State of Ohio Environmental Protection Agency
Division of Air Pollution Control

Ohio's
2008 Lead Standard
Second Round of Recommended Designations

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An Explanation of Ohio EPA's Analysis

Promulgated on October 15, 2008 and effective January 12, 2009, U.S. EPA strengthened the National Ambient Air Quality Standard (NAAQS) for lead from 1.5 ug/m^3 to 0.15 ug/m^3 [73 FR 66964]. Ohio currently has three partial counties designated nonattainment for lead.

As part of the promulgation of this revised standard, an expanded monitoring network was deployed by states beginning on January 1, 2010. Currently, Ohio has a network of 13 lead monitors that have been in place for a number of years, and four new monitors as part of the expanded monitoring network. This expanded monitoring network contains source-specific monitors sited at facilities with lead actual emissions greater than one ton per year; facilities with less than one ton per year of actual lead emissions where dispersion modeling identified the potential for emissions to contribute up to 50 percent of the lead standard in air; and facilities where existing monitors have shown a violation of the new standard, on a three-month rolling average, during 2006, 2007 or 2008.

Ohio's initial designation ("first round") recommendations were submitted to U.S. EPA on October 5, 2009. Those designation recommendations were based on air quality data collected between 2006 and 2008. U.S. EPA announced the final first round designations on November 16, 2010 with publication in the Federal Register on November 22, 2010 (75 FR 71033). The first round designations are effective December 31, 2010, Under Section 107(D)(1)(b)(i) of the Clean Air Act, designations "may be extended by up to one year in the event the Administrator has insufficient information to promulgate the designations.'' [73 FR 67031] As part of the first round of designations, U.S. EPA recognized states may not have sufficient information from new monitors to make such a determination; therefore, U.S. EPA extended the deadline for designations of these areas by one year so that data from the new monitors can be considered in the designation decision. This submittal is Ohio's updated recommendation for the "second round" of designations. The final decision on the second round of nonattainment area designations by U.S. EPA is expected to occur no later than October 15, 2011.

To determine if an area is attaining or not attaining the lead standard, the air quality analysis looks at the rolling three-month average values for each monitor for a three-year period. For each evaluated year, twelve rolling three-month averages are computed starting with November of the preceding year and ending with December of the year being evaluated. Compliance with the lead standard is determined over a three-calendar-year period. Any one exceedance of a three-month average during this period indicates an exceedance of the lead standard. Because not all data are available for 2010[1] due to the time necessary for processing filters under the standard Reference Method, additional designations during this second round will be based on the most recent air quality data collected to date (2009 data and any data collected, analyzed and quality assured for 2010). Any violation of a three-month average during this period indicates an exceedance of the lead standard.

[1] At the time of this submittal, 2010 AQS data are available only through August.

40 CFR Part 50, Appendix R provides the computation methods for the lead standard. This regulation requires individual samples be analyzed and a monthly mean computed. Under the old lead standard, Ohio EPA analyzed samples using a monthly composite method. Therefore, any historical data represented in this document use the monthly composite values to compute the rolling three-month values.

In the air quality data presented below, the three-month averages for monitors that are violating the standard are highlighted in red. Monitoring sites that were missing one or months of a composite analysis in any three-month period or that did not meet the 75% capture criteria are highlighted in yellow.

Data are retrieved from the U.S. EPA's Air Quality System (AQS) at http://www.epa.gov/ttn/airs/airsaqs/ and are presented in ug/m^3 in all tables. AQS data retrieval sheets are provided in Appendix A. The State and local air monitoring stations (SLAMS) data certification report for calendar year 2009 is provided in Appendix B. It should be noted that the 2010 monitoring data will not be certified by the time this submittal is required.

Existing Monitors

Ohio EPA's 2010 monitoring network design plan retained 13 lead monitors across the State. In Ohio's October 5, 2009 first round designation document, only three of these monitors showed violations of the 2008 revised lead standard. Therefore, Ohio EPA recommended that these three areas be designated nonattainment. Based on the additional data collected to date, and shown below, there are no additional nonattainment areas. All other monitors continue to attain the 2008 revised lead standard.

Therefore, Ohio EPA is not suggesting any additional areas monitored by the 13 retained lead monitors be designated nonattainment based upon the data contained in this submittal.

Butler County

Figure 1: Butler County Lead Monitor Location and Site ID Number

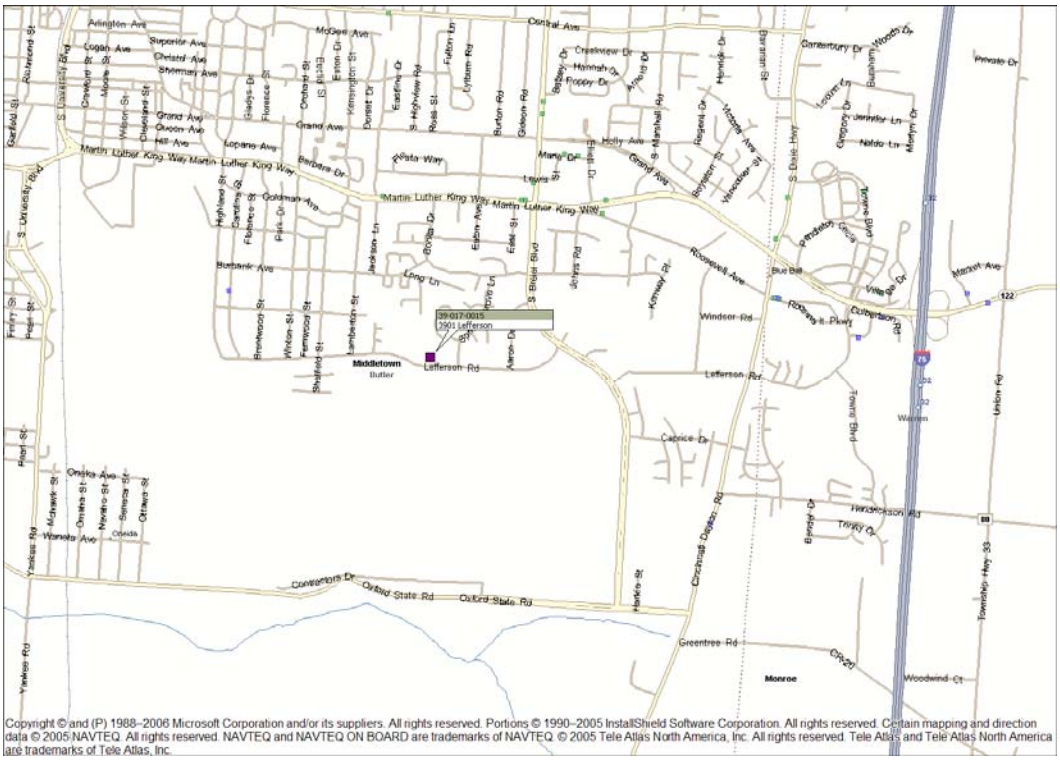

Table 1: Monitor 39-017-0015 three-month rolling average for 2009 and 2010 (ug/m3)

Site Location City	3-month period	Three-month rolling average (ug/m3)	
		2009	2010
39-017-0015	Nov -Jan	0.0047	0.0071
3901 Lefferson – Ohio Bell Facility	Dec -Feb	0.0037	0.0063
	Jan -Mar	0.0036	0.0064
Middletown	Feb-Apr	0.0037	0.0062
	Mar-May	0.0033	0.0061
	Apr-Jun	0.0037	0.0057
	May-July	0.0044	0.0059
	Jun-Aug	0.0052	
	July-Sept	0.0049	
	Aug-Oct	0.0053	
	Sept-Nov	0.0065	
	Oct-Dec	0.0069	

Columbiana County

Figure 2: Columbiana County Lead Monitor Location and Site ID Number

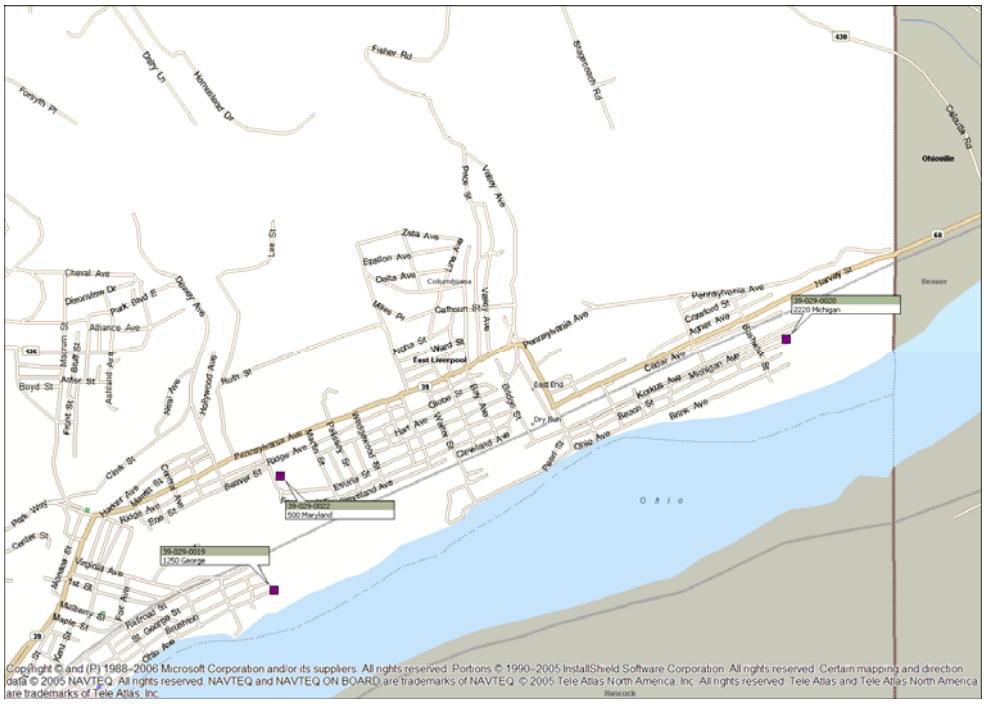

Table 2: Monitor 39-029-0019 three-month rolling average for 2009 and 2010 (ug/m3)

Site Location City	3-month period	Three-month rolling average (ug/m3)	
		2009	2010
39-029-0019	Nov –Jan	0.0075	0.0117
1250 George – Columbiana Port Authority	Dec –Feb	0.0078	0.0082
	Jan –Mar	0.0099	0.0106
	Feb-Apr	0.0163	0.0167
East Liverpool	Mar-May	0.0177	0.0183
	Apr-Jun	0.0162	0.0160
	May-July	0.0122	0.0163
	Jun-Aug	0.0099	0.0172
	July-Sept	0.0121	
	Aug-Oct	0.0134	
	Sept-Nov	0.0167	
	Oct-Dec	0.0137	

Table 3: Monitor 39-029-0020 three-month rolling average for 2009 and 2010 (ug/m3)

Site Location City	3-month period	Three-month rolling average (ug/m3)	
		2009	2010
39-029-0020	Nov –Jan	0.0070	0.0084
	Dec –Feb	0.0056	0.0076
2220 Michigan – SH Bell (State Line) Facility	Jan –Mar	0.0063	0.0107
	Feb-Apr	0.0120	0.0142
	Mar-May	0.0147	0.0167
East Liverpool	Apr-Jun	0.0140	0.0135
	May-July	0.0087	0.0122
	Jun-Aug	0.0069	0.0135
	July-Sept	0.0086	
	Aug-Oct	0.0098	
	Sept-Nov	0.0109	
	Oct-Dec	0.0088	

Table 4: Monitor 39-029-0022 three-month rolling average for 2009 and 2010 (ug/m3)

Site Location City	3-month period	Three-month rolling average (ug/m3)	
		2009	2010
39-029-0022	Nov –Jan	0.0078	0.0103
	Dec –Feb	0.0052	0.0086
500 Maryland – WTI Metals	Jan –Mar	0.0055	0.0117
East Liverpool	Feb-Apr	0.0103	0.0202
	Mar-May	0.0117	0.0201
	Apr-Jun	0.0117	0.0171
	May-July	0.0089	0.0113
	Jun-Aug	0.0086	0.0141
	July-Sept	0.0107	
	Aug-Oct	0.0185	
	Sept-Nov	0.0207	
	Oct-Dec	0.0184	

Cuyahoga County

Figure 3: Cuyahoga County Lead Monitor Location and Site ID Number

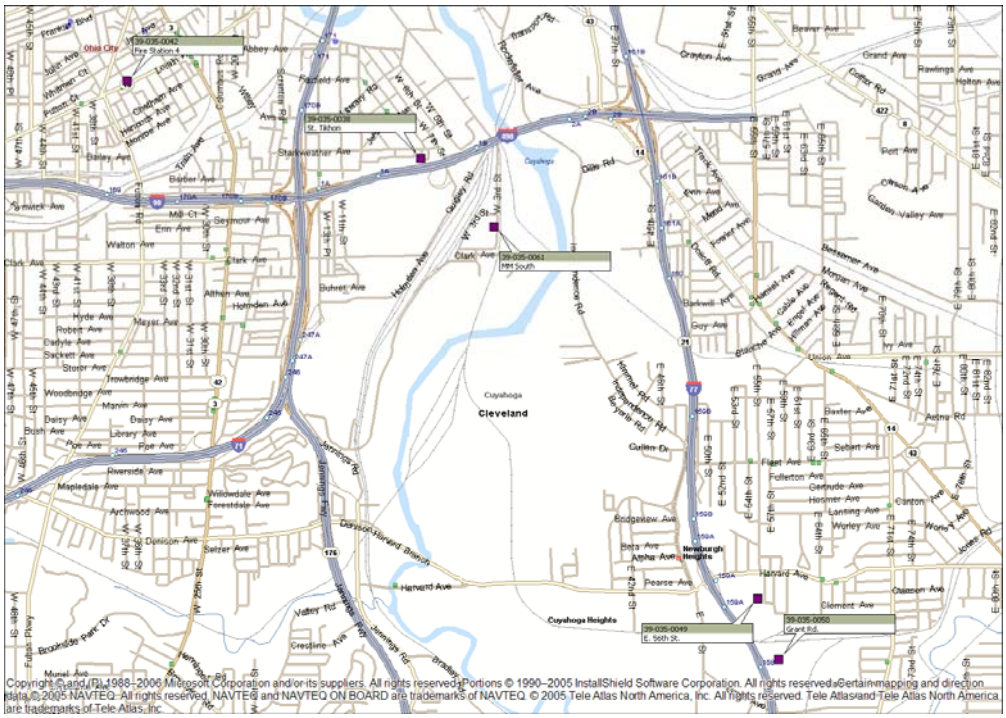

Table 5: Monitor 39-035-0038 three-month rolling average for 2009 and 2010 (ug/m3)

Site Location City	3-month period	Three-month rolling average (ug/m3)	
		2009	2010
39-035-0038	Nov –Jan	0.0047	0.0098
2547 St Tikhon	Dec –Feb	0.0062	0.0083
Cleveland	Jan –Mar	0.0078	0.0104
	Feb-Apr	0.0094	0.0158
	Mar-May	0.0092	0.0172
	Apr-Jun	0.0100	0.0162
	May-July	0.0102	0.0135
	Jun-Aug	0.0121	0.0143
	July-Sept	0.0135	
	Aug-Oct	0.0132	
	Sept-Nov	0.0128	
	Oct-Dec	0.0100	

Table 6: Monitor 39-035-0042 three-month rolling average for 2009 and 2010 (ug/m3)

Site Location City	3-month period	Three-month rolling average (ug/m3)	
		2009	2010
39-035-0042	Nov -Jan	0.0056	0.0075
3136 Lorain Ave	Dec -Feb	0.0064	0.0080
Cleveland	Jan -Mar	0.0064	0.0093
	Feb-Apr	0.0089	0.0123
	Mar-May	0.0085	0.0147
	Apr-Jun	0.0085	0.0141
	May-July	0.0082	0.0179
	Jun-Aug	0.0082	0.0181
	July-Sept	0.0105	
	Aug-Oct	0.0115	
	Sept-Nov	0.0114	
	Oct-Dec	0.0096	

Table 7: Monitor 39-035-0049 three-month rolling average for 2009 and 2010 (ug/m3) ***(*this monitor was already a violating monitor under the first round designations)***

Site Location City	3-month period	Three-month rolling average (ug/m3)	
		2009	2010
39-035-0049	Nov -Jan	0.0783	0.2723
E. 56th St	Dec -Feb	0.1250	0.2156
Cleveland	Jan -Mar	0.1167	0.2968
	Feb-Apr	0.0787	0.2318
	Mar-May	0.0467	0.2660
	Apr-Jun	0.0600	0.1734
	May-July	0.0690	0.1245
	Jun-Aug	0.0550	0.1219
	July-Sept	0.0750	
	Aug-Oct	0.0733	
	Sept-Nov	0.1227	
	Oct-Dec	0.1077	

Table 8: Monitor 39-035-0061 three-month rolling average for 2009 and 2010 (ug/m3)

Site Location City	3-month period	Three-month rolling average (ug/m3)	
		2009	2010
39-035-0061 **W. Side of West 3rd** **Cleveland**	Nov -Jan	0.0056	0.0102
	Dec -Feb	0.0056	0.0100
	Jan -Mar	0.0067	0.0107
	Feb-Apr	0.0080	0.0167
	Mar-May	0.0092	0.0182
	Apr-Jun	0.0107	0.0196
	May-July	0.0140	0.0623
	Jun-Aug	0.0131	0.0781
	July-Sept	0.0131	
	Aug-Oct	0.0115	
	Sept-Nov	0.0123	
	Oct-Dec	0.0113	

Franklin County

Figure 4: Franklin County Lead Monitor Location and Site ID Number

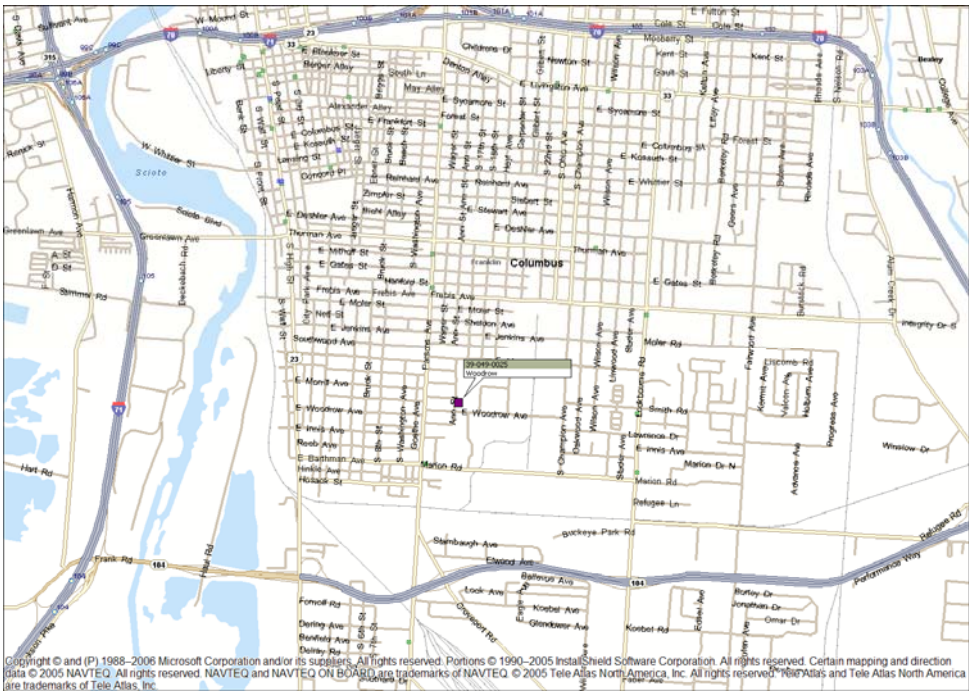

Table 9: Monitor 39-049-0025 three-month rolling average for 2009 and 2010 (ug/m3)

Site Location City	3-month period	Three-month rolling average (ug/m3)	
		2009	2010
39-049-0025	Nov -Jan	0.0049	0.0088
1700 Ann St.	Dec -Feb	0.0053	0.0077
Columbus	Jan -Mar	0.0069	0.0087
	Feb-Apr	0.0085	0.0092
	Mar-May	0.0088	0.0099
	Apr-Jun	0.0109	0.0091
	May-July	0.0105	0.0091
	Jun-Aug	0.0123	0.0096
	July-Sept	0.0097	
	Aug-Oct	0.0107	
	Sept-Nov	0.0097	
	Oct-Dec	0.0091	

Fulton County

Figure 5: Fulton County Lead Monitor Location and Site ID Number

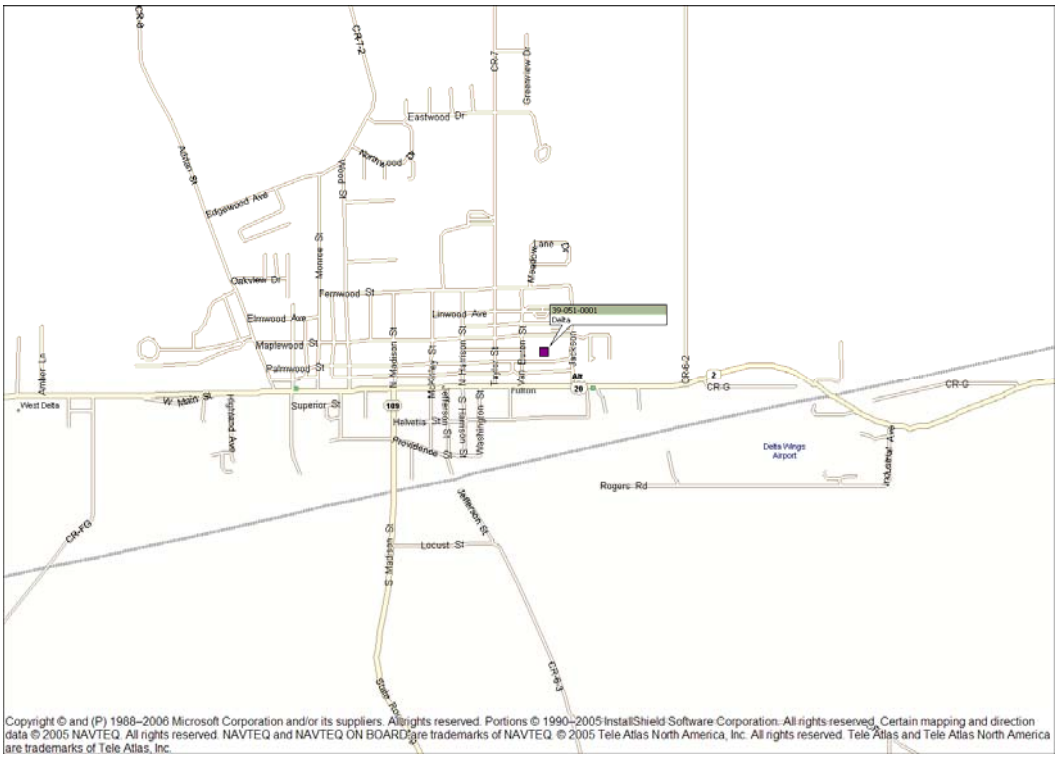

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Table 10: Monitor 39-051-0001 three-month rolling average for 2009 and 2010 (ug/m3) *(*this monitor was already a violating monitor under the first round designations)*

Site Location City	3-month period	Three-month rolling average (ug/m3)	
		2009	2010
39-051-0001 200 Van Buren Delta	Nov -Jan	0.1757	0.0962
	Dec -Feb	0.0990	0.0859
	Jan -Mar	0.1033	0.0489
	Feb-Apr	0.1290	0.0255
	Mar-May	0.1013	0.0272
	Apr-Jun	0.0807	0.0433
	May-July	0.0507	0.0535
	Jun-Aug	0.0500	0.0807
	July-Sept	0.0883	
	Aug-Oct	0.0733	
	Sept-Nov	0.0847	
	Oct-Dec	0.0813	

Ohio EPA is not performing a data substitution analysis for this location to address the incomplete monitor capture criteria because this location still does not meet the criteria for attainment of the standard of 0.15 ug/m3.

Logan County

Figure 6: Logan County Lead Monitor Location and Site ID Number

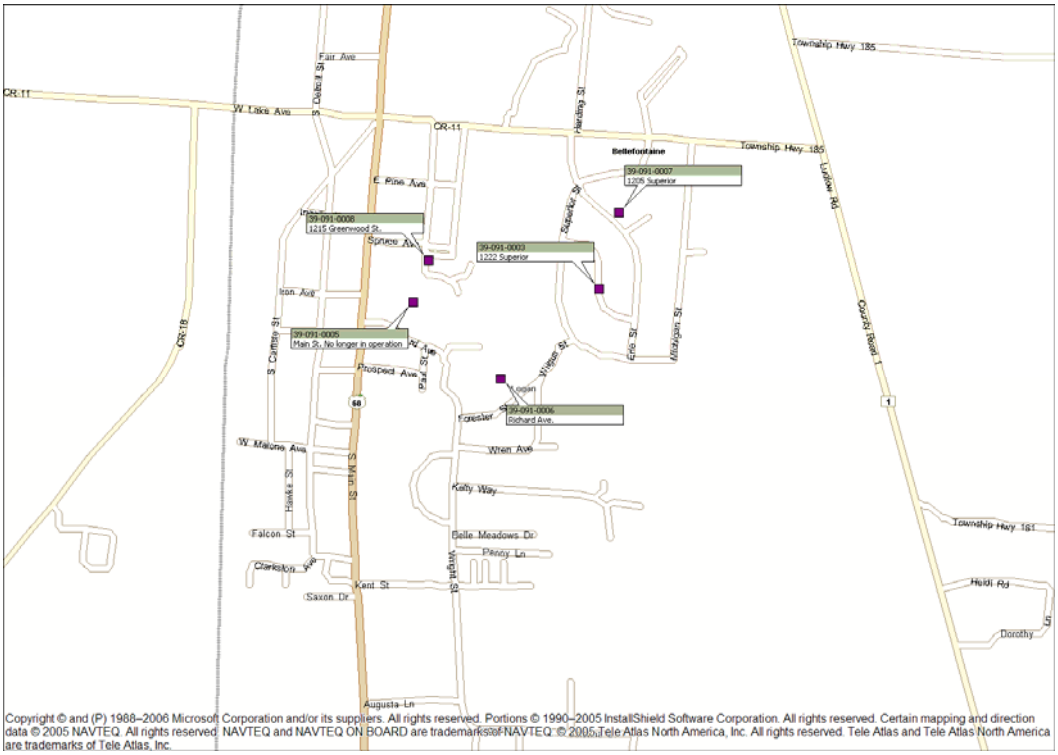

Table 11: Monitor 39-091-0006 three-month rolling average for 2009 and 2010 (ug/m3) ***(*this monitor was already a violating monitor under the first round designations)***

Site Location City	3-month period	Three-month rolling average (ug/m3)	
		2009	2010
39-091-0006	Nov -Jan	0.1067	0.0052
320 Richard - Daido	Dec -Feb	0.1167	0.0055
	Jan -Mar	0.1233	0.0063
Bellefountaine	Feb-Apr	0.0733	0.0064
	Mar-May	0.0600	0.0060
	Apr-Jun	0.0467	0.0044
	May-July	0.0367	0.0041
	Jun-Aug	0.0300	0.0040
	July-Sept	0.0267	
	Aug-Oct	0.0333	
	Sept-Nov	0.0350	
	Oct-Dec	0.0400	

All of November and December 2009 samples from the Bellefountaine Richard site were not collected. Ohio EPA is not performing a data substitution analysis for this location to address the incomplete monitor capture criteria because this location still does not meet the criteria for attainment of the standard of 0.15 ug/m3.

Washington County

Figure 7: Washington County Lead Monitor Location and Site ID Number

Table 12: Monitor 39-167-0008 three-month rolling average for 2009 and 2010 (ug/m3)

Site Location City	3-month period	Three-month rolling average (ug/m3)	
		2009	2010
39-167-0008	Nov -Jan	0.0031	0.0123
	Dec -Feb	0.0025	0.0104
S.R. 676 Washington Career Center	Jan -Mar	0.0021	0.0116
	Feb-Apr	0.0037	0.0056
Marietta	Mar-May	0.0035	0.0055
	Apr-Jun	0.0037	0.0047
	May-July	0.0031	0.0045
	Jun-Aug	0.0034	0.0051
	July-Sept	0.0041	
	Aug-Oct	0.0043	
	Sept-Nov	0.0062	
	Oct-Dec	0.0059	

Table 13: Monitor 39-167-0010 three-month rolling average for 2009 and 2010 (ug/m3)

Site Location City	3-month period	Three-month rolling average (ug/m3)	
		2009	2010
39-167-0010	Nov -Jan	0.0027	0.0057
115 Victory Place	Dec -Feb	0.0023	0.0043
Marietta	Jan -Mar	0.0025	0.0052
	Feb-Apr	0.0040	0.0057
	Mar-May	0.0039	0.0061
	Apr-Jun	0.0040	0.0057
	May-July	0.0036	0.0053
	Jun-Aug	0.0043	0.0052
	July-Sept	0.0051	
	Aug-Oct	0.0048	
	Sept-Nov	0.0082	
	Oct-Dec	0.0060	

All of September, all of October and part of August 2009 samples from the Marietta Victory Place site were not collected. The highest monthly mean value between November 2008 (start date for this monitor) and 2010 was 0.0082 ug/m3. If this value were substituted for all missing samples, the monthly values, and 3-month averages, would still be well below the standard of 0.15 ug/m3.

New Monitors

Ohio EPA's 2010 monitoring network design plan included the addition of four new lead monitors:

1. Cuyahoga County monitor 39-035-0072 near American Spring Wire
2. Marion County monitor 39-101-0003 near Nucor Steel
3. Stark County monitor 39-151-0017 near Timken
4. Trumbull County monitor 39-155-0012 near Ellwood Engineering Castings

The tables below identify all monitoring data collected to date for each of these sites. Based on available data, all monitors are attaining the revised standard. There were no monthly violations or violations of a three-month rolling average at any of these sites.

Therefore, Ohio EPA is not suggesting that any additional areas monitored by the 4 new lead monitors be designated nonattainment based upon the data contained in this submittal.

Cuyahoga County

Figure 8: Cuyahoga County New Lead Monitor Location and Site ID Number

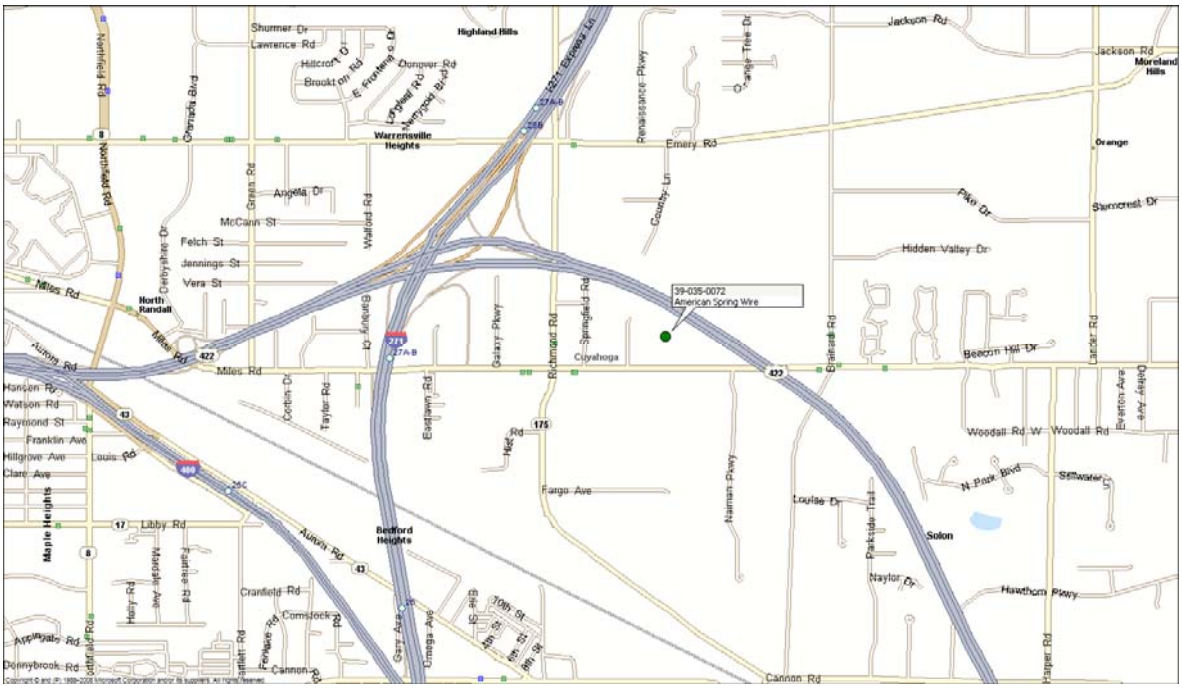

Table 14: Monitor 39-035-0072 three-month rolling average for 2009 and 2010 (ug/m3)

Site Location City	3-month period	Three-month rolling average (ug/m3)
		2010
39-035-0072 **26565 Miles Road** **Cuyahoga**	Nov -Jan	
	Dec -Feb	
	Jan -Mar	0.0092
	Feb-Apr	0.0107
	Mar-May	0.0112
	Apr-Jun	0.0117
	May-July	0.0100
	Jun-Aug	0.0100
	July-Sept	
	Aug-Oct	
	Sept-Nov	
	Oct-Dec	

**Monitor start date is January 1, 2010*.

Marion County

Figure 9: Marion County New Lead Monitor Location and Site ID Number

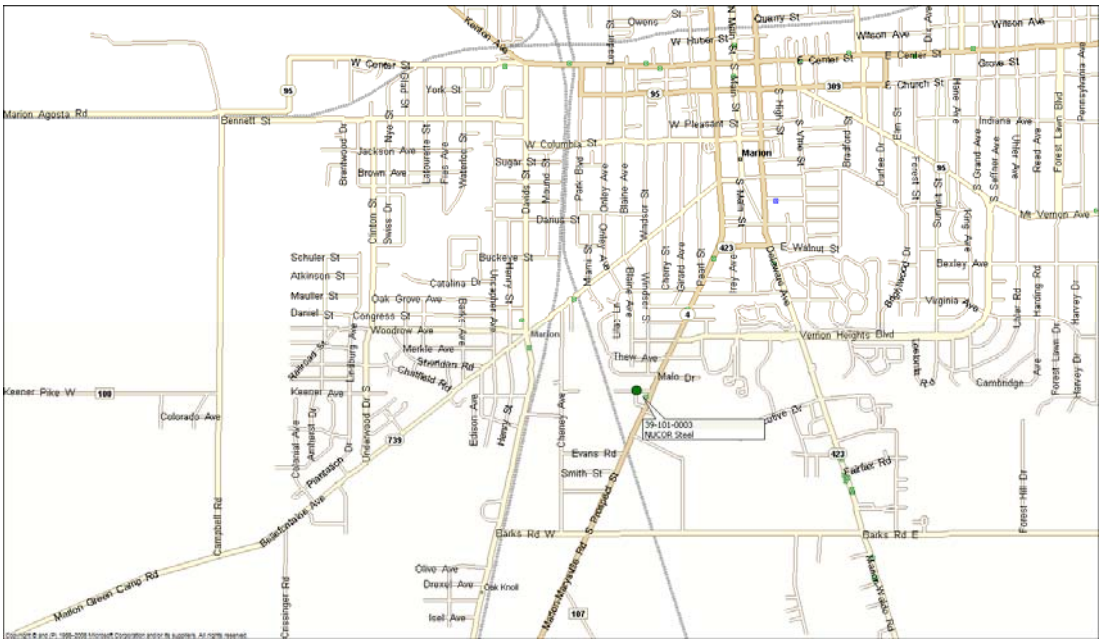

Table 15: Monitor 39-101-0003 three-month rolling average for 2009 and 2010 (ug/m3)

Site Location City	3-month period	Three-month rolling average (ug/m3)
		2010
39-101-0003	Nov -Jan	
Hawthorne Ave.	Dec -Feb	
Marion	Jan -Mar	
	Feb-Apr	
	Mar-May	0.0316
	Apr-Jun	0.0331
	May-July	0.0361
	Jun-Aug	0.0339
	July-Sept	
	Aug-Oct	
	Sept-Nov	
	Oct-Dec	

**Monitor start date is March 12, 2010*.

Stark County

Figure 10: Stark County New Lead Monitor Location and Site ID Number

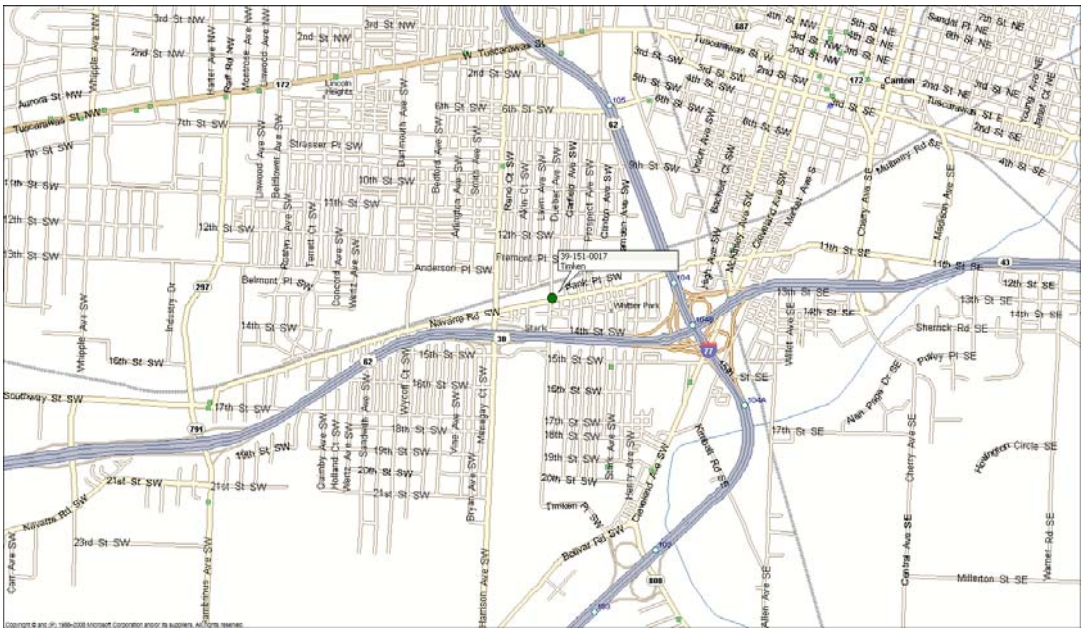

Table 16: Monitor 39-151-0017 three-month rolling average for 2009 and 2010 (ug/m3)

Site Location City	3-month period	Three-month rolling average (ug/m3)
		2010
39-151-0017	Nov -Jan	
1330 Dueber	Dec -Feb	
Canton	Jan -Mar	0.0147
	Feb-Apr	0.0197
	Mar-May	0.0234
	Apr-Jun	0.0174
	May-July	0.0154
	Jun-Aug	0.0163
	July-Sept	
	Aug-Oct	
	Sept-Nov	
	Oct-Dec	

**Monitor start date is January 1, 2010*.

Trumbull County

Figure 11: Trumbull County New Lead Monitor Location and Site ID Number

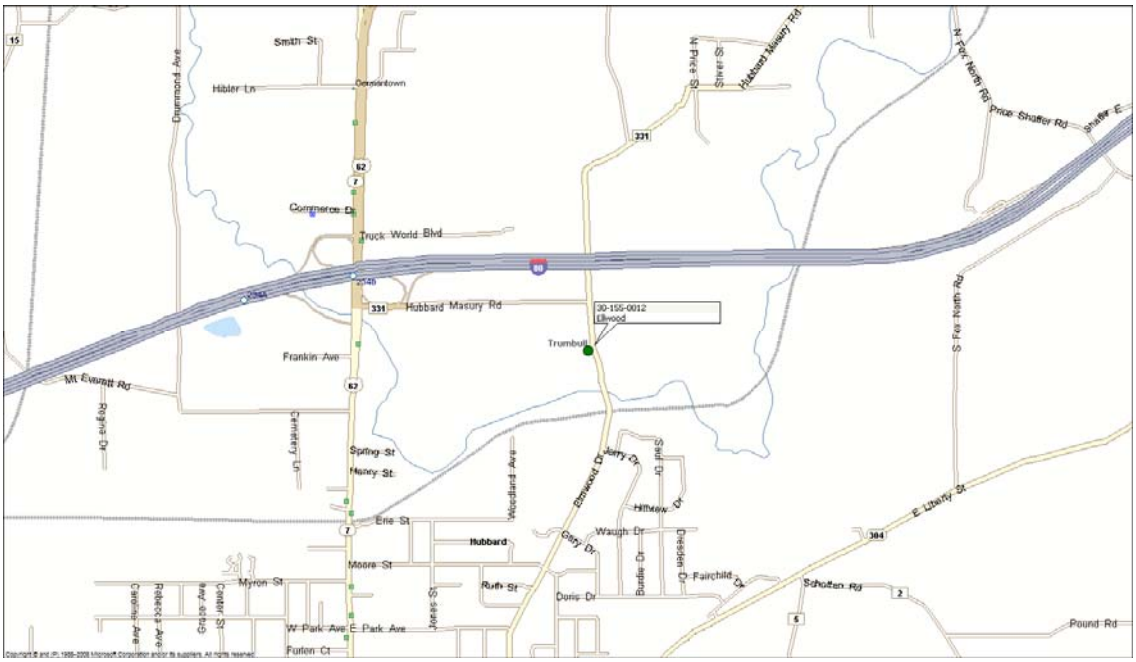

Table 17: Monitor 39-155-0012 three-month rolling average for 2009 and 2010 (ug/m3)

Site Location City	3-month period	Three-month rolling average (ug/m3)
		2010
39-155-0012 2600 Elmwood Dr Trumbull	Nov -Jan	
	Dec -Feb	
	Jan -Mar	
	Feb-Apr	
	Mar-May	
	Apr-Jun	
	May-July	0.0047
	Jun-Aug	0.0056
	July-Sept	
	Aug-Oct	
	Sept-Nov	
	Oct-Dec	

**Monitor start date is May 2, 2010*.

APPENDIX A

Air Quality System (AQS) data sheets

APPENDIX B

SLAMS 2009 lead certification

APPENDIX C

Public notice, public hearing, and response to comments documentation

(*note: no response to comments document is included because no testimony was given, or comments received)