

Public Notice
Ohio Environmental Protection Agency
Ohio Lead Air Monitoring Network 2011-2012

Notice is hereby given that the Director of the Ohio Environmental Protection Agency, (Ohio EPA) as required by 40 CFR 58.10 is making the Lead Air Monitoring Network 2011-2012 plans for ambient air monitoring available for a 30-day public comment period. The plans include the new sampling network for monitoring airborne lead based upon the revised National Ambient Air Quality Standard for lead with added plans for facilities with 0.5 ton per year of lead emissions. The new standard for lead of 0.15 micrograms per cubic meter of air as a rolling 3-month average required a US EPA approved lead monitoring network that began sampling January 1, 2010. All plans for the monitoring of lead, sulfur dioxide, carbon monoxide, nitrogen dioxide, ozone and fine particulates are subject to approval by the United State Environmental Protection Agency (U.S. EPA).

These air monitoring plans must be noticed to allow public comment and to satisfy U.S. EPA requirements for public involvement in air monitoring activities. This notice addresses Ohio EPA's reliance on air monitoring as evidence of attainment and maintenance and the commitment to institute contingency measures if ambient exceedances or violations trigger the contingency plan requirements. **Written comments will be received on or before June 11, 2011** at the following address:

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Ohio Lead Monitoring Plans 2011-2012

The US EPA issued a new National Ambient Air Quality Standard (NAAQS) for airborne lead in 2008. The new lead standard is set at 0.15 ug/m³ as a rolling 3-month average. As a result of that action Ohio EPA, district offices, and contractual agencies implemented a new lead monitoring network of seven required samplers on January 1, 2010. Those seven sites were at locations near facilities that were modeled by the Ohio EPA Division of Air Pollution Control State Implementation Plan (SIP) Section as discussed in the following **Revised Lead Monitoring Network 2011-2012**. Site information about the initial seven samplers that began sampling in early 2011 is included in this notice.

US EPA has determined an additional need for facilities with emissions over 0.5 ton per year (tpy) to be modeled for possible impacts of airborne the lead. The SIP Section has modeled facilities with emissions exceeding 0.5 tpy of lead. The results of the modeling at three facilities in Ohio are specifically discussed in the Revised Lead Monitoring Network 2011-2012.

In addition to the identified facilities with lead emissions of over 0.5 tpy there are three new National Core Monitoring (NCore) Stations in Ohio to sample for airborne lead. The contractual agencies in Hamilton County (HC DES), Montgomery County (Regional Air Pollution Control Agency) and Cuyahoga County (Cleveland Department of Public Health, Division of Air Quality) are operating NCore sites. Lead sampling is one of the requirements for NCore monitoring sites and required to start on or before December 27, 2011.

Agencies with NCore sites that are located in areas not likely to show significant lead concentrations are permitted to request to move the required sampler to a location more likely to show measureable lead concentrations. The main RAPCA NCore site is located in rural Preble Co. The RAPCA agency has already sought and was granted permission to set up a lead site in Moraine in Montgomery County.

Details of the locations of the NCore lead sites follow the information about the facilities in Ohio that have more than 0.5 tpy of lead emissions.

Revised Lead Monitoring Network 2011-2012

As part of implementation of the newly revised 2008 National Ambient Air Quality Standards for lead, the lead monitoring network was revised and expanded beginning in 2010. Beginning in 2010, facilities with emissions of lead greater than one ton per year (tpy) were required to be monitored and facilities with emissions of lead greater than 0.7 tpy were required to be modeled to determine if they impacted 50% of the new lead standard. If these sources did impact 50% of the new lead standard they also required a monitor. U.S. EPA did provide a waiver option for a facility emitting over one tpy. If the state performed modeling to show the source would not impact 50% of the new lead standard, a waiver could be submitted for the monitoring requirement. The new lead standard was set at 0.15 ug/m³.

On December 14, 2010 U.S.EPA finalized rule changes to again expand the nation's lead monitoring network to better assess compliance with the 2008 lead standard. U.S. EPA is now requiring all facilities with emissions of lead greater than 0.5 tpy to be monitored. U.S. EPA also retained the option for the state to perform modeling and submit a waiver for these sources, if applicable. This section will discuss Ohio EPA's proposed revised lead monitoring network, as it relates to facility specific monitoring of lead emissions.

As a part of this effort, Ohio EPA began an extensive review of lead emissions inventories. Based on the inventories, Ohio EPA consulted with several facilities regarding their reporting history. In some cases Ohio EPA found discrepancies where facilities have reported erroneously. Because the facility based lead monitoring network is based upon actual lead emissions from Ohio sources, it was essential to gather accurate information regarding lead emissions in order to effectively develop the lead monitoring network. Once Ohio EPA finalized the accurate emission inventories, any source (not already monitored) with lead emissions greater than 0.5 tpy were selected for modeling¹ to determine if their impact on ambient air would necessitate a monitor. This section contains a discussion of the results of this modeling and the determination as to whether a monitor would be necessary.

Ohio EPA found three facilities with lead emissions exceeding 0.5 tpy, not currently being monitored. All information regarding the modeling performed by Ohio EPA can be found in the attached waiver request (see page 6).

¹ Unless otherwise noted, all modeling was based upon the highest emissions rates that correspond to the highest ton per year emissions reported, in either the National Emissions Inventory or the Toxic Release Inventory, by the facility between 2007 and 2009, as guided by USEPA.

National Core Monitoring Stations Lead Sampling

In addition to sampling for lead near facilities with lead emissions, there is a requirement for airborne lead sampling at National Core Monitoring Stations (NCore). There are three NCore sites in Ohio; The Hamilton County Division of Environmental Services operates one NCore site in Hamilton County, The Regional Air Pollution Control Agency (RAPCA) in Dayton operates one site in Preble County, and the Cleveland Department of Public Health, Division of Air Quality operates one site in Cuyahoga County.

Agencies with NCore sites that are located in rural areas of anticipated low lead concentrations may request permission through the Regional Director to move the required monitor to a location more likely to detect lead concentrations. The RAPCA NCore site is located in rural Preble Co. The RAPCA agency has already sought and was granted permission to locate their required lead site in Moraine in Montgomery County.

Details of the locations of the NCore lead sites follow the information about the facilities in Ohio that have more than 0.5 tpy of lead emissions. The lead sampling at NCore sites are required to start on or before December 27, 2011. If possible those sites will begin in November in order to obtain a complete 2012 sampling year with a 3-month rolling average beginning in January 2012.

All of Ohio Current and New Ohio Lead Monitoring Sites for 2011-2012

Historical Lead Sites that Ohio will continue to operate

Middletown	39-017-0015	Butler	39.489900	-84.364067
Columbiana Port	39-029-0019	Columbiana	40.631111	-80.546944
Michigan Ave.	39-029-0020	Columbiana	40.639722	-80.523889
Maryland	39-029-0022	Columbiana	40.635000	-80.546667
St. Tikhon	39-035-0038	Cuyahoga	41.476944	-81.681944
Fire Sta. 4	39-035-0042	Cuyahoga	41.482222	-81.708889
MM South	39-035-0061	Cuyahoga	41.472222	-81.675278

Woodrow	39-049-0025	Franklin	39.928056	-82.981111
Marietta	39-167-0008	Washington	39.433611	-81.502500
Marietta	39-167-0010	Washington	39.413694	-81.470589

These sites are for sources that currently have monitors in place and will continue to monitor the source.

Source Name	AQS Number	County	Latitude	Longitude
Ferro	39-035-0049	Cuyahoga	41.446667	-81.651111
Bunting Bearing	39-051-0001	Fulton	41.575278	-83.996389
Daido	39-091-0006	Logan	40.341111	-83.757778

These new sites began sampling in 2010 in addition to those above at locations that are based on emissions and modeling.

Source Name	AQS Number	County	Latitude	Longitude
Am Spring Wire	39-035-0072	Cuyahoga	41.426897	-81.490767
Nucor Steel	39-101-0003	Marion	40.571892	-83.137341
Timken	39-151-0017	Stark	40.785406	-81.397506
Ellwood	39-155-0012	Trumbull	41.186422	-80.557893

These are the new NCore lead sites that will begin sampling later in 2011.

Name	AQS Number	County	Latitude	Longitude
G.T. Craig	39-035-0060	Cuyahoga	41.492117	-81.678449
Moraine FH	39-113-7001	Montgomery	39.714167	-84.218056
Taft	39-061-0040	Hamilton	39.128611	-84.504167

Ms. Cheryl Newton
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U.S. EPA Region 5
77 West Jackson Blvd A-18J
Chicago, IL 60604-3590

Re: Request for Lead Monitoring Waivers near Ohio Industrial Sources

On November 12, 2008, U.S. EPA substantially strengthened the National Ambient Air Quality Standards (NAAQS) for lead by revising the level of the primary standard from 1.5 ug/m³ to 0.15 ug/m³. In conjunction with strengthening the lead standard in 2008, U.S. EPA promulgated new monitoring requirements including new design requirements for the lead monitoring network. Under this proposal, monitoring requirements stated there must be one source-oriented lead monitor located near each lead source that emits one or more tons per year (TPY) to measure the maximum contribution in ambient air, unless a waiver was granted by the U.S. EPA Regional Administrator. Ohio EPA submitted its monitoring plan at that time but did not submit any waivers under this original proposal.

Subsequently, on December 27, 2010, U.S. EPA revised the original monitoring requirements from 2008. New monitoring requirements state there must be one source-oriented lead monitor located near each lead source than emits 0.5 or more TPY to measure the maximum contribution in ambient air, unless a waiver is granted by the U.S. EPA Regional Administrator. According to 40 CFR Part 58, Appendix D, paragraph 4.5(a), a state may apply for a monitoring waiver if they can demonstrate that a particular source will not contribute to a maximum lead concentration (based on a maximum 3-month rolling average over three years of monitoring data) in ambient air in

excess of 0.075 ug/m³ or 50% of the lead NAAQS, based on historical monitoring data, air dispersion modeling, or other means. To apply for a waiver, U.S. EPA requires the following:

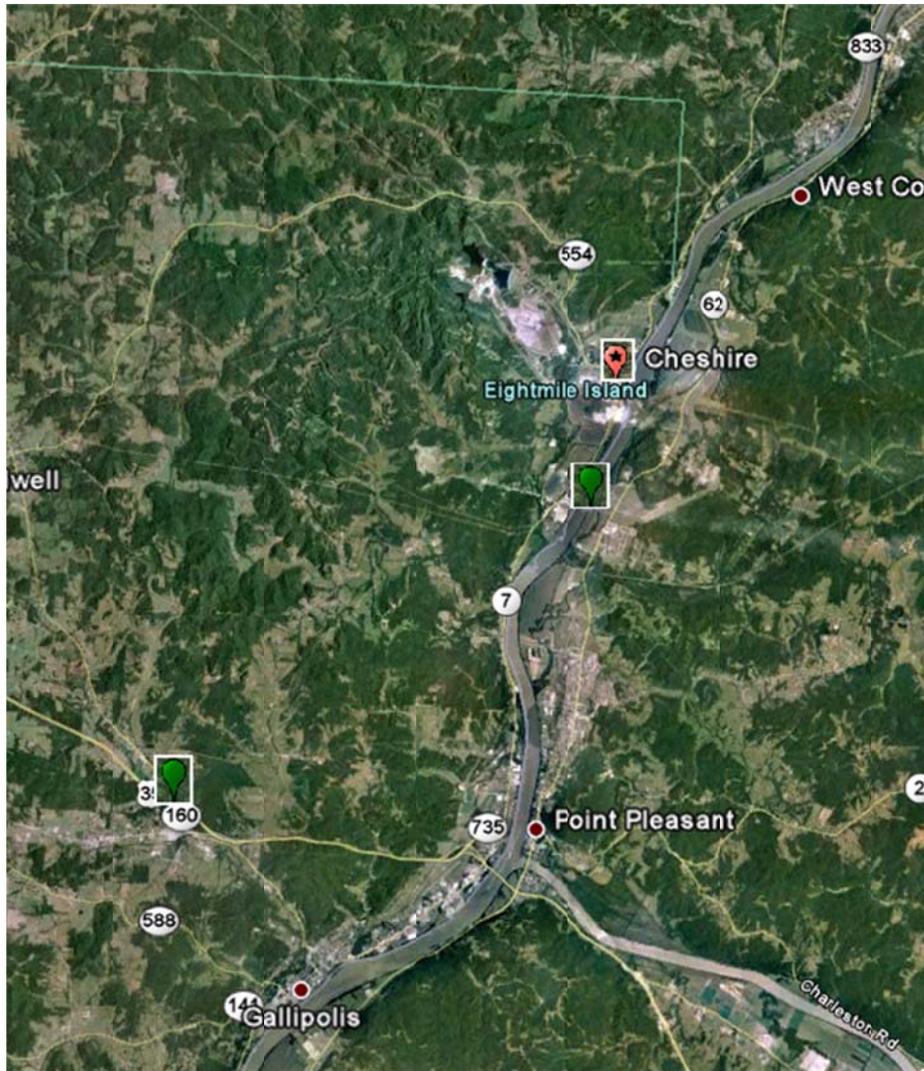
- 1) A formal letter that summarizes the rationale for why monitoring should not be necessary at a given facility,
- 2) The detailed modeling results or historical monitoring data analysis, and
- 3) Any supporting documentation, as noted above for modeling or providing the full air quality dataset with map showing monitor locations.

This letter is a request for such waivers for American Electric Power – James A. Gavin Facility (herein referred to as “AEP Gavin”) in Gallia County, I. Schumann in Cuyahoga County and Severstal Wheeling, Inc. (herein referred to as “Severstal Warren”) in Trumbull County.

American Electric Power – James A. Gavin Facility

Facility Background

AEP Gavin is located along the Ohio River in Gallia County. Gallia County sits in the foothills of the Appalachian Mountains. Surrounding terrain is gently rolling and heavily forested. Elevations range from 163 to 278 meters, with source elevations 173 meters above sea level. AEP Gavin is shown by the  symbol. Surrounding lead sources are shown by the  symbol.



Emission Sources and Trends

There are two other sources of lead emissions within the vicinity of AEP Gavin. Just to the south is the Ohio Valley Electric Corp. - Kyger Creek Station. Further southwest is a smaller insignificant source. Lead emissions from AEP Gavin have steadily decreased since 2005, from 0.73 TPY to 0.32 TPY in 2009.

TPY Emissions	NEI	TRI					State EI				
	2005	2005	2006	2007	2008	2009	2005	2006	2007	2008	2009
AEP Gavin ²	0.02	0.73	0.53	0.63	0.69	0.34	0.73	0.53	0.63	0.68	0.32
Kyger Creek	<0.00	0.21	0.28	0.22	0.21	0.21	NR	NR	NR	0.34	0.34
Holzer Medical Center	<0.00	NR	NR	NR	NR	NR	NR	NR	<0.00	<0.00	<0.00

Table 1: Lead Emissions from 2005- 2009

(NR = not reported)

² In 2009 Ohio EPA and AEP Gavin responded regarding over reporting of historic lead emissions in the State EI. AEP Gavin clarified that the TRI values more accurately represent emissions due to a more robust calculation method compared to that used in the State EI. Beginning in 2008, AEP Gavin used the more accurate calculation method in the State EI. 2005, 2006 and 2007 State EI emissions in the table above are corrected per previous communications with U.S. EPA.

Source Parameters

The modeled emissions rates correspond to highest reported type in the National Emissions Inventory (NEI), Toxics Release Inventory (TRI) or State Emissions Inventory (State EI). The emission rates per unit were provided by the facility. The total type modeled for AEP Gavin is 0.8 TPY.

All lead emission sources are stacks. Table 2 shows all the modeled source parameters.

Source ID	Easting (m)	Northing (m)	Base Elevation (m)	Stack Height (m)	Temperature (K)	Exit Velocity (m/s)	Stack Diameter (m)	Emission Rate (TPY)
UNIT 1	403260	4309910	172.82	252.984	328.15	14.863	12.8016	0.421356
UNIT 2	403330	4310040	172.82	252.984	328.15	14.863	12.8016	0.397266

Table 2 – Source Parameters

Modeling

The sources were modeled using Beeline Software's BEEST Model. This utilizes U.S. EPA's American Meteorological Society/Environmental Protection Agency Regulatory Model (AERMOD) model, version 07026. All modeling was completed prior to the release of AERMOD version 11059. Surface data and upper air data from Huntington West Virginia (NWS Station 03860) were determined to be representative of the facility site. AERSURFACE was run using one sector and four seasons. All lead emission

sources are stacks. Table 2 shows all the modeled source parameters. Two receptor grids were modeled surrounding this facility. Receptor grid spacing is as follows: 100 meters extending out 10km from the facility, and 200 meters extending out 16km from the facility.

Modeling Results

The lead post processor, written and provided by U.S. EPA, was used to calculate a 3-month rolling average of the lead concentrations. AERMOD modeling output files were used as input files into the post processor. The overall maximum 3-month averaged concentration calculated by the post processor is 0.00 ug/m³ (maximum modeled monthly average impact at 0.0012 ug/m³). Due to the tall stacks, it is believed that modeled concentrations are so low due to great dispersement. This calculated concentration does not exceed 50% of the NAAQS. Figure 1 shows the maximum concentration and the concentration gradient surrounding the facility.

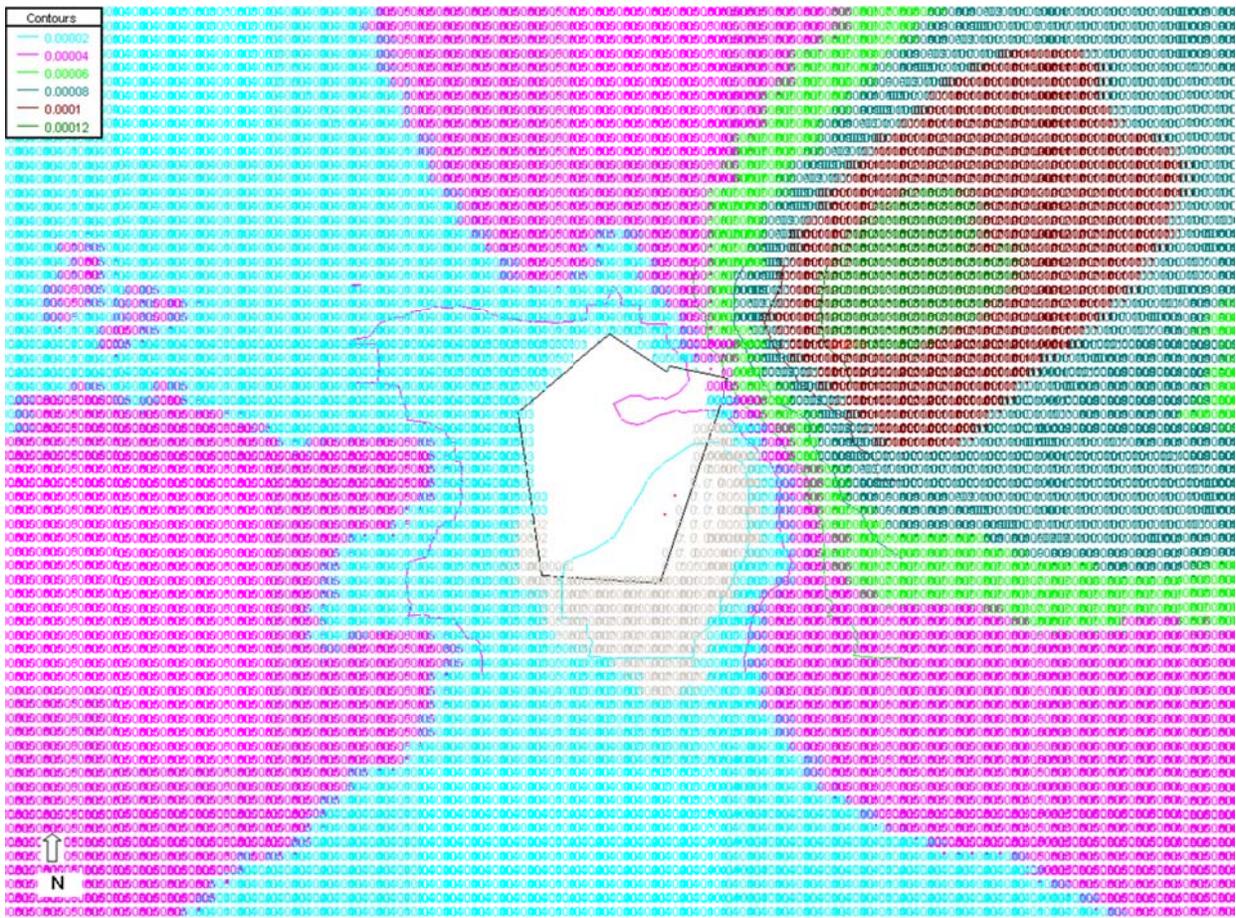


Figure 1: Maximum concentration and the concentration gradient surrounding AEP Gavin Facility

Impact Analysis

As indicated in Table 1 above, there are two other sources in the vicinity of AEP Gavin. The only other source in the area of potential significance is the Kyger Creek facility. However, Kyger Creek's emissions are significantly lower than AEP Gavin and Kyger Creek has similarly tall stacks. Therefore, it is believed that any potential impacts would be greatly dispersed as seen in the results from the AEP Gavin modeling.

Regardless, to be conservative, a background value could be added to the results. The nearest monitor that would represent a background value is located in Washington County near R.H. Gorsuch power plant and the Eramet Marietta facility. This monitor would likely over-represent background in the AEP Gavin area.

To determine an appropriate and conservative background value, Ohio EPA looked at the 3-month average concentrations from monitor 39-167-0008 (State Route 676, Washington Career Center, Marietta, OH) from 2008 to 2010. The 3-month average concentrations for each year were averaged and the highest of the three years was used as a background value. This value is 0.0073 ug/m³ (see the attached monitor summary for the computation).

To be conservative, the maximum modeled monthly average impact was added to the background because rolling 3-month averages were too low for the U.S. EPA lead post processor to calculate. A total potential impact considering a conservative background value is seen in Table 3:

Post Processor 3-month Averaged Concentration (ug/m³)	Maximum Monthly Modeled Impact (ug/m³)	Background (ug/m³)	Total Predicted Concentration (ug/m³)
0.00	0.00012	0.0073	0.00742

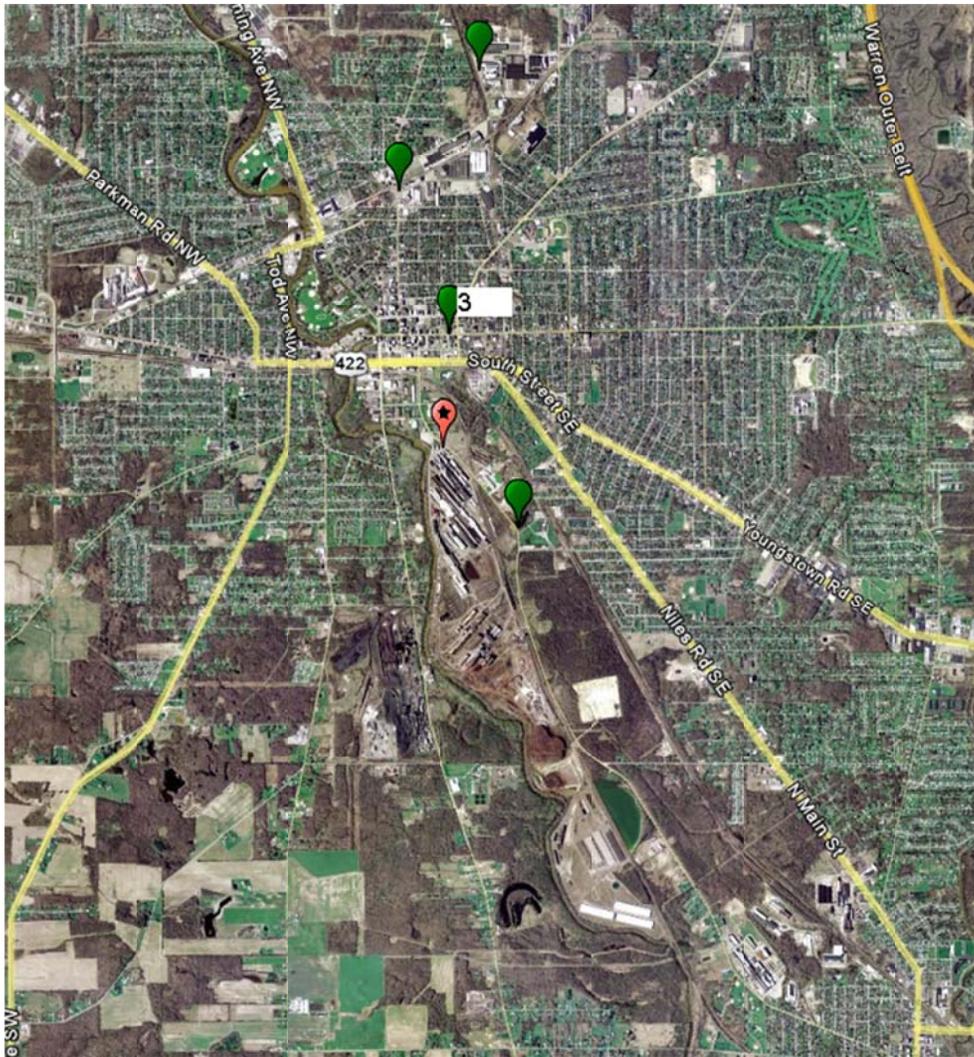
Table 3: Maximum predicted lead concentration

This value is well below 50% of the NAAQS, or 0.075 ug/m³.

Severstal Warren

Facility Background

Severstal Warren is located within the town of Warren in Trumbull County. Trumbull County sits along the Ohio-Pennsylvania border. The surrounding area is predominately residential neighborhoods and farm land. The terrain is mainly flat. Elevations range from 257 to 300 meters, with source elevations 267 meters above sea level. Severstal Warren is shown by the  symbol. Surrounding lead sources are shown by the  symbol.



Emission Sources and Trends

There are six other sources of lead emissions within the vicinity of Severstal Warren. Just to the southeast is one source and directly north are three sources (represented by one symbol on the above map due to close proximity) all with insignificant emissions. Further north are two additional sources, again with insignificant emissions. Lead emissions from Severstal Warren have steadily decreased since 2005, from 0.58 TPY to 0.00 TPY in 2009.

TPY Emissions	NEI	TRI					State EI				
	2005	2005	2006	2007	2008	2009	2005	2006	2007	2008	2009
Severstal Warren	<0.00	0.54	0.58	0.39	0.35	0.00	0.58	0.57	0.48	0.18	0.00
BFI Medical Waste/Stericycle	<0.00	NR	NR	NR	NR	NR	0.01	0.01	0.02	0.02	0.02
Trumbull Memorial Hospital	<0.00	NR	NR	NR	NR	NR	0.00	0.00	NR	NR	NR
General Motors Lordstown	<0.00	NR	NR	NR	NR	NR	0.00	0.00	0.00	<0.00	<0.00
U.S. Defense Warren Depot	<0.00	<0.00	<0.00	<0.00	<0.00	<0.00	NR	NR	NR	NR	NR
GE Lighting Ohio Lamp	0.05	0.05	0.06	0.06	0.06	<0.00	NR	NR	NR	NR	NR
Tecnocap	<0.00	NR	NR	NR	NR	NR	NR	NR	NR	0.00	0.00

Table 4: Lead Emissions from 2005- 2009

(NR = not reported)

Source Parameters

The modeled emissions rates correspond to highest reported typ in the National Emissions Inventory (NEI), Toxics Release Inventory (TRI) or State Emissions Inventory (State EI). The emission rates per unit were confirmed by the facility. The total typ modeled for Severstal Warren is 0.58 TPY.

All lead emission sources are stacks and volume sources. The volume sources were modeled to account for the fugitive lead emissions from the blast furnaces (BOFs). Tables 5 and 6 show all modeled source parameters.

Source ID	Easting (m)	Northing (m)	Base Elevation (m)	Stack Height (m)	Temperature (K)	Exit Velocity (m/s)	Stack Diameter (m)	Emission Rate (TYP)
BOF1	515904	4562144	267	48.77	399.82	13.99	5.18	0.300
BOF2	515904	4562144	267	48.77	399.82	13.99	5.18	0.280

Table 5: Point Source Parameters for Severstal Warren

Source ID	Easting (m)	Northing (m)	Base Elevation (m)	Release Height (m)	Emission Rate (TYP)
BOF1	515925	4562254	267	59.74	6.12E-03
BOF2	515925	4562254	267	59.74	5.71E-03

Table 6: Volume Source Parameters for Severstal Warren

Modeling

The sources were modeled using Beeline Software's BEEST Model. This utilizes U.S. EPA's American Meteorological Society/Environmental Protection Agency Regulatory Model (AERMOD) model, version 07026. All modeling was completed prior to the release of AERMOD version 11059. Surface data from the Youngstown Municipal Airport (NWS Station 14852) and upper air data from Pittsburgh, Pennsylvania (NWS Station 94823) were determined to be representative of the facility site. AERSURFACE was run using twelve sectors and four seasons. One receptor grid was modeled. Receptors were spaced 50 meters apart extending out 23 km, surrounding the facility.

Modeling Results

The lead post processor, written and provided by U.S. EPA, was used to calculate a three-month rolling average of the lead concentrations. AERMOD modeling output files were used as input files into the post processor. The overall maximum 3-month averaged concentration calculated by the post processor is 0.01ug/m³. The maximum modeled concentration was at 319077.00E, 4493219.00N, east north east of the facility. Figure 2 shows the maximum concentration and the concentration gradient surrounding the facility.

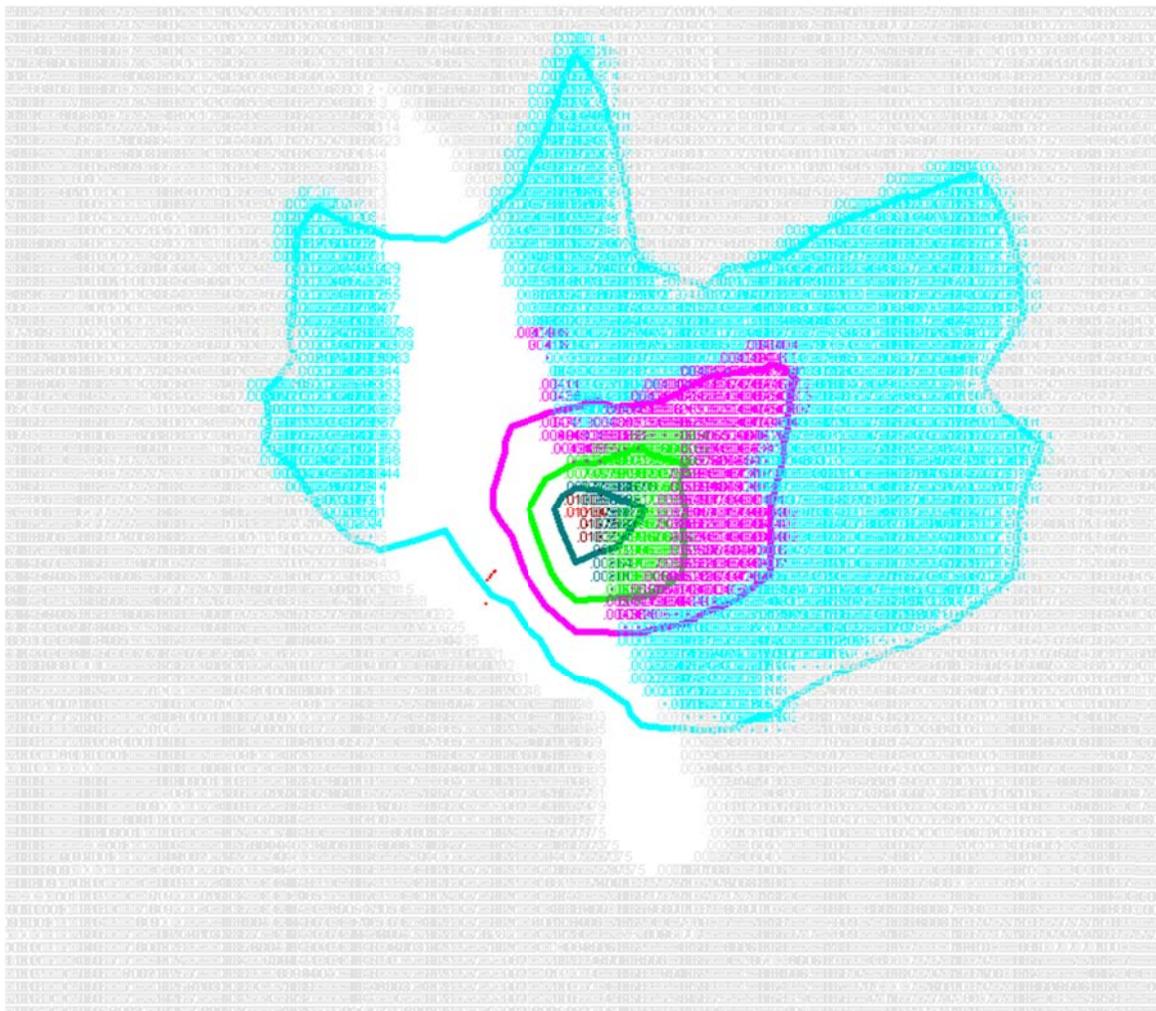


Figure 2: Maximum concentration and the concentration gradient surrounding Severstal Warren facility

Impact Analysis

As indicated in Table 4 above, there are six other sources in the vicinity of Severstal Warren. All of these sources have negligible lead emissions.

Regardless, to be conservative, a background value could be added to the results. The nearest monitor that could represent a background value is a new monitor installed as part of the first monitoring network evaluation under the new standard. It is located approximately 13 miles southeast of Severstal Warren near the Ellwood Engineering

facility. Six months of monitoring data from 2010 is available for this site. To be conservative, the highest monthly value during those six months will be used as a background value. This value is 0.0170 ug/m³ (see the attached monitor summary for the computation).

The monitor at Ellwood Engineering, which is a 2.49 TPY lead source, was within the area of highest modeled concentration. Therefore, this should provide more than conservative results as a background for this site.

Because there is limited data from the Ellwood Engineering monitor, an alternative was considered. There are three monitors located in East Liverpool, Columbiana County. These three monitors serve the area around the Von Roll facility. To determine an appropriate and conservative background value, Ohio EPA looked at the 3-month average concentrations from each of these monitors from 2008 to 2010. The 3-month average concentrations for each year were averaged and the highest of the three years was used as a background value. This value is 0.0166 ug/m³ (see the attached monitor summary for the computation) for monitor 39-029-0019. This monitor is located across from the Von Roll facility in East Liverpool. Predominant wind directions for this area indicates emissions from the Von Roll facility would blow directly towards the monitor, as shown in Figure 3.

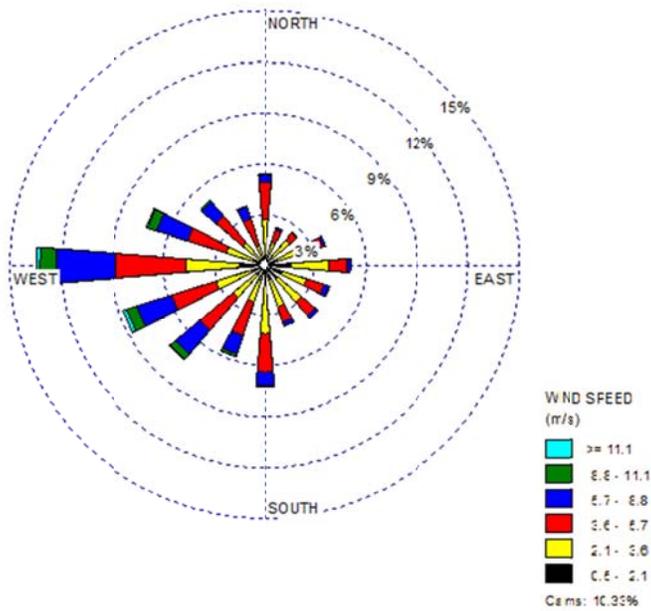


Figure 3: Pittsburgh Wind Rose

A total potential impact considering a conservative background value using either background monitor as described above is seen in Table 7:

Post Processor 3-month Averaged Concentration (ug/m3)	Background (ug/m3)	Total Predicted Concentration (ug/m3)
0.01	0.0170	0.0270
0.01	0.166	0.0266

Table 7: Maximum predicted lead concentration

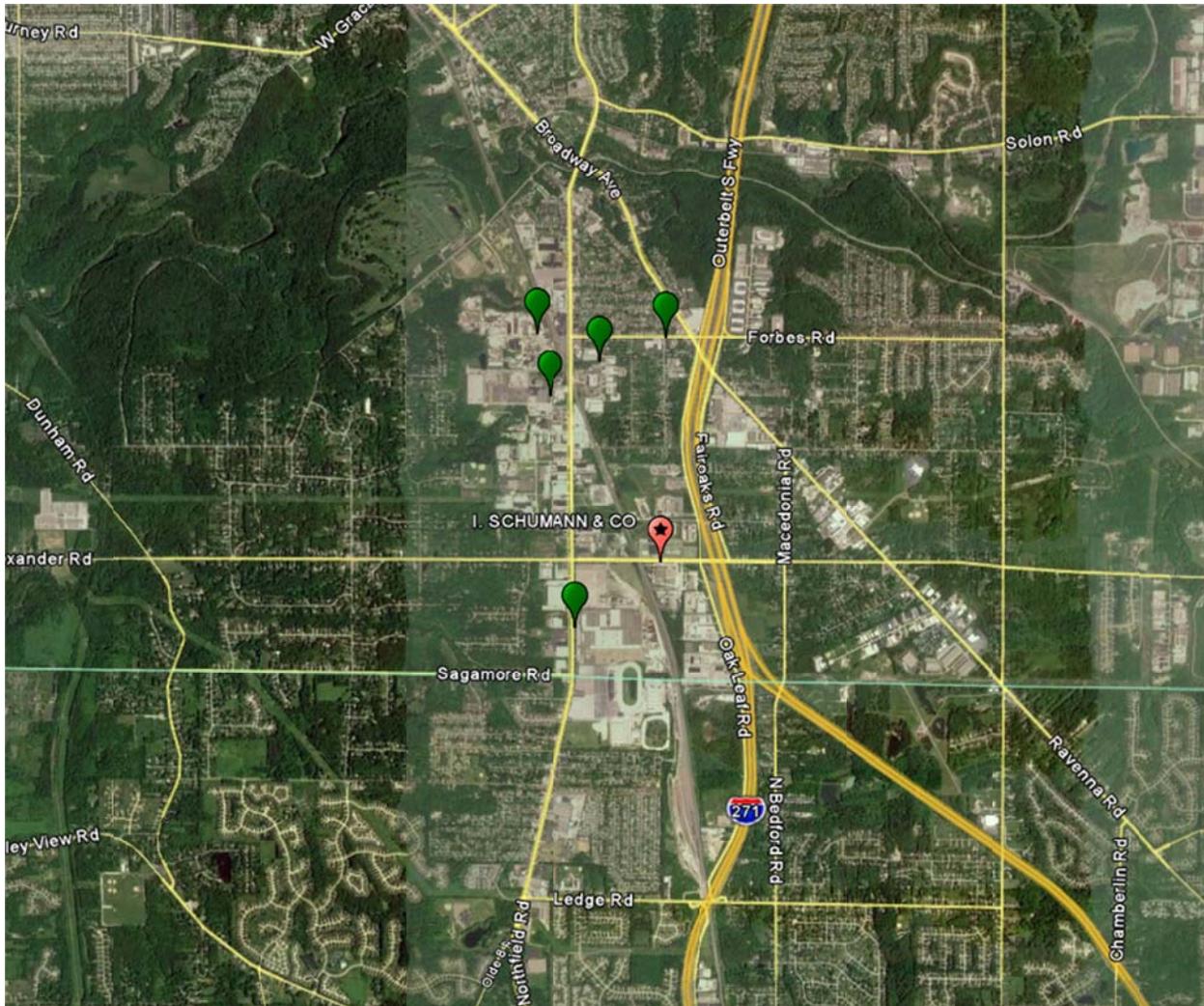
These values are well below 50% of the NAAQS, or 0.075 ug/m3.

I. Schumann

Facility Background

I. Schumann is located southeast of Cleveland in Cuyahoga County near the town of Oakwood by the Summit County border. Lake Erie lies to the north of Cuyahoga County. Surrounding area is predominately neighborhoods, industry and farm land. The terrain is mainly flat. Elevations range from 284 to 351 meters, with source elevations all approximately 310 meters above sea level. I. Schumann is shown by the

 symbol. Surrounding lead sources are shown by the  symbol.



Emission Sources and Trends

There are five other sources of lead emissions within the vicinity of I. Schumann. Just to the southwest is one source with insignificant emissions. Directly north are four sources, two of which have insignificant emissions. The remaining two sources to the north have slightly higher emissions but still insignificant compared to those of I. Schumann. Lead emissions from I. Schumann have steadily decreased since 2005, from 0.55 TPY to 0.40 TPY in 2009 when viewing TRI reporting and from 0.79 to 0.69 TPY when viewing State EI reporting.

TPY Emissions	NEI	TRI					State EI				
	2005	2005	2006	2007	2008	2009	2005	2006	2007	2008	2009
I. Schumann	0.55	0.55	0.55	0.45	0.45	0.40	NR	NR	NR	0.79	0.69
Ford Motor Walton Hills Stamping	<0.00	<0.00	<0.00	<0.00	<0.00	<0.00	NR	NR	NR	NR	NR
Commonwealth Aluminum	<0.00	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Federal Metals	0.17	0.17	0.19	0.23	0.04	0.03	NR	NR	NR	NR	NR
Hukill Chemical	<0.00	NR	NR	NR	0.00	NR	0.00	0.00	0.00	0.00	0.00
Morgan Electro Ceramics	0.14	0.14	0.14	0.14	0.05	0.04	NR	NR	NR	0.00	0.00

Table 8: Lead Emissions from 2005- 2009

(NR = not reported)

Source Parameters

The modeled emissions rates correspond to highest reported typ in the National Emissions Inventory (NEI), Toxics Release Inventory (TRI) or State Emissions Inventory

(State EI). The emission rates per unit were confirmed by the facility. The total typ modeled for I. Schumann is 0.79 TPY.

All lead emission sources are stacks. Table 9 show all modeled source parameters.

Source ID	Easting (m)	Northing (m)	Base Elevation (m)	Stack Height (m)	Temperature (K)	Exit Velocity (m/s)	Stack Diameter (m)	Emission Rate (TYP)
STACK1	456535.7	4578571	310.23	17.22	352.59	13.14938	1.905	0.233205
STACK2	456588.4	4578508	310.99	7.7114	344.26	16.73617	0.9662	0.007008
STACK3	456517	4578587	309.97	9.1745	372.59	11.22415	1.524	0.003942
STACK4	456533.2	4578551	310.08	17.0688	352.59	14.98833	1.6246	0.448

Table 9: Point Source Parameters for I. Schumann

Modeling

The sources were modeled using Beeline Software’s BEEST Model. This utilizes U.S. EPA’s American Meteorological Society/Environmental Protection Agency Regulatory Model (AERMOD) model, version 07026. All modeling was completed prior to the release of AERMOD version 11059. Surface data from the Cleveland International Airport (NWS Station 14820) and upper air data from Buffalo, New York (NWS Station 14733) were determined to be representative of the facility site. AERSURFACE was run using twelve sectors and four seasons. Two receptor grids were modeled surrounding this facility. Receptor grid spacing is as follows: 100 meters extending out 1km from the facility, and 250 meters extending out 2.5km from the facility.

Modeling Results

The lead post processor, written and provided by U.S. EPA, was used to calculate a 3-month rolling average of the lead concentrations. AERMOD modeling output files were used as input files into the post processor. The overall maximum 3-month averaged concentration calculated by the post processor is 0.05 ug/m³. The maximum modeled concentration was at 456658.5E, 4578621.0N, north of the facility. Figure 4 shows the maximum concentration and the concentration gradient surrounding the facility.



Figure 4: Maximum concentration and the concentration gradient surrounding I. Schumann facility

Impact Analysis

As indicated in Table 8 above, there are five other sources in the vicinity of I. Schumann. All of these sources have insignificant lead emissions during more recent years although two sources did have emissions reported in the 0.1 to 0.2 TPY range in historical years. In addition, these facilities are upwind of I. Schumann. Predominate wind direction are shown in Figure 5.

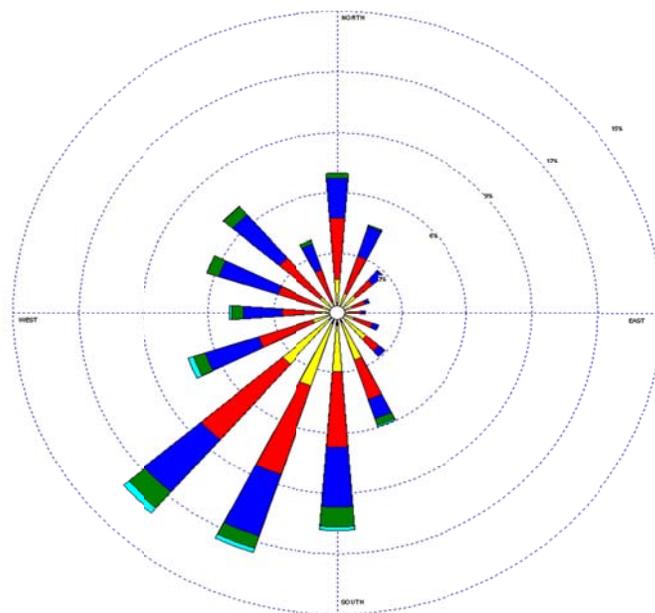


Figure 5: Cleveland Wind Rose

Regardless, to be conservative, a background value could be added to the results. There are several monitors located within the heavily industrialized area of Cleveland. Any of these monitors would conservatively over-represent a background concentration for I. Schumann. Monitors in this industrialized area are depicted below:

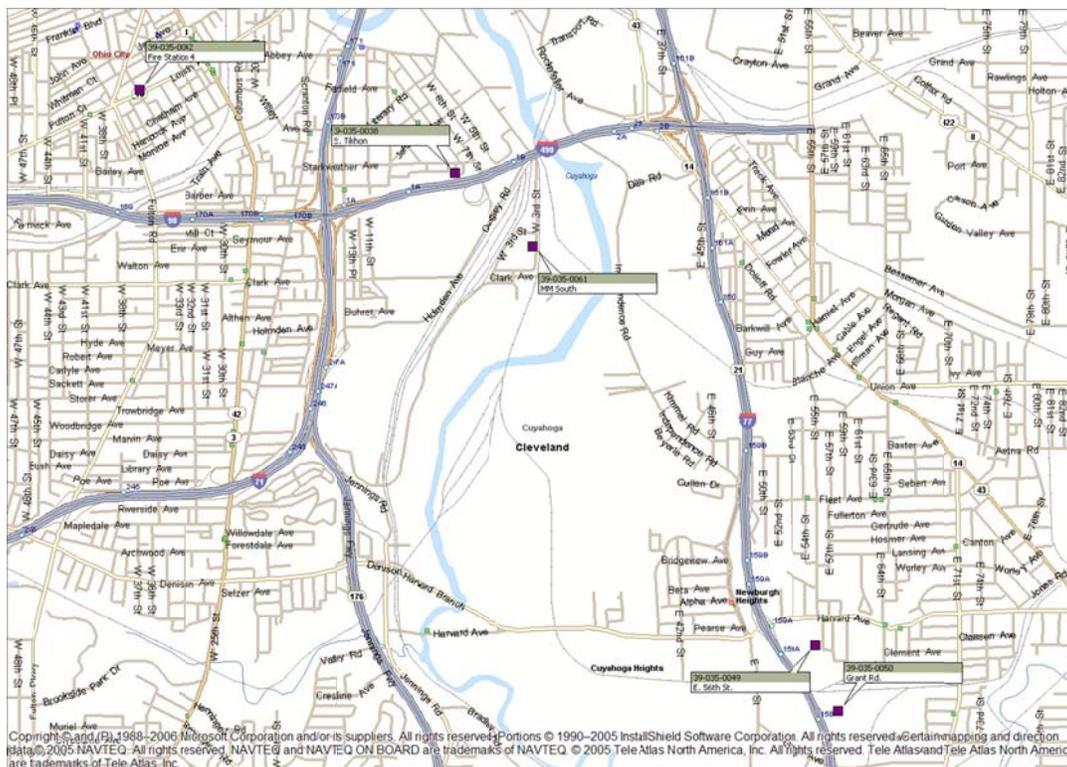


Figure 5: Cleveland Area Monitors

The Fire Station 4 monitor (39-035-0042) in Cleveland was chosen as the background monitor for I. Schumann. This monitor is in a more residential section of this industrialized area and closer to the large industrial complex where lead sources are located than where I. Schumann is located. Therefore this monitor serves as a very conservative background for this facility.

To determine an appropriate and conservative background value, Ohio EPA looked at the 3-month average concentrations from this monitor from 2008 to 2010. The 3-month average concentrations for each year were averaged and the highest of the three years was used as a background value. This value is 0.0176 ug/m³ (see the attached monitor summary for the computation).

A total potential impact considering a conservative background value using the background monitor above is seen in Table 10:

Post Processor 3-month Averaged Concentration (ug/m³)	Background (ug/m³)	Total Predicted Concentration (ug/m³)
0.05	0.0176	0.0676

Table 10: Maximum predicted lead concentration

This value is below 50% of the NAAQS, or 0.075 ug/m³.

Conclusion

This letter addresses the items necessary to apply for a waiver of monitoring requirements for American Electric Power – James A. Gavin Facility, Severstal Warren, and I. Schumann.

The reported emissions from American Electric Power – James A. Gavin Facility were 0.8 TPY but modeling did not identify any local areas of high impact around the facility. Therefore, Ohio requests that U.S. EPA waive the requirement to monitor at this location.

The reported emissions from Severstal Warren were 0.58 TPY but modeling did not identify any local areas of high lead impacts around the facility. Therefore, Ohio requests that U.S. EPA waive the requirement to monitor at this location.

The reported emissions from I. Schumann were 0.79 TPY but modeling did not identify any local areas of high lead impacts around the facility. Therefore, Ohio requests that U.S. EPA waive the requirement to monitor at this location.

If you have any questions regarding this request, please contact Jennifer Hunter, Manager, SIP Section, Division of Air Pollution Control at 614-644-3696.

Sincerely,

Robert Hodanbosi

Chief, Division of Air Pollution Control