency's Resource Conservation and Recovery Act (RCRA) Toxic Characteristic Leaching Procedure (TCLP), Removal Management Levels (RMLs), and the Illinois Environmental Protection Agency's (Illinois EPA's) Tiered Approach to Clean-up (TACO) levels. Given the Site's location in a mixed residential area and its current status as an open area, no longer used for rail traffic, there is clear potential for exposure to neighboring residents, and this action is properly classified as a time-critical removal.

The time-critical removal action proposed herein includes the removal of contaminated soil from the areas shown in Figures A-2, A-3 and A-4, with off-site disposal, thereby mitigating site conditions. Clean soil will be graded over the excavated areas and seeded to prevent erosion.

BNSF, the potentially responsible party, has indicated that it is prepared to conduct the time-critical removal action described in this Action Memorandum and may complete the work pursuant to an Administrative Order on Consent (AOC). Separately, BNSF has petitioned the Surface Transportation Board for permission to abandon railroad operations along the corridor, so the premises can be conveyed to the City of Chicago (City). In turn, the City plans to construct a walkway and green space along the Sangamon Street corridor, to be named "El Paseo."

There are no nationally significant or precedent setting issues associated with the proposed response at this non-NPL site.

II. SITE CONDITIONS AND BACKGROUND

CERCLIS ID: ILN000505581

State ID: C54R

Category: Time-Critical Removal Action

A. Site Description

The Site is an out-of-service railroad corridor located in the City of Chicago, Cook County, Illinois, and running from 16th Street south along Sangamon Street to 21st Street. It is immediately adjacent to a City-owned corridor, which in turn includes Sangamon Street and the sidewalk that runs along its west side, and an undeveloped area south of Cullerton Avenue. The southern portion of the Site and the undeveloped portion of the City corridor are adjacent to the Loewenthal Metals Site, which was the subject of a time-critical removal action in 2013, discussed further below. The northern end is adjacent to the National Lead Site, which has been addressed under Illinois Environmental Protection Agency's (Illinois EPA) voluntary remediation program.

There are several privately-owned properties adjacent to the BNSF corridor that may partly encroach on it, and thus there is an issue of whether there may be additional current owners of the Site. BNSF will conduct a title search and property survey as part of this action prior to the removal action.

The former Loewenthal Metals Company owned and operated a smelter at 947 West Cullerton Street in Chicago, Illinois (Figure A-1). EPA conducted a time-critical removal action at the Loewenthal Metals Site from July 2013 to October 11, 2013 to remove high concentrations of lead in the soil so as to allow future residential use. A total of 4,800 tons of impacted soil and debris were excavated, treated with a fixation agent, and transported for disposal at Republic Services' Newton County landfill in Indiana. Clean top soil was graded over the site and seeded to prevent erosion.

As part of the investigation phase of the Loewenthal Metals Site removal action, EPA requested access to the portion of BNSF's corridor lying to the east of the Loewenthal Metals Site, in order to delineate the extent of lead contamination. EPA and BNSF agreed that BNSF's contractor, TRC, would collect soil samples at EPA-designated locations and split the samples with EPA. These sampling locations are shown on Figure 1 and are designated as LM-SB-24 to LM-SB-35. The LM-series samples were collected on June 21, 2013. In addition to the sampling activities at the EPA-designated locations, on June 21, 2013, TRC collected three additional soil samples from an area one block north of the EPA sampling locations and north of Cullerton Avenue along the BNSF corridor. These samples are designated as GP-1 to GP-3.

The results of this sampling event documented levels of lead exceeding the RCRA toxicity characteristic level for lead, which is 5 mg/L, and the RMLs for lead, which are 400 mg/kg for residential use scenarios and 800 mg/kg for industrial. In particular, TCLP analysis on a sample from location LM-SB-24 showed a lead concentration of 56 milligrams per liter (mg/L), and 6,300 mg/kg lead at the surface-to-one-foot-deep range. Lead concentrations in other samples from this event ranged from 3,100 mg/kg to 1,500 mg/kg in the surface-to-one-foot-deep range. Notably, the RMLs for lead are the same as the Illinois EPA TACO levels for lead; thus, there exceedances of the state's levels as well.

Following the June 21, 2013 sampling, BNSF's contractor constructed temporary fencing around the known contaminated areas, and sampled and managed the soil pile that was staged along Sangamon Street during the removal of the crossings and track from Cullerton Avenue to 18th Street. The soil was disposed of as special waste and the removal of railroad track was suspended pending further sampling and characterization.

Based on BNSF's and EPA's initial sampling results, BNSF completed additional soil sampling on November 21, 2013 and again on October 7-8, 2014, to further evaluate lead impacts along the BNSF corridor running from 21st Street north to 16th Street, at which point the right of way intersects the main BNSF east-west rail lines.

The analytical results were compared to the Tier 1 Soil Remediation Objectives (SROs) for both residential and industrial/commercial properties, which are listed in the Illinois TACO regulations, 35 Illinois Administrative Code (IAC) 742. In addition, the TCLP analytical results were compared to the values in EPA's Identification and Listing of Hazardous Waste rules at 40 Code of Federal Regulations (CFR) Part 261. TCLP lead samples with concentrations greater than 5 mg/L are classified as hazardous waste.

Based on the results of the soil samples collected and analyzed for total lead, 33 soil boring locations on the BNSF corridor have total lead concentrations above 800 mg/kg, exceeding the RML for industrial and residential values. In addition, lead concentrations at six sample locations are above the 5 mg/l TCLP threshold. As such, this material will have to be managed as a hazardous waste.

In addition to the total lead and TCLP lead analyses, EPA analyzed one soil sample (LM-SB-24) from two to three feet below ground surface (bgs) for polycyclic aromatic hydrocarbons (PAHs) analysis, and one sample (LM-SB-26) from two to three feet bgs for volatile organic

compounds (VOCs) analysis. None of the VOC analyses exceeded RMLs or Illinois EPA TACO levels for residential or industrial values.

Summary Table for Exposure Threats to Surface Soil (0 to 2 ft.) - BNSF Right of Way Boundaries

Locations	Total # samples	Max soil level (ppm)	#>400 ppm	#>800 ppm	TCLP exceedance
Block 1 - [Pb]	16	1,700	12	8	0
Block 2* - [Pb]	21	5,010	17	15	2
Block 3 - [Pb]	20	3,180	14	7	1
Block 2*: GP - 1, 2, 3	# samples	Max soil level (ppm)	RML (ppm)	# > RML	
Arsenic [As]	3	125	67	2	
Benzo(a)pyrene	3	68	1.5	3	

Pb – Lead; RML – Removal Management Level; ppm – parts per million; TCLP – Toxicity Characteristic Leaching Procedure
Block 1: Sangamon St, between W 21st and Cullerton St; example sample sites listed in table 1 - P1

Block 2: Sangamon St, between Cullerton St and W 19th St; example sample sites listed in table 1 - P3, P4, P5, P6, P7, GP1, GP2, GP3

Block 3: Sangamon St, between W 19th St and W 18th St

Contaminant	Concentration (mg/kg)	Location	Removal Management Level (mg/kg)
Lead	1,040 mg/kg 0-1 feet	GP-1	400mg/kg Residential/800mg/kg Industrial
Lead	1200 mg/kg 0-1 feet	GP-2	400mg/kg Residential/800mg/kg Industrial
Lead	3,190 mg/kg 0-2 feet	GP-3	400mg/kg Residential/800mg/kg Industrial
Lead	1,540 mg/kg 0-2 feet	P-1	400mg/kg Residential/800mg/kg Industrial
Lead	1200 mg/kg 2-4 feet	P-3	400mg/kg Residential/800mg/kg Industrial
Lead	1,350 mg/kg 0-1 feet	P-4	400mg/kg Residential/800mg/kg Industrial
Lead	5010mg/kg 0-2feet	P-5	400mg/kg Residential/800mg/kg Industrial

Lead	120 mg/kg 0-1 feet	P-6	400mg/kg Residential/800mg/kg Industrial
Lead	4,960 mg/kg 2-4 feet	P-6	400mg/kg Residential/800mg/kg Industrial
Lead	2,620mg/kg 0-2 feet	P-7	400mg/kg Residential/800mg/kg Industrial

1. Physical Location

The Sangamon ROW Site is located in a mixed commercial, light industrial and residential neighborhood in the City of Chicago, Cook County, Illinois, and runs from 16th Street south along Sangamon Street to 21st Street. The Site is located adjacent to the City's Sangamon Street and a sidewalk, which run along the west side of the railroad corridor. Additionally, the portion of the Site between 16th and 18th Streets is adjacent to the National Lead Site, which has been addressed through the Illinois EPA voluntary remediation program. Figure A-1 shows the location of the corridor and the points at where samples have been collected.

Several areas of third-party private property are adjacent to the railroad corridor and may overlap with or encroach on the railroad's property. BNSF will conduct a title search and property survey as part of this action prior to the planned soil removal.

An Environmental Justice (EJ) analysis for the Site was conducted. Screening of the surrounding area used Region 5's EJ Screening Tool (which applies the interim version of the national EJ Strategic Enforcement Assessment Tool (EJSCREEN)). Region 5 has reviewed environmental and demographic data for the area surrounding the Sangamon Street Right of Way Site in Chicago, Illinois and determined there is a high potential for EJ concerns at this Site. The screening table and map are included in Figure A-5.

2. Site Characteristics

The BNSF property is easily accessible and is not fenced except for a portion from 18th Street to 16th Street. The corridor had track and grade crossings between 18th Street and 21st Street until BNSF contracted with Orange Crush to remove the rails, ties and crossings in the summer of 2013. BNSF had also arranged for temporary fencing to be placed at Cullerton Avenue, but it has since fallen down and the area is again accessible to the public.

The sampling EPA and BNSF's contractor TRC conducted at the Site documents high levels of lead that exceed the TCLP in 5 sample locations along the BNSF corridor. The sampling taken elsewhere along the corridor has documented lead levels at the surface that exceed the RMLs for lead of 400mg/kg for residential and 800 mg/kg for industrial.

There are two areas of the Site that the City has already addressed. Both areas are located along the sidewalk constructed on the east side of the right of way from Cullerton Avenue south to 21st

Street. The City removed soil at the south parcel from 21st Street to Cullerton Avenue and constructed a sidewalk, and the area is now designated as an urban garden. The second area was adjacent to the Loewenthal Metals removal action. In August and September of 2013, the City removed two to three feet of soil from this area and backfilled it with clean fill.

3. Release or Threatened Release into the Environment of a Hazardous Substance, or Pollutant, or Contaminant

Analytical results from previous sampling events have documented lead's presence in soils in concentrations above the RCRA TCLP threshold and Superfund RMLs, and the Illinois EPA TACO residential and industrial standards. The high levels of lead contamination have been documented near the surface, primarily in the zero-to-two- foot range. The contaminated soil will be removed to allow for re-use of the corridor and adjacent property. The City is planning to construct the El Paseo project, which is being designed as a "green way" and walking path. Contaminated soil removal is required so that this project can be conducted safely. Otherwise, the material would be disturbed during El Paseo construction, causing a release or threat of release of lead contamination through dust via movement by equipment and by rain or flood waters.

4. NPL Status

The Site is not on the National Priorities List (NPL).

5. Maps, Pictures, and Other Graphic Representations

Figure A-1 is the Site Location Map for the Sangamon Street Right of Way Site. Figure A-2, A-3 and A-4 show the areas where the removal action plan will be implemented. Figure A-5 is the EJ Screen report and map.

B. Other Actions to Date

1. Previous Actions

Previous actions at the Site include the City's 2009 removal of the top twelve to sixteen inches of contaminated soil along the west side of the BNSF tracks running from Cullerton Avenue south to 21st Street, so that the City could construct a walking path and an urban garden in this area. EPA was not contacted or present when this work was completed.

During the summer of 2013, BNSF contracted Orange Crush to remove the rail crossings along the portion of its corridor running north from Cullerton Avenue to 18th Street. Orange Crush removed all the rail lines, ties, and scrapped some soil during this action. After receiving complaints from residents that the track removal was creating excessive dust, EPA told BNSF and its contractor, verbally and through e-mail correspondence, to properly characterize the soil that was being removed and to institute dust control measures. BNSF then staged soil piles, sampled them for disposal, and arranged for the soil, track and ties to be removed from the area. The soil was transported and disposed of as a special waste at a permitted landfill.

EPA consulted with the City's Department of Transportation regarding the high levels of lead found in the area between the east border of the Loewenthal property and the western edge of the BNSF corridor. After the City determined that it owned and maintained this area, it conducted a cleanup of lead-contaminated soil. The City's documentation, dated January 17, 2014, reports that the cleanup was conducted between September 30 and October 11, 2013, and that its contractor, SET Environmental, Inc., excavated 64 cubic yards of contaminated soil that was hauled off-site for treatment and disposal. Geotextile fabric was placed on the bottom of the excavation and the excavated areas were filled with clean soil.

2. Current Actions

No removal actions are currently occurring on the Site.

C. State and Local Authorities' Roles

1. State and Local Actions to Date

By letter of December 9, 2014, Illinois EPA referred the Sangamon Street Right of Way Site to EPA, requesting that a removal assessment and, as appropriate a removal action, be conducted.

The City has conducted limited removal of lead hot spots and lead contaminated soil on the east side of the undeveloped Sangamon Street corridor from Cullerton Avenue south to 21st Street. It is also planning to construct the El Paseo along Sangamon Street and the undeveloped City property between the former Loewenthal property and the BNSF corridor, and conceptual plans have been prepared to conduct the work.

2. Potential for Continued State/Local Response

EPA anticipates that there will be no need for state or local response on the BNSF railroad corridor in view of BNSF's agreement in principle to undertake the response action. EPA has no information suggesting any lead hot spots remain on the City's Sangamon Street corridor.

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

Conditions at the Site may pose an imminent and substantial endangerment to public health or welfare, and 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.

A potential exposure risk is present due to lead in soils at concentrations above Removal Management Levels and at six sampling locations above the RCRA TCLP level of 5 mg/l. The railroad corridor is unfenced and accessible to the public, so presently individuals may have direct contact with the contamination. Walsh Elementary School is one block east of the Sangamon Corridor and many children walk through the area on a daily basis. Exposure could occur through direct contact with the contaminated soil or inhalation of airborne particles dispersed from the uncovered contaminated soil. There are no signs warning people of the presence of contamination to be avoided. Additionally, the planned redevelopment and use of the Sangamon corridor as a public walkway and green space will involve heavy construction. Thus, the contaminated soil should be removed and replaced with clean soil prior to any construction of the El Paseo.

Data for the levels of arsenic in surface soil samples that BNSF's contractor provided to EPA are limited to only three borings. Of the three surface samples from those borings, two exceed the RML value of 67 ppm, with a maximum of 125 ppm.

Data for the levels of Polycyclic Aromatic Hydrocarbons (PAHs) in surface soil samples BNSF's contractor provided to EPA are also limited to only 3 borings. For all three samples, the level of benzo(a)pyrene significantly exceeded the RML of 1.5 ppm. While there may be multiple sources of PAHs in urban soil, PAHs are also present in creosote used to treat railroad ties. Therefore, the presence of PAHs may be expected in surface soil throughout the corridor.

Lead can affect almost every organ and system in the 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. In pregnant women, high levels of exposure to lead may cause miscarriage. High-level exposure in men can damage the organs responsible for sperm production. DHHS has determined that lead and lead compounds are reasonably anticipated to be human carcinogens and the EPA has determined that lead is a probable human carcinogen (ATSDR, CAS # 7439-92-1, August 2007).

Ingesting very high levels of arsenic can result in death. Exposure to lower levels can cause nausea and vomiting, decreased production of red and white blood cells, abnormal heart rhythm, damage to blood vessels, and a sensation of "pins and needles" in hands and feet. Ingesting or breathing low levels of inorganic arsenic for a long time can cause a darkening of the skin and the appearance of small "corns" or "warts" on the palms, soles, and torso. Skin contact with inorganic arsenic may cause redness and swelling. Several studies have shown that ingestion of inorganic arsenic can increase the risk of skin cancer and cancer in the liver, bladder, and lungs. Inhalation of inorganic arsenic can cause increased risk of lung cancer. The Department of Health and Human Services (DHHS) and the EPA have determined that inorganic arsenic is a

known human carcinogen (ATSDR, Chemical Abstract Services [CAS] # 7440-38-2], August 2007).

Benzo(a)pyrene is included in 15 specific PAHs that are reasonably anticipated to cause cancer in humans according to the 12th Report on Carcinogens published by the National Toxicology Program. According to the report, uptake of PAHs through the skin is substantial. Some people who have breathed or touched mixtures of PAHs and other chemicals for long periods of time have developed cancer.

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

Analytical results from previous reports and activities documented the presence of lead in concentrations above the RCRA TCLP threshold of 5 mg/l. Thus, the soil meets this criterion for classification as a characteristic hazardous waste. These high levels of lead are at or near the soil surface and could migrate as windblown dust, or through rain, flooding, or vehicular tracking.

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

Cook County, Illinois receives a substantial amount of precipitation, and temperatures are normally below freezing during the winter, with regular snowfall. In the winter, the average temperature is 25.1°F and the average daily minimum temperature is 17.3°F. In the summer, the average temperature is 71.7°F, and the average daily maximum temperature is 81.7°F. The average total annual precipitation is 38.65 inches and the average seasonal snowfall is 32.6 inches. The average wind speed is about 10.7 miles per hour (according to the National Weather Service). These weather conditions may cause water, wind, and freeze-thaw erosion of the Site's surface soil. Lead contaminated surface soil may as a result of wind action during dry periods pose an inhalation hazard. Such wind action could also lead to deposition of materials in uncontaminated areas. Migration of contaminants in surface soil could also occur through surface water flow during wet periods.

IV. ENDANGERMENT DETERMINATION

Given the Site conditions, the nature of the known and suspected hazardous substances on Site, and the potential exposure pathways to nearby populations described in Sections II and III above, actual or threatened release of hazardous substances and pollutants or contaminants from the 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 AND ESTIMATED COSTS

A. Proposed Actions

1. Proposed action description

BNSF has orally agreed to prepare and implement a Removal Action Work Plan for the Site. The main components of the work plan include the following mandatory provisions:

- a) Completion of preliminary activities such as control of public access with fences;
- b) Site preparation including clearing and grubbing;
- c) Excavation of lead contaminated soil within defined removal areas (Figures A-2, A-3 and A-4) to depths specified in the EPA approved removal work plan;
- d) Transportation and off-site disposal of excavated material from defined areas;
- e) Removal of soil in areas where the soil exceeds RCRA hazardous waste levels;
- f) Placement of demarcation barrier at excavation limits to warn anyone undertaking future excavation projects;
- g) Backfilling with clean fill and grading and seeding to prevent erosion;
- h) Compliance, where practicable, with state and local requirements that are applicable or relevant and appropriate to on-site activities and are more stringent than their federal counterparts;
- i) Construction Quality Assurance Measures, such as
 - Air Monitoring
 - Dust suppression
 - Fugitive Emission Management Plan
 - Health and Safety Plan
 - Sampling and Analysis Plan;
- j) Written schedule for Completion of Tasks;
- k) Submission of Weekly and Final Reports;
- l) Taking any other response actions to address any release or threatened release of hazardous substances, pollutant or contaminants that the EPA OSC determines may pose an imminent and substantial endangerment to public health or the environment.

The removal action will be conducted in a manner not inconsistent with the NCP. The PRP will also initiate planning for provisions of post-removal Site control consistent with the provisions of Section 300.415(1) of the NCP.

The threats posed by uncontrolled substances considered hazardous meet the criteria listed in the NCP Section 300.415(b)(2), and the response actions proposed herein are consistent with any long-term remedial actions which may be required. The proposed removal of hazardous substances, pollutants and contaminants that pose a substantial threat of release is expected to minimize substantial requirements for post-removal Site controls.

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 EPA, with the EPA Off-Site Rule, 40 C.F.R Section 300.440.

2. Contribution to remedial performance

The proposed action would not impede future actions, if any, under the Remedial Program.

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

This section is not applicable because this is a time critical removal action.

4. Applicable or relevant and appropriate requirements (ARARs)

All applicable, relevant and appropriate requirements (ARARs) of Federal and State law will be complied with to the extent practicable considering the exigencies of the circumstances.

5. Project Schedule

This project is expected to be completed in 10 weeks.

B. Estimated Costs

This information is not presented because this is an Enforcement Action Memorandum to support a proposed administrative consent order, the respondent, BNSF, having agreed in principle to perform the work. If ultimately an agreement is not reached, the OSC will assemble the anticipated costs and seek authorization that they be committed for an EPA-led action.

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.

VII. OUTSTANDING POLICY ISSUES

There are no outstanding policy issues.

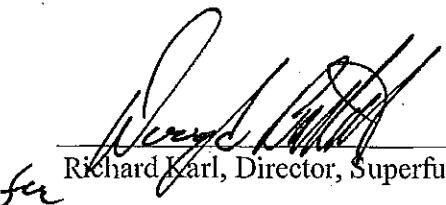
VIII. ENFORCEMENT

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

IX. RECOMMENDATION

This decision document represents the selected removal action for the Sangamon Street Right of Way in Chicago, Cook County, Illinois, developed in accordance with CERCLA as amended, and is not inconsistent with the NCP. This decision is based on the administrative record for the Site (Attachment 1). Conditions at the Site meet the NCP Section 300.415(b)(2) criteria for a removal action and I recommend your approval of the removal action proposed in this Action Memorandum. You may indicate your decision by signing below.

APPROVE:



for Richard Karl, Director, Superfund Division

DATE:

9/8/2015

DISAPPROVE:

Richard Karl, Director, Superfund Division

DATE:

Enforcement Addendum

Figures:

- | | |
|------------|----------------------------|
| A-1 | Site Location Map |
| A,-2, 3, 4 | Removal Action Area Extent |
| A-5 | EJ Screening Map |

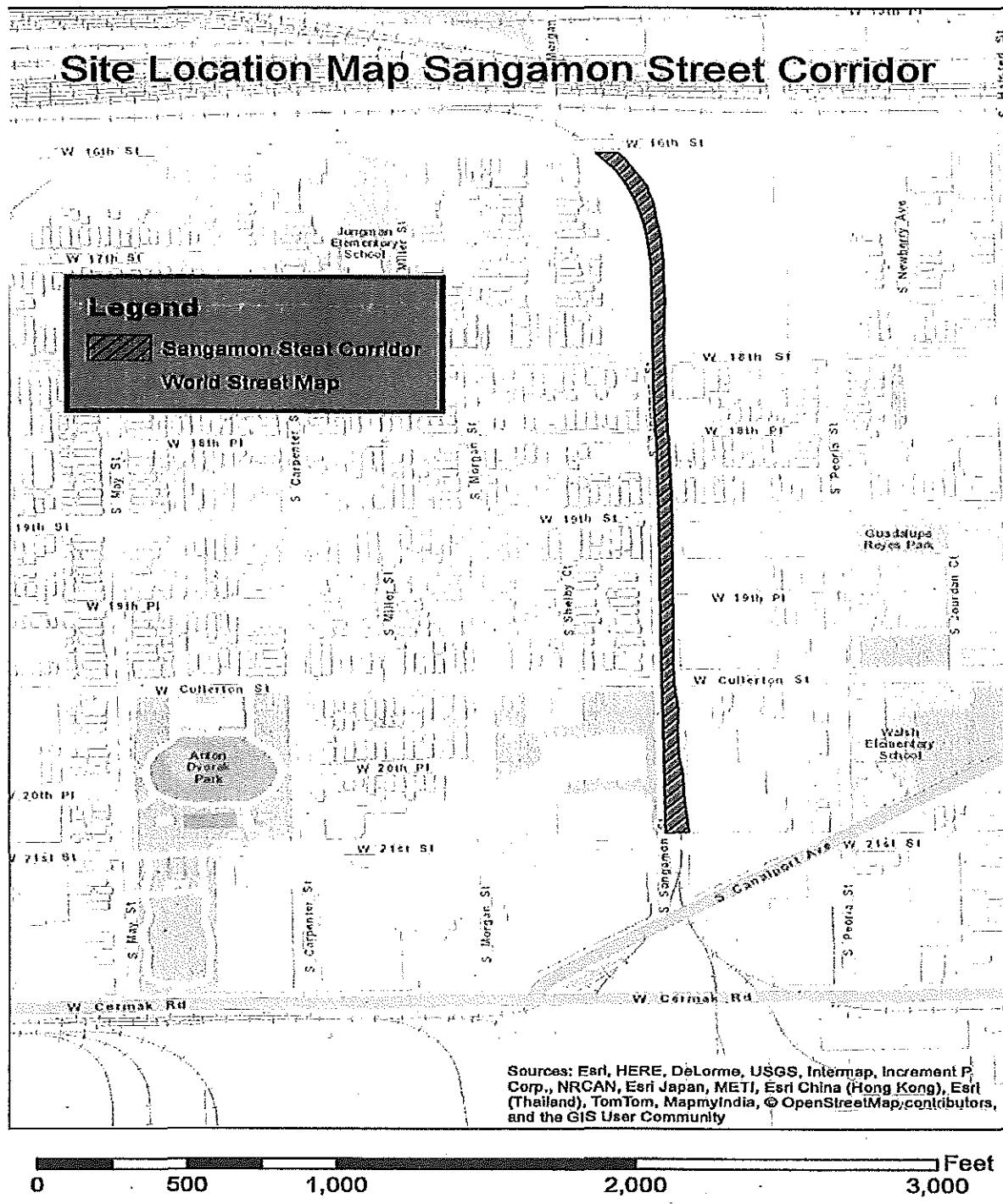
Attachments:

1. Administrative Record Index

cc: B. Schlieger, USEPA 5202 G (email: schlieger.brian@epa.gov)
L. Nelson, U.S. DOI, w/o Enf. Addendum
(email: lindy_nelson@ios.doi.gov)
B. Everettts, Illinois EPA, w/o Enf. Addendum
(email: bruce.everetts@illinois.gov)

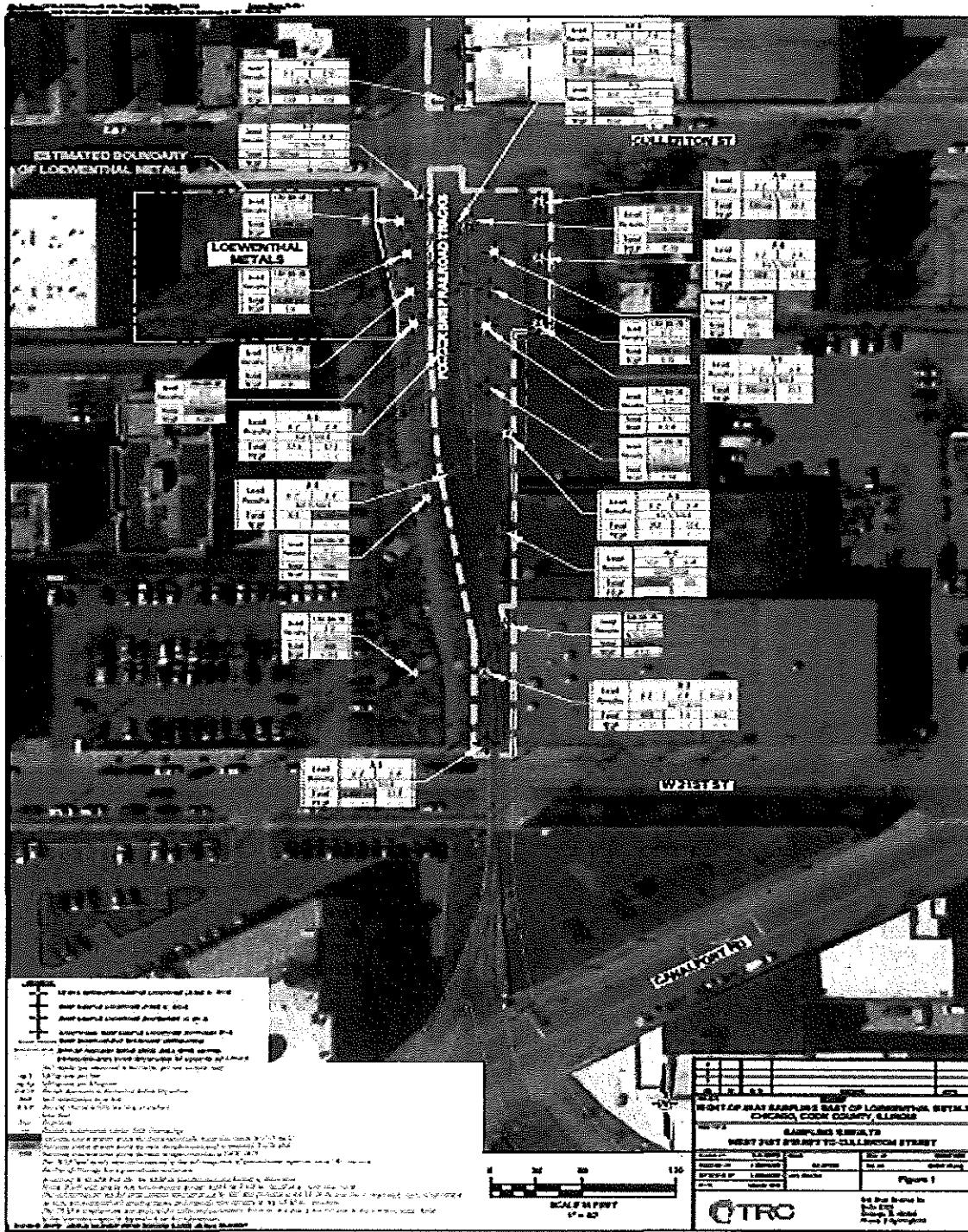
FIGURE A-1

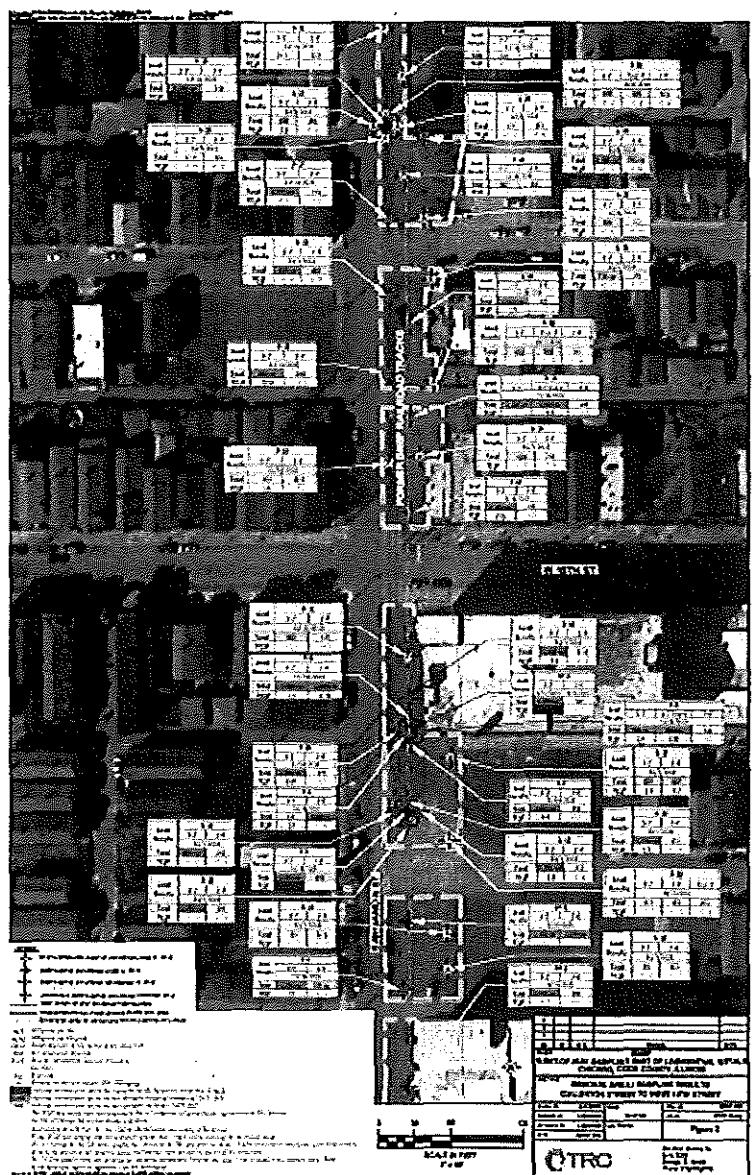
**SITE LOCATION MAP
SANGAMON STREET RIGHT OF WAY**



FIGURES A-2, A-3 and A-4

REMOVAL ACTION AREA





POWER
NATIONAL
LEAD

W107107

POINT OF SWAY SAMPLER BART OF LOWMYRTLE INSTAL
CHICAGO COOK COUNTY, LUM 38

PERCH LOCATION MAP
W1071 WTH INLET TO NEAT GTH STREET

SEARCHED INDEXED SERIALIZED FILED
FEB 10 1988

ATTACHMENT I

**U.S. ENVIRONMENTAL PROTECTION AGENCY
REMOVAL ACTION**

**ADMINISTRATIVE RECORD
FOR THE
SANGAMON STREET RIGHT OF WAY SITE
CHICAGO, COOK COUNTY, ILLINOIS**

**ORIGINAL
MAY, 2015**

NO.	SEMS ID	DATE	AUTHOR	RECIPIENT	TITLE/DESCRIPTION	PAGES
1	918539	No Date	TRC	BNSF	Table 1: Soil Analytical Results - USEPA TACO Tier 1 SROs	2
2	918540	No Date	TRC	BNSF	Table 2: Soil Analytical Results - USEPA RML and CFR	2
3	918537	6/27/13	Brown, A., Pace Labs	Meagher, L., TRC	Laboratory Analytical Report for the June 21, 2013 Sampling Event	22
4	918538	12/12/13	Brown, A., Pace Labs	Meagher, L., TRC	Laboratory Analytical Report for the November 12, 2013 Sampling Event	116
5	918536	12/1/14	Meagher, L., TRC	Jeffries, G., BNSF	Letter re: Soil Sampling Results (with Attachments)	43
6	918535	12/24/14	TRC	BNSF	BNSF Right-of-Way Sampling Maps	6
7	918534	4/1/15	TRC	BNSF	Draft Removal Action Work Plan	17
8	-	-	Faryan, S., U.S. EPA	Karl, R., U.S. EPA	Enforcement Action Memorandum re: Determination of Threat to Public Health and/or the Environment at the Sangamon Street Right of Way Removal Action (<i>PENDING</i>)	-

A-5 EJ Screen Report and Map



EJSCREEN Report

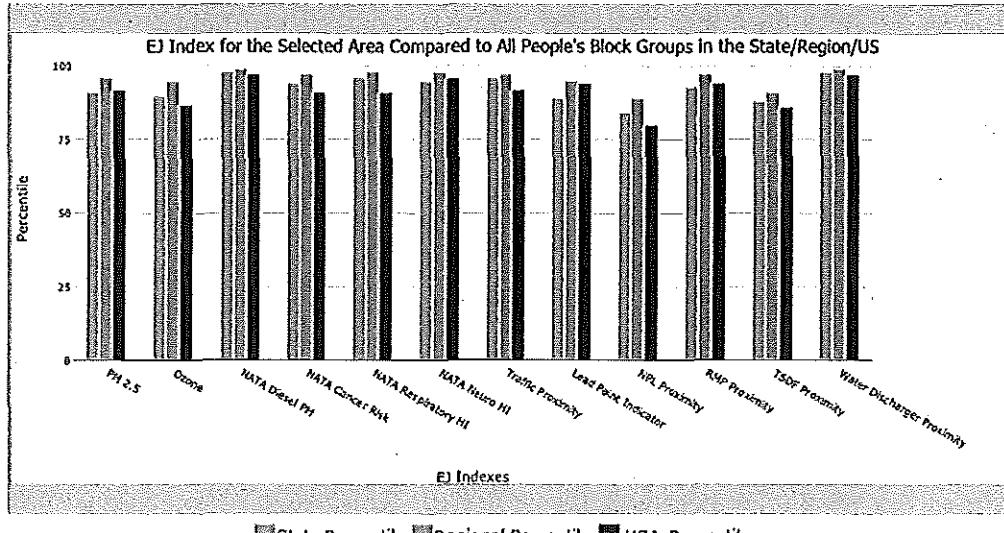


for 1 mile Ring Centered at 41.867973,-87.649938, ILLINOIS, EPA Region 5

Approximate Population: 35480

Sangamon Right of Way

Selected Variables	State Percentile	EPA Region Percentile	USA Percentile
EJ Indexes			
EJ Index for PM2.5	91	96	92
EJ Index for Ozone	90	95	87
EJ Index for NATA Diesel PM	98	99	97
EJ Index for NATA Air Toxics Cancer Risk	94	97	91
EJ Index for NATA Respiratory Hazard Index	96	98	91
EJ Index for NATA Neurological Hazard Index	95	98	96
EJ Index for Traffic Proximity and Volume	96	97	92
EJ Index for Lead Paint Indicator	89	95	94
EJ Index for Proximity to NPL sites	84	89	80
EJ Index for Proximity to RMP sites	93	97	94
EJ Index for Proximity to TSDFs	88	91	86
EJ Index for Proximity to Major Direct Dischargers	98	99	97



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.



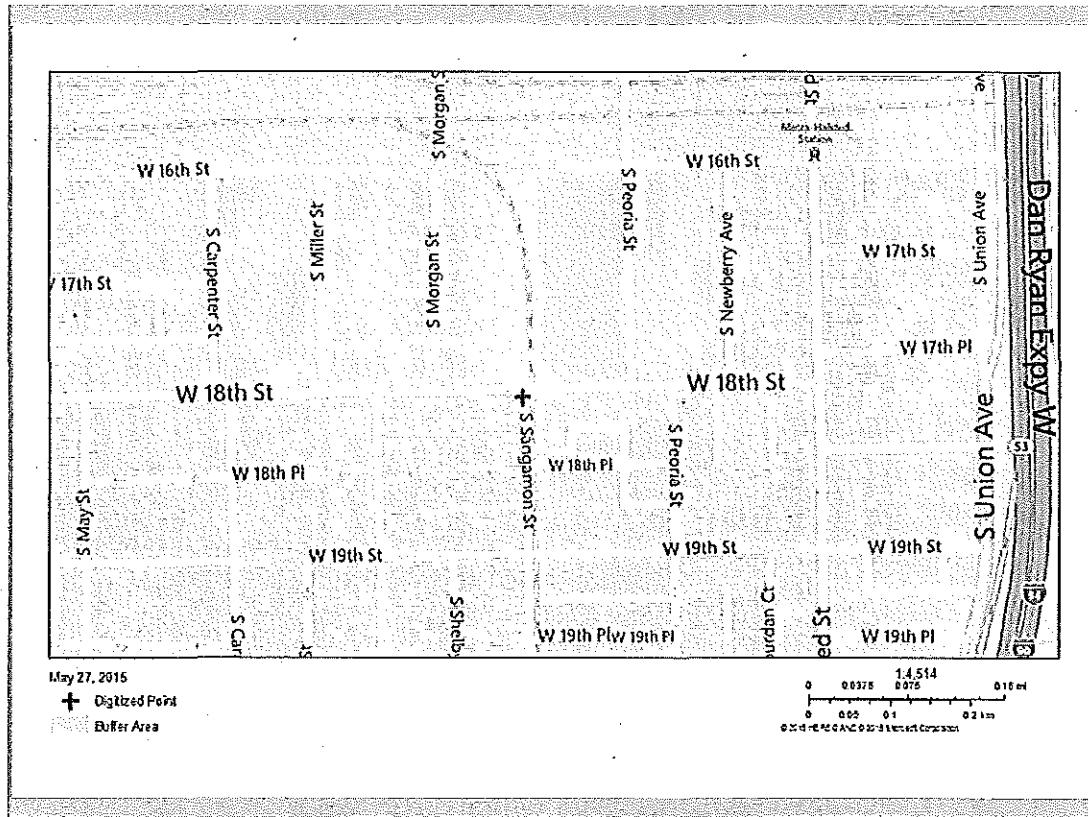
United States
Environmental Protection
Agency

EJSCREEN Report

for 1 mile Ring Centered at 41.857973,-87.649938, ILLINOIS, EPA Region 5

Approximate Population: 35480

Sangamon Right of Way



May 27, 2015

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EJSCREEN Report



for 1 mile Ring Centered at 41.857973,-87.649938, ILLINOIS, EPA Region 5

Approximate Population: 35480

Sangamon Right of Way

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	11.4	99	10.8	99	9.78	98
Ozone (ppb)	423	44.1	18	44.4	26	46.1	25
NATA Diesel PM ($\mu\text{g}/\text{m}^3$)*	3.39	0.968	98	0.712	95-100th	0.824	95-100th
NATA Cancer Risk (lifetime risk per million)*	74	48	96	42	95-100th	49	80-90th
NATA Respiratory Hazard Index*	3.6	1.8	97	1.5	95-100th	2.3	80-90th
NATA Neurological Hazard Index*	0.16	0.073	94	0.067	95-100th	0.063	95-100th
Traffic Proximity and Volume (daily traffic count/distance to road)	220	69	92	69	93	110	88
Lead Paint Indicator (% Pre-1960 Housing)	0.58	0.43	63	0.4	71	0.3	79
NPL Proximity (site count/km distance)	0.034	0.069	43	0.086	41	0.096	38
RMP Proximity (facility count/km distance)	0.75	0.43	83	0.33	88	0.31	89
TSDF Proximity (facility count/km distance)	0.036	0.037	72	0.051	65	0.054	64
Water Discharger Proximity (facility count/km distance)	0.68	0.27	90	0.23	93	0.25	92
Demographic Indicators							
Demographic Index	68%	34%	86	28%	92	35%	87
Minority Population	80%	36%	83	24%	91	36%	85
Low Income Population	56%	31%	85	32%	85	34%	83
Linguistically Isolated Population	20%	5%	90	2%	96	5%	92
Population With Less Than High School Education	26%	13%	87	12%	92	14%	85
Population Under 5 years of age	5%	6%	42	6%	43	7%	42
Population over 64 years of age	11%	13%	46	13%	40	13%	44

* 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/nata/main/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.

May 27, 2015

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