ID# 3

Request forRedesignation for Lead Attainment in Marion County

March 2000

REQUEST FOR REDESIGNATION

FOR

LEAD ATTAINMENT

IN

MARION COUNTY

February 2000

COMPILED JOINTLY BY

OFFICE OF AIR MANAGEMENT

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

AND

INDIANAPOLIS ENVIRONMENTAL RESOURCES MANAGEMENT DIVISION

Throughout the development of this redesignation request, staff of the IDEM Office of Air Management worked closely with your staff to identify and resolve all potential issues of concern to U.S. EPA. The Department requests that U.S. EPA approve the Marion County redesignation. If you have any questions regarding this submittal, please contact Kathryn Watson, Chief, Air Programs Branch at (317) 233-5694.

Sincerely,

Lori F. Kaplan
Commissioner

LFK/jal

Attachments
cc: J. Elmer Bortzer, U.S. EPA
Mayor Bart Peterson, Indianapolis
Richard Martin, IERMD

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REQUEST FOR REDESIGNATION FOR
LEAD ATTAINMENT IN MARION COUNTY

1.0 INTRODUCTION

1.1 Background

A small portion of Franklin Township, in Marion County, Indiana was designated as a primary nonattainment area with the National Ambient Air Quality Standards (NAAQS) for lead (Pb), on January 6, 1992 (40 CFR 81.315 (updated 1996)). A small portion of Wayne Township, in Marion County, Indiana was designated as an unclassifiable area with the NAAQS for Pb, on January 6, 1992 (40 CFR 81.315 (updated 1996)). In compliance with the Clean Air Act (CAA), the Indiana State Board of Health Air Pollution Control Division, now known as the Indiana Department of Environmental Management (IDEM), developed and implemented rules designed to control emissions of Pb.

1.2 Geographical Boundaries

Following is a brief description of the county for which redesignation is requested.

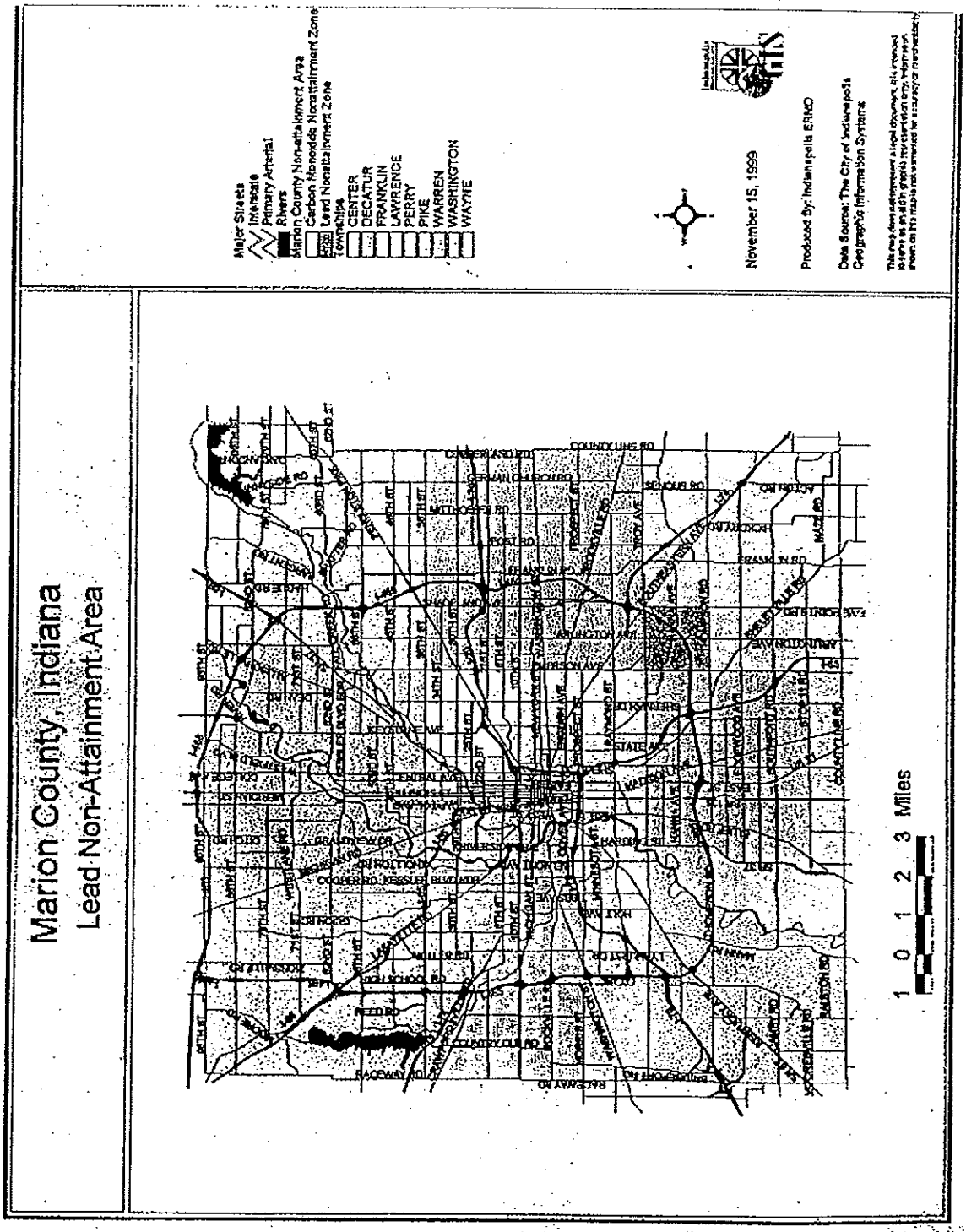
Marion County is in central Indiana. It is surrounded by the Indiana counties of Boone, Hamilton, Hancock, Shelby, Johnson, Morgan and Hendricks. Indianapolis is the largest city in the county.

Only a small portion of Franklin Township in Marion County was determined to be nonattainment for Pb. This area is described as follows:

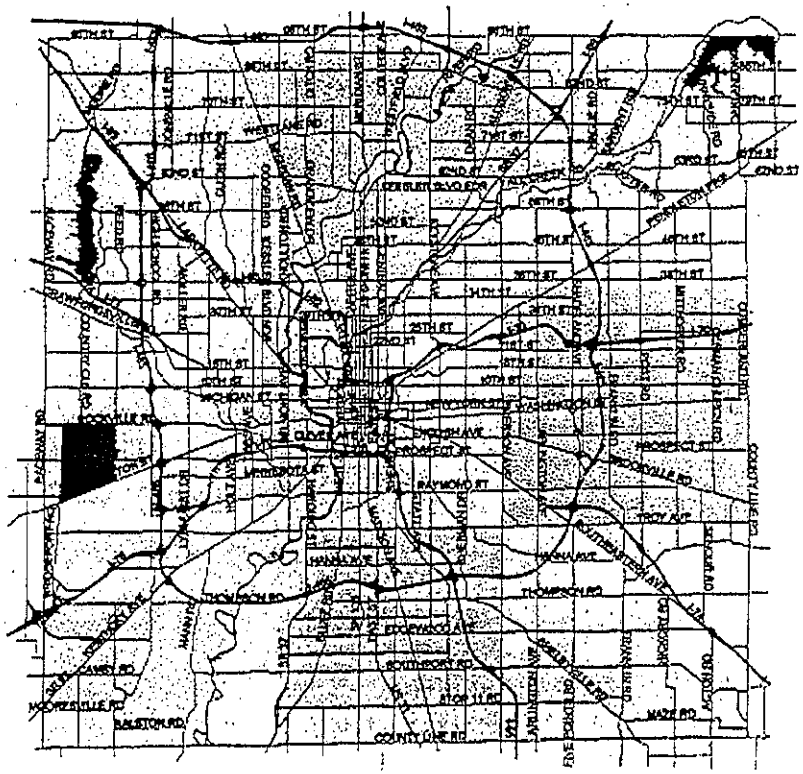
"Marion County (part) – (part of Franklin Township: area bound by Thompson Road on the south; Emerson Avenue on the west; Five Points Road on the east; and Troy Avenue on the north)" [40 CFR 81.315 (updated 1996)] (See Map A, page 2).

A small portion of Wayne Township in Marion County was determined to be unclassifiable for Pb. This area is described as follows:

"Marion County (part) – (part of Wayne Township: area bound by Rockville Road on the north, Girls School Road on the east, Washington Street on the south, and Bridgeport Road on the west.)" [40 CFR 81.315 (updated 1996)] (See Map B, page 3).


Marion County, Indiana
Lead Non-Attainment Area
Major Streets
Interstate
Primary Arterial
Rivers
Marion County Non-attainment Area
Carbon Monoxide Nonattainment Zone
Land Nonattainment Zone
Townships
CENTER
DECATUR
FRANKLIN
LAWRENCE
PERRY
PIKE
WARREN
WASHINGTON
WAYNE
November 15, 1999
Produced By: Indianapolis EMD
Data Source: The City of Indianapolis
Geographic Information Systems
1 0 1 2 3 Miles

Marion County, Indiana
Lead Unclassifiable Area



1 0 1 2 3 Miles

Major Streets
- Interstate
- Primary Arterial
- Rivers

Townships
- CENTER
- DECATUR
- FRANKLIN
- LAWRENCE
- PERRY
- PIKE
- WARREN
- WASHINGTON
- WAYNE

November 15, 1999

Produced By: Indianapolis ERMD

Data Source: The City of Indianapolis Geographic Information Systems

This map does not represent a legal document. It is intended to serve as an aid in graphic representation only. Information shown on this map is not warranted for accuracy or merchantability.

1.3 Status of Air Quality

As shown in Enclosure A-Item1, pages A-1 through A-5, the Pb monitoring data obtained for Marion County since 1985 shows that this area meets the Pb ambient standard.

There were no exceedances of the Pb ambient standards at the two historically operated highway emissions monitoring sites, AIRS I.D.18-097-0058 monitoring site (local agency Site 24) and AIRS I.D. 18-097-0062 monitoring site (local agency Site 25). AIRS I.D. 18-097-0058 monitoring site was operated between June 1982 to December 1996. AIRS I.D. 18-097-0062 monitoring site was operated between June 1983 and December 1996.

There have been no exceedances of the Pb ambient standards at AIRS I.D. 18-097-0063 monitoring site (local agency Site 26), which has been in operation since January 1984. This site is located in the unclassifiable portion of the county.

Additionally, there have been no exceedances of the Pb ambient standards at AIRS I.D. 18-097-0076 monitoring site (local agency Site 36), which has been in operation since May 1991. This site is located adjacent to the Quemetco, Inc. facility, which is in the unclassifiable portion of the county.

There have been three exceedances of the Pb ambient standards documented at AIRS I.D. 18-097-0069 monitoring site (local agency Site 27), which has been in operation since April 1985. The three exceedances occurred during the fourth quarter of 1985, first quarter of 1986, and the first quarter of 1990. There have been no additional exceedances at this site since the second quarter of 1990. This site is located in the non-attainment portion of the county, adjacent to the former Refined Metals Corporation facility.

There have been four exceedances of the Pb ambient standard documented at AIRS I.D. 18-097-0075 monitoring site (local agency Site 28), which has been in operation since April 1991. The four exceedances occurred during the fourth quarter of 1991, first quarter of 1992, and the first and second quarters of 1994. There have been no additional exceedances at this site since the third quarter of 1994. This site is located in the non-attainment portion of the county, adjacent to the former Refined Metals Corporation facility.

2.0 REQUIREMENTS FOR REDESIGNATION

2.1 General

Section 107 (d) (3) (E) of the CAAA lists a number of requirements that must be met by nonattainment areas prior to consideration for redesignation to attainment. In addition, U.S. EPA has published detailed guidance in a document labeled "Procedures for Processing Requests to Redesignate Areas to Attainment" in the form of a memorandum, issued September 4, 1992, to Regional Air Directors. This Plan is based on the above, supplemented with guidance received from staff of the Regulation Development Section of U.S. EPA Region 5.

The subsections below list the requirements that apply to this SIP. Each is addressed in a later section that describes in detail how the requirement has been met.

2.2 Lead Monitoring

1) A demonstration that the national ambient air quality standards for lead, as published in 40 CFR 50.12, have been attained.

2) Ambient monitoring data that has been quality assured in accordance with 40 CFR 58.10 and recorded in the Aerometric Information and Retrieval System (AIRS) data base and available for public review.

3) A commitment that, once redesignated, the state will continue to operate an appropriate monitoring network to verify the maintenance of the attainment status.

2.3 Emission Inventory

1) A comprehensive emission inventory of major and minor permitted sources of lead completed for the base year.

2.4 Controls and Regulations

1) A U.S. EPA approved SIP control strategy that includes Reasonably Available Control Technology (RACT) requirements for existing stationary sources covered by Control Technology Guidelines (CTG) and non-CTG RACT for all major sources.

2) Evidence that control measures required in past SIP revisions have been fully implemented.

3) Acceptable provisions to provide for new source review.

4) Assurances that existing controls will remain in effect after redesignation, unless the state demonstrates through modeling that the standard can be maintained without one or more controls.

2.5 Corrective Actions for Potential Future Violations of the Standard

1) A commitment to enact and implement expeditiously additional contingency control measures in response to exceeding specified predetermined levels (triggers) or in the event that future violations of the ambient standards occur.

2) A list of potential contingency measures that would be implemented in such an event.

3) A list of lead sources potentially subject to future controls.

3.0 LEAD MONITORING

3.1 Marion County Monitoring Network

Marion County

There have been six monitors measuring lead concentrations in the Indianapolis area. Currently four sites are operated by the Indianapolis Environmental Resources Management Division, and no sites are operated by the Indiana Department of Environmental Management. The four currently operated sites includes the following: AIRS I.D. 18-097-0063 monitoring site at 7601 Rockville Road (local agency Site 26); AIRS I.D. 18-097-0069 monitoring site at 3309 S. Arlington (local agency Site 27); AIRS I.D. 18-097-0075 monitoring site at 3700 S. Arlington (local agency Site 28); and AIRS I.D. 18-097-0076 monitoring site at 230 S. Girls School Road (local agency Site 36). Two other sites were previously operated in Marion County to monitor vehicle emission and includes the following: AIRS I.D. 18-097-0058 monitoring site at 16th Street and Martindale (local agency Site 24) and AIRS I.D. 18-097-0062 monitoring site at I-70 East (local agency Site 25). Both of the highway emissions monitoring sites were discontinued with the EPA's approval.

A listing of the sites with their corresponding highest reading, reported as the maximum arithmetic mean averaged over a calendar quarter, from 1985 to 1998 is given in Enclosure A, Item 1.

3.2 Ambient Data

The national primary ambient air quality standard for lead measured by the reference methods described in Appendix G of 40 CFR Part 50 is:

1.5 micrograms per cubic meter, maximum arithmetic mean averaged over a calendar quarter.

The secondary ambient standard for lead is the same as the primary ambient standard.

A tabular summary of the lead monitoring data for Marion County is provided in Enclosure A, Item 1. The information included in this summary was obtained from the AIRS data base.

There have been no exceedances documented in Marion County at any monitoring site since the second quarter of 1994. Therefore, the monitoring data for the two-year attainment demonstration period (1996 and 1997) shows that the National Ambient Air Quality Standards (NAAQS) for lead has been attained in all portions of Marion County.

3.3 Improvements

Four notable changes were made in Marion County, which helped the area attain the NAAQS for lead. The most significant improvement was the permanent closing of the Refined Metals Facility in the non-attainment portion of the county.

The second major improvement resulted from the Federal initiative requiring the elimination of lead in gasoline used by on-road mobile sources. This helped contribute to a marked decrease in ambient lead levels near major county thoroughfares.

Improvements were also made in the unclassfiable portion of the county, where Quemetco, Inc. is located. Specifically, Quemetco's continued compliance with the Marion County Lead SIP, the Indiana State Lead Rule (326 IAC 15-1), and the National Emission Standards for Hazardous Air Pollutants (NESHAP) Secondary Lead Smelters (40 CFR Part 63 Subpart X) has helped decrease Pb emissions in this portion of the county.

Finally, the shutdown of four facilities in the attainment portion of the county helped provide a small decrease in Pb emissions in this area.

Marion County

Federally mandated programs and the closing of significant stationary lead emitting sources can be attributed for the decrease in monitored lead emissions in Marion County. Additionally, source-specific operating provisions were implemented at Quemetco, Inc., Indianapolis.

1. **Shutdown of the Refined Metals Facility in the Nonattainment Portion of the County**

   On February 25, 1997, Refined Metals Corporation (AIRS Plant I.D. 0036) sent a letter to the Indianapolis ERMD stating that all operations at their facility would cease on February 28, 1997. On March 13, 1997, the Indianapolis ERMD received a second letter from the company requesting termination of their current operating permit and withdraw of their Title V permit application. Copies of the two aforementioned letters can be found in Enclosure D, Items 1 and 2.

   The Refined Metals facility had a long history of non-compliance with portions of the Marion County Lead SIP and the Indiana State Lead Rules found at 326 IAC 15-1. The following enforcement actions were taken by the Indianapolis Environmental Resources Management Division (ERMD) and the IDEM in an effort to correct deficiencies noted at the facility.

On November 16, 1994, the Indianapolis Environmental Resources Management Division issued a Notice of Violation (Cause number 490039501CP0055) for three quarterly violations of the NAAQS for lead (first quarter 1993, first quarter 1994, and second quarter 1994). Additionally, Refined Metals was cited for tampering with the Indianapolis ERMD's air monitoring device operated near the facility. The Indianapolis ERMD and Refined Metals entered into a Consent Decree on January 10, 1995 (Cause No. 49 D039501 CP0055).

On December 6, 1994, the IDEM issued Refined Metals a Notice of Violation (Cause Number A-2521) for:

- failing to keep the materials storage building under negative pressure,
- not operating their continuous opacity monitor, and providing valid data for the M-1 baghouse, and
- violating the facility's lead dust control program, including tracking materials outside of the materials storage building, and failing to maintain sweeper operating records.

On January 10, 1995, the IDEM and Refined Metals signed an Agreed Order to settle Cause Number A-2521.

Resulting from the Refined Metals facility's permanent shutdown on February 25, 1997, Marion County can document a decrease in lead emissions by 0.0179100 tons/year (based on 1996 AIRS data). It should be noted that the former Refined Metals facility was purchased by the Exide Corporation. The Exide Corporation does not plan to operate the facility. More details about the status of the site can be found in Section 3.5 Continued Monitoring.

2. Elimination of Lead in Gasoline Used by On-Road Mobile Sources

With the elimination of lead in gasoline used by on-road mobile sources, the EPA estimates that the lead air pollution levels measured near major highways has decreased 97% between 1978 and 1997. (Federal Register: January 20, 1999, Volume 64, Number 12, Page 3031).

As referenced above in Section 1.3 Status of Air Quality, Marion County previously operated two highway emissions monitoring sites. Site 24 was operated between June 1982 and December 1996. Site 25 was operated between June 1983 and December 1996. The quarterly Pb averages for these two sites between the years 1985 and 1996 are summarized in Enclosure A. All of the reported quarterly Pb averages were well below the primary and secondary ambient Pb standards.

3. **Implementation of Source-Specific Provisions at Quemetco, Inc. in the Unclassifiable Portion of the County**

As mandated by the Marion County Lead SIP, the Indiana State Lead Rule found at 326 IAC 15-1, and the National Emission Standards for Hazardous Air Pollutants (NESHAP) from Secondary Lead Smelters found at 40 CFR Part 63 Subpart X, the following source-specific provisions apply to Quemetco, Inc., located in the unclassifiable portion of Marion County:

- **Maintaining the Building Under Negative Pressure**
  Quemetco, Inc. is required to control fugitive emissions from the reverberatory furnace, electric arc furnace, casting operations, and refinery kettles by ensuring the building is maintained under negative pressure while the plant is in operation. A negative pressure monitoring system is also required to be operated at the facility.

  - Quemetco, Inc. controls fugitive emissions from the above processes by totaling enclosing the units and venting their emissions to a control device. A summary of the processes and their associated air pollution control devices is provided as follows:

Process	Control Device
- Lead Refining Kettle #1	Equipped with a hood to capture emissions, which are transferred via a plenum to the Kettle Sanitary Baghouses (#039) and #(040) and then exhausted via Stack #100.
- Lead Refining Kettle #2	Equipped with a hood to capture emissions, which are transferred via a plenum to the Kettle Sanitary Baghouses (#039) and (#040) and then exhausted via Stack #100.
- Lead Refining Kettle #3	Equipped with a hood to capture emissions, which are transferred via a plenum to the Kettle Sanitary Baghouses (#039) and (#040) and then exhausted via Stack #100.

Process	Control Device
- Lead Refining Kettle #4	Equipped with a hood to capture emissions, which are transferred via a plenum to the Kettle Sanitary Baghouses (#039) and (#040) and then exhausted via Stack #100.
- Lead Refining Kettle #5	Equipped with a hood to capture emissions, which are transferred via a plenum to the Kettle Sanitary Baghouses (#039) and (#040) and then exhausted via Stack #100.
- Lead Refining Kettle #6	Equipped with a hood to capture emissions, which are transferred via a plenum to the Kettle Sanitary Baghouses (#039) and (#040) and then exhausted via Stack #100.
- Lead Refining Kettle #7	Equipped with a hood to capture emissions, which are transferred via a plenum to the Kettle Sanitary Baghouses (#039) and (#040) and then exhausted via Stack #100.
- Lead Refining Kettle #8	Equipped with a hood to capture emissions, which are transferred via a plenum to the Kettle Sanitary Baghouses (#039) and (#040) and then exhausted via Stack #100.
- Reverberatory Furnace	Flue gases are vented to a baghouse (#035) and then to the W.W. Sly Scrubber (#046), and are exhausted via Stack #111.
- Electric Arc Slag Reduction Furnace	Flue gases are vented to the Electric Furnace Baghouse (#037) and then to the W.W. Sly Scrubber (#046), and are exhausted via Stack #111.

-	Casting Operations	Emissions are vented to the Kettle Sanitary Baghouses (#039) and (#040) and then exhausted via Stack #100.

- Quemetco, Inc. operates a negative pressure monitor, which is equipped with a pie chart to continuously record the differential pressure within the building. During the most recent annual inspection of the facility (April 1, 1999), the Indianapolis ERMD staff verified that Quemetco's monitor was functioning properly and the buildings are maintained under negative pressure at all times.

- **Controlling Fugitive Emissions Within the Facility**
  Quemetco, Inc. is required to control fugitive emissions within the building. Fugitive emissions are required to be vented to the atmosphere through HEPA filters which serve several different work areas or through process control devices and then to the atmosphere through the main process stack (Stack 100).

As stated above, Quemetco, Inc. has placed the foundry building under negative pressure by installing numerous roof vents throughout the plant, which are exhausted to nine baghouse collectors. The air pollution control equipment used is Busch Model MRV-80 baghouses, which are equipped with one cell of woven bags and one cell of HEPA filters. Each baghouse's design control efficiency is 99.97%. Additionally, each of the nine baghouses exhaust to the ambient air. A listing of the roof vent baghouses and the fugitive emission areas that they control are provided as follows:

Roof Vent Baghouse	Area Controlled
• #1	General ventilation of room air in the Bin 10 Feed Storage Area (storage for reverberatory furnace charge materials).
• #2	General ventilation of room air in the electric arc furnace building high bay.
• #3	General ventilation of room air in the east room of the cold charge furnace building.
• #4	General ventilation of room air in the reverberatory charge preparation room.
• #5	General ventilation of room air in the slag warehouse.

- #6 — General ventilation of room air in the reverberatory/slag reduction furnace area.
- #7 — General ventilation of room air in the north end of the refinery.
- #8 — General ventilation of room air in the slag reduction furnace area.
- #9 — General ventilation of room air in the south end of the refinery.

On March 21, 1997, the Indianapolis ERMD issued a Notice of Violation to Quemetco, Inc. for failing to demonstrate compliance with the allowable lead limit for Stack 106. The violation occurred on December 13, 1996, when the facility stack tested roof vent baghouse number 6 (Stack 106) to determine compliance with the lead limit contained in Construction Permit 90079, Condition number 4. The performance test results showed that the average actual lead emissions during the test were 0.023 pound per hour, which exceeded the allowable limit of 0.015 pounds per hour.

Within the Notice of Violation, Quemetco was also cited for failing to demonstrate compliance with the lead limit for Stack 108. The violation occurred on December 12, 1996, when the facility stack tested roof vent baghouse number 8 (Stack 108) to determine compliance with the particulate limit contained in Construction permit 930079-01, approval number 079-03. The performance test results showed that the average actual lead emissions during the test were 0.024 pounds per hour, which exceeded the allowable limit of 0.015 pounds per hour.

On April 29, 1997, Quemetco, Inc. retested Stacks 106 and 108 and demonstrated compliance with the lead limits. For Stack 106, the performance test results showed that the average actual lead emissions during the test were 0.0083 pounds per hour, which were below the allowable limit of 0.015 pounds per hour. For Stack 108, the stack test results showed the average actual lead emissions during the test were 0.0046 pounds per hour, which also were below the allowable limit of 0.015 pound per hour.

On September 21, 1998, Quemetco, Inc. and the Indianapolis ERMD entered into a Compliance Agreement to settle the violations. As a part of the settlement Quemetco, Inc. agreed to perform the following tasks at their facility:

- At all times, the facility must operate all roof vent baghouses utilizing at least one compartment of HEPA filters while the processes controlled by the baghouse are operating.
- During maintenance periods, the facility may remove one or more of the roof vent baghouses from operation so long as the building remains under negative pressure.
- The HEPA filters used on all roof vent baghouses at the facility must have a rated efficiency of 99.97% or greater.
- The pressure drop of the roof vent baghouses must be checked every day that the plant is in operation. If the pressure drop exceeds the limits specified by the manufacturer, Quemetco, Inc. must initiate the corrective actions specified within their SOP Manual for Baghouse Leak Detection Systems and Corrective Action.
- Quemetco, Inc. must also maintain documentation that the above provisions have been complied with.

- **Opacity Limitations for Building Openings**
  Visible emissions from building openings shall not exceed a three minute average of three percent opacity, determined according to the methods specified in 40 CFR 60, Appendix A, Method 9, except that the opacity shall be determined as an average of 12 consecutive observations observed at 15 second intervals. During routine observations of the facility and during the most recent annual inspection (April 1, 1999), the Indianapolis ERMD has not recorded any violation of the opacity limitations from any building openings at Quemetco.

- **Opacity Limitations for the HEPA Filtered Roof Vent Exhausts**
  Visible emissions from the HEPA filtered roof vent exhausts shall not exceed an average of three percent opacity, determined in accordance with 40 CFR 60, Appendix A, Method 9. During routine observations of the facility and during the most recent annual inspection (April 1, 1999), the Indianapolis ERMD has not recorded any violation of the opacity limitations for the HEPA filtered roof vent exhausts at Quemetco.

- **Opacity Limitations for the Main Process Stack (Stack 100) and for the Electric Slag Reduction Furnace Stack (Stack 111)**
  The opacity limit for the main process stack (Stack 100) and the Electric Arc Slag Reduction Furnace Stack (Stack 11) is ten percent opacity, determined according to methods specified in 40 CFR 60, Appendix A, Method 9.

  During routine observations of the facility and during the most recent annual inspection (April 1, 1999), the Indianapolis ERMD has not recorded any violation of the opacity limitations for the Stacks 100 and 111 at Quemetco.

- **Continuous Opacity Monitoring System for the Main Process Stack (Stack 100) and for the Electric Slag Reduction Furnace Stack (Stack 111)**

  - Quemetco, Inc. is required to comply with the following continuous opacity monitoring system provisions for the main process stack (stack 100):

    - Quemetco, Inc. has installed the required continuous opacity monitoring system on Stack 100.

    - Quemetco, Inc. was also required to submit a written continuous emissions monitoring operating procedures (SOP) to the Indianapolis ERMD and to the IDEM's. The plan was approved by the Indianapolis ERMD and the IDEM.

    - According to the IDEM, Office of Air Management's Compliance Data Section, Quemetco, Inc. has met the requirement to perform quarterly performance audits of the continuous opacity monitoring system.

    - According to the IDEM, Office of Air Management's Compliance Data Section, Quemetco, Inc. has met the requirement to submit quarterly reports regarding the continuous emissions monitoring system to the IDEM.

    - According to the IDEM, Office of Air Management's Compliance Data Section, Quemetco Inc. has met the requirement to submit excess emissions reports to the IDEM according to 326 IAC 1-6.

  - Quemetco, Inc. is required to comply with the following continuous opacity monitoring system provisions for the Electric Arc Slag Reduction Furnace (stack 111):

    - Quemetco, Inc. has installed the required continuous opacity monitoring system on Stack 111.

    - Quemetco, Inc. was also required to submit a written continuous emissions monitoring operating procedures (SOP) to the Indianapolis ERMD and the IDEM. The plan was approved by the Indianapolis ERMD and the IDEM.

- According to the IDEM, Office of Air Management's Compliance Data Section, Quemetco, Inc. has met the requirement to submit quarterly reports regarding the continuous emissions monitoring system to the IDEM.

- According to the IDEM, Office of Air Management's Compliance Data Section, Quemetco Inc. has met the requirement to submit excess emissions reports to the IDEM according to 326 IAC 1-6.

- **Stack Testing of Stacks 100 and 111**

The most recent stack test of the main process stack (stack 100) was performed on December 9, 1996. The lead emissions measured during the stack test were 0.516 pounds per hour and demonstrated compliance with the lead emissions limit for Stack 100 of 1.0 pound per hour. The throughput at the time of the test was 30.20 tons per hour.

On March 18, 1996, Stack 111 was performance tested while only the electric arc slag reduction furnace was in operation. The lead emissions measured during the stack test were 0.008 pound per hour and demonstrated compliance with the lead emissions limit for the electric arc slag furnace vented through Stack 111 of 0.136 pounds per hour.

On April 29, 1997, Stack 111 was performance tested while the electric arc slag reduction furnace and the reverberatory furnace were both in operation. For this operating scenario, the lead emissions limit has been defined as an average of the electric arc slag reduction furnace emissions limit (0.0007 gr/dscf) and the reverberatory furnace emissions limit (0.00087 gr/dscf pursuant to 40 CFR Part 63 Subpart X). The emissions measured during the stack test were 0.023 pounds per hour and demonstrated compliance with the lead emissions limit for Stack 111 of 0.309 pounds per hour.

- **Fugitive Lead Dust Control Plan**

As required by 326 IAC 15-1-3 and 40 CFR Part 63 Subpart X Section 63.546 (a)(b), Quemetco, Inc. submitted a Standard Operating Procedures (SOPs) Manual for Fugitive Lead Dust Sources on December 23, 1997. The facility revised the document on September 28, 1998. The following provisions are contained within the plan:

- maintaining records of maintenance activities;
- controlling fugitive emissions from processes by locating the equipment in a total enclosure, which is vented to an air pollution control device;
- controlling fugitive emissions from the battery breaking area, the furnace area, the refining and casting areas, and the materials storage and handling areas by placing the units in total enclosure and venting them to a control device; and

- controlling fugitive emissions from plant roadways by regularly sweeping with a wet mechanical sweeper.

The plan has been incorporated into the facility's construction permit.

The Indianapolis ERMD has verified during the most recent annual inspection of the facility (April 1, 1999) that Quemetco's fugitive lead dust control maintenance records are complete.

- **Installation of Baghouse Leak Detection System and Development of SOPs Manual**
As required by 326 IAC 3-1.1-1 and 40 CFR Part 63 Subpart X Section 63.548, Quemetco, Inc. was required to install a bag leak detection system for all baghouses that are used to control process, process fugitive or fugitive dust emissions, including those used to control emissions from building ventilation (but excluding baghouses equipped with HEPA filters per U.S. EPA letter by Phil Mulrine from April 9, 1996). Additionally, the facility was required to prepare a SOPs manual that describes in detail procedures for inspection, maintenance, and bag leak detection and corrective action plans for the applicable baghouses.

    - The Indianapolis ERMD verified during the most recent annual inspection of the facility (April 1, 1999) that Quemetco, Inc. installed a Tribo-electric system in each of their process baghouses. The system's monitors are connected to a central computer system, and alarms are triggered if problems are noted with any of the baghouses. Quemetco, Inc. maintains records of any alarm occurrences and the corrective actions taken. The Indianapolis ERMD noted that the records were up-to-date and found to be sufficient.

    - Quemetco, Inc. submitted a Standard Operating Procedures (SOPs) Manual for the Baghouse Leak Detection Systems and Corrective Actions on December 23, 1997. The facility revised the document on September 28, 1998. One of the provisions of the plan is to maintain records of baghouse operating parameters. The plan has been incorporated into the facility's construction permit. The Indianapolis ERMD verified during the most recent annual inspection of the facility (April 1, 1999) that Quemetco's baghouse operating parameters records are complete.

As demonstrated above, Quemetco, Inc. is complying with the Marion County Lead SIP, the Indiana State Lead Rule found at 326 IAC 15-1, and the NESHAP from Secondary Lead Smelters found at 40 CFR Part 63 Subpart X.

4. **Shutdown of Four Facilities in the Attainment Portion of the County**

The following four Pb emitting facilities shutdown in the attainment portion of Marion County:

- **Central Soya**
  Central Soya (AIRS Plant I.D. 0008) ceased operations at their facility in mid-1994, due to an explosion in their hexane extraction unit. The facility maintains permits for particulate emissions from grain handling operations.

  Resulting from the permanent shutdown of the lead emitting portions of the facility, Marion County can document a decrease in lead emissions by 0.0023643 tons/year lead (based on 1990 AIRS data).

- **Marathon Oil Company**
  On September 25, 1996, the Indianapolis ERMD received a notice from Marathon Oil Company (AIRS Plant I.D. 0051) requesting that the agency invalidate and no longer maintain their source operating permit.

  Resulting from the Marathon Oil Company's permanent shutdown on September 25, 1996, Marion County can document a decrease in lead emissions by 0.0000231 tons/year lead (based on 1990 AIRS data).

- **Chrysler Corporation**
  On August 14, 1990, the Indianapolis ERMD received a letter from Chrysler Corporation (AIRS Plant I.D. 0011) withdrawing their permit. Resulting from the permanent shutdown of the facility, Marion County can document a decrease in lead emissions by 0.0013755 tons per year (based on 1990 AIRS data).

- **Connor Corporation – Richardson Division**
  The Connor Corporation – Richardson Division (AIRS Plant I.D. 0065) shutdown their facility in 1998. Resulting from the permanent shutdown of the facility, Marion County can document a decrease in lead emissions by 0.0804 tons per year (based on 1996 AIRS data).

The total lead emission reductions in Marion County, which can be attributed to the shutdown of the four sources referenced above, is 0.0841629 tons per year.

3.4 Quality Assurance

All the data shown in Enclosure A, Item 1 has been quality assured in accordance with 40 CFR 58.10, as well as the Indiana Quality Assurance Manual and found to be valid. The data has been recorded in the Aerometric Information and Retrieval System (AIRS) data base and through it, made available to the public.

3.5 Continued Monitoring

The Indianapolis ERMD commits to continue monitoring for Pb in Marion County at AIRS I.D. 18-097-0063 monitoring site (local agency Site 26) and AIRS I.D. 18-097-0076 monitoring site (local agency Site 36) located in the unclassifiable portion of the county, which is adjacent to the Quemetco, Inc. facility.

The following factors have been considered by the Indianapolis ERMD in their decision to commit to continue monitoring in the nonattainment portion of the county:

- The former Refined Metals facility has been shutdown and the company no longer maintains its air operating permit.

- Exide Corporation has taken responsibility for the clean-up of the Refined Metals facility.

- The EPA and IDEM issued a Notice of Violation to the Refined Metals Corporation (Civil Action No. IP902077C), which was settled by a Consent Decree signed on August 31, 1998. Refined Metals was cited for treating, storing, and or disposing of hazardous waste without a permit; for failing to submit a closure plan, and for releasing hazardous waste into the environment. The consent decree is binding upon any purchaser of the facility.

- The Exide Corporation is now responsible for completing the requirements within the Consent Decree. The company has been working with EPA Region V and the IDEM's Office of Land Quality to gain approval for their proposed closure plan and Resource Conservation Recovery Act (RCRA) Corrective Action Plan. EPA has approved the Corrective Action Plan, which addresses remediation of potential off-site impacts, and to the groundwater. The IDEM is reviewing the second draft of the proposed closure plan. The Exide Corporation is required to decontaminate multiple outside storage piles and the interior of the materials storage building. Additionally, the company may be required to remediate contaminated soil at the site.

- The IDEM Office of Land Quality does not anticipate any significant lead emissions to the ambient air resulting form the implementation of the RCRA Corrective Action Plan and the Closure plan.

- If the Exide Corporation decides to operate at the site as a hazardous waste treatment, storage, or disposal facility, they would need to apply for a permit. Additionally, according to the aforementioned consent decree, Exide would need to comply with the January 10, 1995, Agreed Order in Commissioner of the Department of Environmental Management v. Refined Metals Corporation, Cause Number A-2521.

In consideration of the factors outlined above, the Indianapolis ERMD commits to monitor at AIRS I.D. 18-097-0075 monitoring site (local agency Site 28), which is located on the former Refined Metals facility's property. This site is located at the "fenceline" of the facility, where the maximum lead concentrations would be anticipated to be measured. The Indianapolis ERMD will cease operation of AIRS I.D. 18-097-0075 monitoring site (local agency Site 28), after all of the physical remediation projects conducted at the site are completed. This may occur prior to the IDEM's official acceptance of Exide's certification of closure.

The monitoring data will continue to be quality assured to meet the requirements of 40 CFR 58.10. Connection to a central station will provide real time availability of the data and knowledge of any exceedances. All data will continue to be entered in AIRS on a timely basis in accordance with federal guidelines.

4.0 EMISSION INVENTORY

4.1 Base Year Inventory

Table I, below, which was abstracted from the U.S. EPA Aerometric Information Retrieval Subsystem shows the lead emissions from major and minor permitted sources located in Marion County between 1985 to 1998. The year 1996 was chosen as the base year for the attainment emission inventory, because of the extensive lead emission plant data available for that year within the AIRS database. All sources of lead emissions greater than zero tons per year, are found in Enclosure B, Item 1 and summarized in Table I below.

TABLE I
Pb Emissions Plant Totals for All Permitted Sources 1985 to 1998

SOURCE	AIRS FACILITY ID	YR.	EMISSIONS IN T/Y
American Art Clay Company	0002	93	0.4800240
		96	0.0371888
		97	0.0380960
		98	0.0382400
Bridgeport Brass dba Olin Brass	0005	90	0.0027386*
		96	0.0000000
Central Soya Company Inc.	0008	90	0.0023643 Pb EMITTING OPERATIONS CLOSED SUMMER 1994
Central State Hospital	0009	90	0.0000040*
		96	0.0000000
		97	0.0000000
		98	0.0000000
Chrysler Corporation	0011	88	0.0013755
		90	0.0013755 CLOSED 8/14/90
Chrysler Corp. IN Foundry	0012	85	0.2750000
		96	0.5740000

*Source no longer operates coal-fired boilers at their facility and is below reporting thresholds.

TABLE I
Pb Emissions Plant Totals for All Permitted Sources 1985 to 1998

SOURCE	AIRS FACILITY ID	YR.	EMISSIONS IN T/Y
Chrysler Corp. IN Foundry	0012	97	0.0000000
		98	0.0000000
National Railroad Passenger Corp.	0014	90	0.0005360*
		96	0.0000000
Allison Transmission Division Of GMC (Plant 3)	0017	90	0.0000000
		93	0.0003656
		96	0.0005809
		97	0.0006192
Eli Lilly and Company	0019	96	0.0030000
		98	0.0000000
Visteon Automotive Systems (Ford Motor Company)	0021	90	0.0057079
		93	0.0045304
		96	0.0001598
		97	0.0005472
DOA Ft. Benjamin Harrison	0022	90	0.0001968
		93	0.0001968
		96	0.0001675 *
		97	0.0000000
		98	0.0000000
Link-Belt Bearing-Rexnord Corporation	0025	90	0.0000388
		93	0.0162974
		96	0.0017702
		97	0.0016034
		98	0.0002200
IPALCO - Stout	0033	90	7.1167750
		93	0.0000156
		96	0.0342931
		97	0.0599900
		98	0.0639800

*Source no longer operates coal-fired boilers at their facility and is below reporting thresholds.

TABLE I
Pb Emissions Plant Totals for All Permitted Sources 1985 to 1998

SOURCE	AIRS FACILITY ID	YR.	EMISSIONS IN T/Y
IPALCO -- Perry K	0034	90	0.4107990
		93	0.0094868
		96	0.0967112
		97	0.0370904
		98	0.0391320
Refined Metals Corporation	0036	85	2.0000000
		96	0.0179100
			CLOSED 2/25/97
Indianapolis Casting Corp.	0039	90	0.0000675
		96	0.0201100
		97	0.0201100
		98	0.0201100
Wishard Memorial Hospital	0041	97	0.0000030
		98	0.0000029
Thomson Consumer Electronics	0047	96	0.0000042
		97	0.0000000
		98	0.0000000
Reilly Industries, Inc.	0049	90	0.0000218
		93	0.0002358
		96	0.0000000
		97	0.0000000
		98	0.0000000
Marathon Petroleum Co. CLOSED 9/25/96	0051	90	0.0000231
Praxair (Union Carbide Corporation)	0060	88	0.0000034
		96	0.0000000
		97	0.0000000
		98	0.0000000

TABLE I
Pb Emissions Plant Totals for All Permitted Sources 1985 to 1998

SOURCE	AIRS FACILITY ID	YR.	EMISSIONS IN T/Y
Citizens Gas & Coke	0061	90	0.0000294
		96	0.0000258
		97	0.0001362
		98	0.0001500
Inter-State Foundry Co., Inc.	0063	93	0.0569120
Interstate Castings, Inc.		96	0.0641543
		97	0.0787060
		98	0.0571000
Connor Corp. - Richardson Div.	0065	90	0.1483800
(Richardson Co. BWitco)		96	0.0804000
		97	0.0738000
		98	0.0628000
			CLOSED 1998
Indiana Girls School	0068	90	0.0002994
		93	0.0002994
		96	0.0000028
		97	0.0000003*
		98	0.0000000
Allison Engine Company -	0070	88	0.0117943
Plant 5		90	0.0096860
		96	0.1502234*
Allison Gas Turbine Div-Plant 8	0071	88	0.0000038
Allison Engine Co. B Plant 8		90	0.0000018
		93	0.0000018
		96	0.0014595
Rolls Royce/Allison	0310	97	0.0000000
(Allison Plants 5 and 8)		98	0.0000000
Eli Lilly and Company	0074	96	0.0980000

***Source no longer operates coal-fired boilers at their facility and is below reporting thresholds.**

TABLE I
Pb Emissions Plant Totals for All Permitted Sources 1985 to 1998

SOURCE	AIRS FACILITY ID	YR.	EMISSIONS IN T/Y
Eli Lilly and Company	0074	97	0.0000000
		98	0.0000000
Quemetco, Inc.	0079	85	17.1260000
		90	2.0000000
		93	1.4850000
		96	1.6700000
		97	1.5500000
		98	0.5349000
Asphalt Material and Construction, Inc.	0098	88	0.0000008
		90	0.0000008
		96	0.0000000
		97	0.0000000
		98	0.0000000
Raytheon (Naval Air Warfare Center)	0100	88	0.0000011
		96	0.0000000
		97	0.0000000
		98	0.0000000
Ogden Martin Systems of Indianapolis	0123	90	0.0005361
		93	0.0003639
		96	0.0061200
		97	0.0056200
		98	0.0058800
St. Francis Hospital - Beech Grove	0163	96	0.0130000
		97	0.0000020
		98	0.0068470
Farm Fans, Inc.	0199	96	0.0088287
		97	0.0000000
		98	0.0000000
Community Hospital East	0299	96	0.0000002

TABLE I

Pb Emissions Plant Totals for All Permitted Sources 1985 to 1998

SOURCE	AIRS FACILITY ID	YR.	EMISSIONS IN T/Y
Community Hospital East	0299	97	0.0000060
		98	0.0000000
Eastern Electric Apparatus Repair Co.	0251	96	0.0006000
		97	0.0004000
		98	0.0002000
Altec Industries, Inc.	0256	96	0.0178959
		98	0.0000000
Clarion Health Partners	0300	97	0.2200000
		98	0.2200000
Marion County Totals by Year		**85**	**19.4010000**
		88	**0.0131789**
		90	**9.2995494**
		93	**2.0442427**
		96	**2.8966063**
		97	**2.0867297**
		98	**1.0495619**

One of the requirements for an approvable redesignation SIP is a demonstration that improvement in air quality between the year violations occurred and attainment was achieved as a result of permanent and enforceable emission reductions and not on temporary adverse economic conditions or unusually favorable meteorology.

Table II below shows the distribution of plants, based on annual lead emissions, listed in the 1985-1998 inventory. Additionally, Enclosure B, Item 2 provides an emissions inventory trend summary for Marion County over the same time-frame.

A review of the available data for the 1996 base year shows that in Marion County, there were no stationary sources with emissions greater than five tons per year. Additionally, there were two stationary sources, of the twenty-six plants included in the emission inventory, with emissions greater than 0.2 tons per year. These sources were Quemetco, Inc. (Plant I.D. # 0079), and Chrysler Corporation Indiana Foundry (Plant I.D. #0012). The 1996 base year lead emissions for these two sources were 1.67 tons per year and 0.574 tons per year respectively. The base year lead emissions from the two plants, accounted for 77.46% of the total 1996 point source lead emissions for Marion County (2.8966063 tons of lead).

As stated previously in Section 1.3 Status of Air Quality, there have been no exceedances of the Pb ambient standards measured at the two monitoring sites found within the "unclassifiable" portion of the county, where Quemetco, Inc., is located. The two monitoring sites include: Site 26, which has been in operation since January 1984, and Site 36, which has been in place since May 1991. The above information demonstrates further that all portions of Marion County continue to meet the Pb ambient standard.

TABLE II

Distribution of Plants Listed in 1985-1998 Inventory

County	# of Plants > 5 tpy	# of Plants > 0.2 tpy	Total in Inventory	Year
Marion	1	3	3	85
Marion	0	0	5	88
Marion	1	3	20	90
Marion	0	2	12	93
Marion	0	2	26	96
Marion	0	1	15	97
Marion	0	2	15	98

4.2 Emission Projections

Emissions were projected to the year 2010 to allow for any possible delays in redesignation. As shown in Enclosure B, Item 2 lead emissions from sources emitting more than 0.2 tons per year accounted for approximately 77.46% of all point source emissions for the year 1996. Projections for these are based on BEA (Bureau of Economic Affairs). A summary is presented in Table III below.

TABLE III
Projected Growth 1996-2010 Summary for Annual Emissions
(Tons/Year Pb)

County	Source Type	Base Yr. 1996	Projected Yr. 2010	Change
Marion	**Point Sources**	**2.897**	**3.145**	**+8.56%**

The annual lead emissions are expected to increase by about 8.56% by the year 2010. Therefore, the anticipated year 2010 Pb emissions from all stationary sources in Marion County should be 3.145 tons per year. However, the projected levels for the year 2010 will be considerably lower than the actual 1990 total Marion County Pb emission, which were 9.331 tons per year. Since the year 1990, the County's lead emission totals for the years 1993, 1996, 1997 and 1998 have been significantly below 9.331 tons per year.

4.3 Demonstration of Maintenance

Ambient air quality data from all monitoring sites indicated that the National Ambient Air Quality Standards for lead were being met in 1996. Therefore, attainment is expected to be maintained through the projected year 2010.

To verify future maintenance during the initial ten-year maintenance period, the IDEM will re-evaluate the emissions inventory once every three years. This will be conducted on the same schedule used for the ozone precursor inventory, which will begin with 1999 yearly data. The inventory will be re-evaluated based in part on the annual AIRS update, and will include an indication of any new lead source growth or other changes from the initial attainment inventory. Where those factors have changed significantly, a new inventory will be prepared.

4.4 Permanent and Enforceable Emission Reductions

Permanent and enforceable reductions of lead emissions in Marion County resulted from the shutdown of Refined Metals and other small stationary lead emitting sources. Additionally, Federal initiatives, such as the elimination of lead in gasoline used by on-road mobile sources, also contributed to the attainment of the lead standard.

5.0 CONTROLS AND REGULATIONS

5.1 Implementation of Past SIP Revisions

The Indiana rules controlling lead emissions are in effect and are being enforced. Indiana rule 326 IAC 15 requires all Pb sources in Indiana to be in compliance with specified limits. The Indiana Lead rule applies to all stationary sources of lead listed in 326 IAC 15-2 unless alternative limitations and requirements have been established in a Part 70 permit in accordance with 326 IAC 2-7-24.

For Marion County, compliance is monitored by inspectors from the Indianapolis Environmental Resources Management Division's Air Pollution Control Section. It is a local agency with compliance and enforcement powers delegated from the State. Oversight is provided by IDEM.

5.2 New Source Review Provisions

Indiana has a longstanding and fully implemented New Source Review procedure. New Source Review is addressed in rule 326 IAC 2. The rule includes provisions for the Prevention of Significant Deterioration (PSD) in 326 IAC 2-2; the implementation of this program, applicable to attainment areas, has been delegated to the State by U.S. EPA Emission Offset Policy for nonattainment areas.

Any facility that is not listed in the 1996 emission inventory, or for the closing of which credit was taken in demonstrating attainment, will not be allowed to construct, reopen, modify or reconstruct without meeting any applicable permit rule requirement. The review process will be identical to that used for new sources.

5.3 Controls to Remain in Effect

Indiana does not intend to drop or relax any of the already implemented control measures listed above after redesignation. Indiana hereby commits that any changes to its rules, or emission limits applicable to Pb sources, will be submitted to U.S. EPA for approval as a SIP revision. This will include, where appropriate, a demonstration based on modeling that the standard will be maintained. Indiana does intend, upon redesignation, to apply 326 IAC 2-2 rather than 326 IAC 2-3 for permitting any new sources or modifications. Indiana, through its Office of Enforcement, has in place the resources required to enforce actively any violations of its rules or permit provisions. After redesignation, it intends to continue enforcing all rules that relate to the emission of lead in the subject areas.

6.0 CORRECTIVE ACTIONS

6.1 Commitment to Revise Plan

Indiana hereby commits to review and, if necessary, revise its Maintenance plan for Marion County eight years after redesignation to attainment of the Pb NAAQS, as required by Section 175(A) of the CAA. Indiana will comply with the existing or revised plan for the second ten-year maintenance period.

6.2 Commitment for Contingency Measures

Due to the permanent shutdown of the Refined Metals Corporation facility in the non-attainment portion of the county, Marion County has been able to demonstrate attainment with the Pb NAAQS. Future contingency measures for this area will include requiring any proposed stationary sources of lead emissions to comply with all applicable New Source Review provisions referenced in Section 5.2 above, and other controls specified within Section 5.3 above.

The IDEM and the Indianapolis ERMD will also closely monitor existing stationary sources of Pb emissions. The following methods will be used to monitor the existing stationary Pb sources in Marion County:

- During routine inspections of permitted stationary sources, the Indianapolis ERMD will evaluate any potential increases in Pb emissions at these facilities, and

- The IDEM and the Indianapolis ERMD will examine the annual point source inventory for sources with increased emissions and for any new sources. Emissions reporting is required by the annual "emission statement" reporting requirements found in 326 IAC 2-6.

In the event there is an exceedance of the lead standard, the above information will be used to identify additional control measures that are needed to assure future attainment of the National Ambient Air Quality Standard for lead. Indiana hereby commits to adopt and implement expeditiously any identified necessary corrective actions.

No contingency measure shall be implemented without providing the opportunity for full public participation during which the relative costs and benefits of individual measures, at the time they are under consideration, can be fully evaluated.

Adoption of any control measures is subject to necessary administrative and legal approval. This will include publication of notices, an opportunity for public hearing, and other measures required by Indiana law (IC 13-14-8-7) for rule making by state environmental boards. This law provides

accelerated procedures for adopting interim control measures in the event of an emergency affecting public health.

In any event, the implementation plan would include an analysis, by a method mutually agreed upon by Indiana and the U.S. EPA, to demonstrate that the proposed measures are adequate to return the area to attainment.

6.3 List of Sources

The lead sources potentially subject to future controls is by necessity basically the same as the current list of sources which is found in Section 4.1, Table I. As noted in Sections 6.2 above, sources subject to additional controls will be those which the planned study shows are responsible for triggering the contingency measures and the control of which will most effectively help to ensure compliance with the standards. In addition to reviewing the known sources, the possibility that the problem is attributable to new or previously unknown sources will not be overlooked.