Iowa State Implementation Plan

Redesignation Request and Maintenance Plan for the Lead (Pb) Nonattainment Area in Council Bluffs, Iowa



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Executive Summary

On October 15, 2008, the U.S. Environmental Protection Agency (EPA) substantially revised the lead (Pb) National Ambient Air Quality Standards (NAAQS) from 1.5 micrograms per cubic meter (μ g/m³) to a level of 0.15 μ g/m³. In 2011 EPA designated a portion of Council Bluffs as nonattainment for the 2008 lead NAAQS. The Iowa Department of Natural Resources (DNR) submitted a plan to EPA in February 2015 that required the implementation of emission reductions and other control measures necessary to attain the lead standards as expeditiously as practicable.

To demonstrate attainment of the 2008 lead NAAQS, 36 consecutive 3-month rolling average lead concentrations must be less than or equal to $0.15 \ \mu g/m^3$. From January 2013 through December 2015 no 3-month rolling averages above the lead NAAQS were measured in Council Bluffs. The area's 2013-2015 lead design value is $0.13 \ \mu g/m^3$. This attains the NAAQS by the December 31, 2016, attainment deadline.

EPA can redesignate an area to attainment if all of the following conditions from Section 107(d)(3)(E) of the Clean Air Act (CAA) are met.

- 1. EPA determines that the area has attained the NAAQS.
- 2. EPA has fully approved the applicable implementation plan for the area under §110(k) of the CAA.
- 3. EPA determines that the improvement in air quality is due to permanent and enforceable emission reductions.
- 4. EPA has fully approved a maintenance plan for the area as meeting the requirements of CAA §175A.
- 5. The state has met all requirements applicable to the area under §110 and Part D of the CAA.

With this proposed State Implementation Plan (SIP) revision, the State of Iowa is submitting a request that the Council Bluffs lead nonattainment area be redesignated to attainment for the 2008 lead standard and that EPA approve the associated proposed maintenance plan.

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1. Introduction

On October 15, 2008, the U.S. Environmental Protection Agency (EPA) promulgated a revision to the primary and secondary lead (Pb) National Ambient Air Quality Standards (NAAQS), lowering the level established in 1978 by an order of magnitude, from 1.5 micrograms per cubic meter (μ g/m³) to 0.15 μ g/m³ (73 FR 66963, November 12, 2008). The averaging period was also revised, from a calendar quarter to a 3-month rolling average. To meet EPA's revised health standard no 3-month rolling average lead concentration within a consecutive three-year period may exceed 0.15 μ g/m³. Although a lead design value is based on three years of 3-month rolling averages, a single 3-month average over the standard constitutes a NAAQS violation because the form of the standard uses the maximum 3-month average and does not allow any exceedances.

Effective December 31, 2011, EPA designated a portion of Council Bluffs as nonattainment for the 2008 lead NAAQS (<u>76 FR 72097</u>; November 22, 2011).¹ The federal Clean Air Act (CAA) requires each state with a nonattainment area to submit a revision to their State Implementation Plan (SIP) detailing how the NAAQS will be attained as expeditiously as practicable.² Under CAA §192(a) the SIP revision must provide for attainment no later than 5 years after designation. The attainment deadline for the Council Bluffs lead nonattainment area is therefore no later than December 31, 2016.

The Iowa Department of Natural Resources (DNR) submitted the attainment plan to EPA on February 3, 2015.³ EPA proposed approval of the attainment plan on October 2, 2015 (<u>80 FR 59695</u>) and finalized approval of the plan on February 26, 2016 (<u>81 FR 9770</u>). Implementation of the plan's control measures has significantly reduced ambient lead concentrations in the area. The 2013-2015 lead design value for the area is 0.13 μ g/m³, which attains the 2008 lead NAAQS.

1.1. Purpose

The State of Iowa is seeking redesignation of the Council Bluffs lead nonattainment area to attainment for the 2008 lead NAAQS. EPA can redesignate an area to attainment if all of the following conditions from Section 107(d)(3)(E) of the CAA are met.

- 1. EPA determines that the area has attained the NAAQS.
- 2. EPA has fully approved the applicable implementation plan for the area under §110(k) of the CAA.
- 3. EPA determines that the improvement in air quality is due to permanent and enforceable emission reductions.
- 4. EPA has fully approved a maintenance plan for the area as meeting the requirements of CAA §175A.
- 5. The state has met all requirements applicable to the area under §110 and Part D of the CAA.

The purpose of this document is to address these conditions. This includes a proposed revision to the SIP through the submittal of a maintenance plan to satisfy the CAA §175A criteria. The maintenance plan provides for attainment of the 2008 lead NAAQS in Council Bluffs throughout the required planning horizon of 10 years after redesignation. The maintenance plan also includes contingency measures to promptly correct any lead NAAQS violations if they were to occur after redesignation.

¹ While the official definition of the nonattainment area in 40 CFR 81.316 references Pottawattamie County, the nonattainment area is commonly referred to as the Council Bluffs lead nonattainment area because it is located within the city limits of Council Bluffs.

² Such SIP revisions are often referred to as nonattainment SIPs or attainment plans.

³ Iowa DNR: *"State Implementation Plan, Lead Non-Attainment, Council Bluffs, Iowa,"* January 30, 2015. Available at: <u>http://www.iowadnr.gov/Environmental-Protection/Air-Quality/Implementation-Plans</u>

2. Nonattainment Area

In the 2008 lead NAAQS revisions (73 FR 66963, November 12, 2008) EPA included provisions to expand the ambient lead monitoring network by requiring sites near sources with lead emissions greater than 1.0 ton⁴ per year. A required source-oriented lead monitoring site began operating in Council Bluffs on November 3, 2009. The monitoring site (ID 19-155-0011)⁵ is located near the intersections of 8th Ave and S 27th St, approximately 250 feet north of Griffin Pipe Products Co., LLC (Griffin Pipe), as shown in Figure 2-1. In the following year (2010), six 3-month rolling averages above the 0.15 μ g/m³ level of the lead NAAQS were measured. The highest value, 0.26 μ g/m³, occurred with the August 2010 average. EPA subsequently designated a portion of Council Bluffs as nonattainment.



Figure 2-1. Location of the Griffin Pipe lead monitoring site (ID 19-155-0011) in Council Bluffs (left) and its position relative to Griffin Pipe (right).

The lead nonattainment area encompasses approximately 3.43 square miles within the city limits of Council Bluffs. Council Bluffs is located in western Pottawattamie County, borders the Missouri River, and is part of the Omaha (NE)–Council Bluffs (IA) metropolitan statistical area. The nonattainment area is roughly centered on the locations of the lead monitoring site and the two adjacent lead sources, Griffin Pipe and Alter Metal Recycling (see Figure 2-2). The legal definition of the nonattainment boundary is found in 40 CFR 81.316 as the: "Area bounded by Avenue G on the north, N 16th/S 16th street on the east, 23rd Avenue on the south, and N 35th/S 35th street on the west."

2.1. Affected Facilities

Griffin Pipe manufactures ductile iron pressure pipe for potable water transmission and wastewater collection. Lead present in the scrap metal is emitted when the scrap is melted in the cupola, when the molten metal is treated in the desulfurization and magnesium inoculation processes, and when the molten metal is cast into pipe. Lead is also emitted from the facility's haul roads when roadway silt containing lead becomes airborne due to vehicle traffic. Griffin Pipe is a major source under the Title V program.

Alter Metal Recycling is a scrap material processing facility located immediately south of Griffin Pipe. Haul roads are the facility's primary source of lead emissions. Alter Metal Recycling is a minor source. The approximate property boundaries of both facilities (based on data from <u>http://gis.pottcounty.com</u>) are shown in Figure 2-3.

⁴ EPA later reduced the lead emissions threshold from 1.0 to 0.50 tons per year (<u>75 FR 81126</u>, December 27, 2010).

⁵ In this document this site is referred to as either the Griffin Pipe or the Council Bluffs lead monitoring site.



Figure 2-2. Depiction of the Council Bluffs lead nonattainment area (bounded in green).



Figure 2-3. Approximate property boundaries of Griffin Pipe (blue) and Alter Metal Recycling (orange).

3. Attainment of the 2008 Lead NAAQS

For an area to be eligible for redesignation to attainment, CAA §107(d)(3)(E)(i) requires EPA to determine that the NAAQS have been attained. According to EPA's redesignations guidance⁶ there are two components to demonstrating that the NAAQS have been attained. First, the ambient air quality data used to demonstrate attainment should be the product of ambient monitoring that is representative of the area of highest concentration. The second component relies upon supplemental air quality modeling approved by EPA.

3.1. Ambient Lead Data

The source-oriented ambient lead monitoring site in Council Bluffs is located in a populated high impact area. Lead is measured in total suspended particulate (TSP) and concentrations are reported in local conditions. Ambient lead concentrations measured at this site were used in the nonattainment designation process and recent data are appropriate for use in redesignating the area to attainment. There are no additional ambient lead monitoring sites in the area.

According to 40 CFR 50, Appendix R, the 2008 lead NAAQS is met at a monitoring site when the identified design value is valid and is less than or equal to 0.15 μ g/m³. The design value is the site-level metric that is selected according to the procedures in Appendix R from among the valid three-month arithmetic mean concentrations for the 38-month period consisting of the most recent 3-year calendar period plus two previous months (*i.e.*, 36 3-month periods) using the last month of each 3-month period as the period of report.

Lead design values computed for the Council Bluffs site using data through 2015 are listed in Table 3-1. The 2013-2015 design value is $0.13 \ \mu g/m^3$, which meets the lead NAAQS. Thus the area has attained the 2008 lead NAAQS by its December 31, 2016, attainment deadline.

Table 3-1. Lead design values (μ g/m ³) at the Council Bluffs lead monitoring site (ID 19-155-0011).
Design values not meeting the NAAQS are indicated in red.

2010-2012	2010-2012 2011-2013		2013-2015	NAAQS Level	
0.26	0.20	0.20	0.13	0.15	

Since the form of the standard is based on the maximum 3-month rolling average across a three-year period, design values do not immediately respond to sudden and continuous improvements in air quality. The 2013-2015 lead design value yields an important improvement in ambient air quality but it still represents a 3-month rolling average from 2013. It does not yet reflect additional reductions that correspond with Alter Metal Recycling having transitioned to full implementation of their permanent and enforceable control measures in late 2014. An evaluation of the individual 3-month rolling averages is therefore warranted to provide a more thorough review in which recent air quality trends can be assessed.

The 3-month rolling averages from 2010-2015 are listed in Table 3-2 and plotted in Figure 3-1. Looking at the annual maximums, Figure 3-1 shows that a trend toward lower concentrations emerges after

⁶ U.S. EPA: "*Procedures for Processing Requests to Redesignate Areas to Attainment,"* Memorandum from John Calcagni, Director, Air Quality Management Division, September 4, 1992.

2012. The maximum 3-month rolling average lead concentration measured in 2015 (0.07 μ g/m³) is 65% lower than the 2012 annual maximum (0.20 μ g/m³) and is 46% lower than the 2013 maximum (which produced the 2013-2015 0.13 μ g/m³ design value).

In Figure 3-2 the 3-month rolling averages are plotted by month and again trends toward lower lead concentrations are evident, particularly during the summer and early fall months when the 3-month rolling average concentrations typically peak. In all but two cases the 2015 3-month rolling averages are the lowest among all other years. While January and February are the exceptions the winter months are not historically associated with lead NAAQS violations and are therefore less significant.

	monitoring site (ID 19-155-0011). NAAQS violations are in red.					
		3-Month R	olling Averag	e (Site ID 19	-155-0011)	
	2010	2011	2012	2013	2014	2015
January	0.10	0.05	0.08	0.09	0.03	0.07
February	0.03	0.03	0.05	0.07	0.03	0.05
March	0.07	0.07	0.07	0.05	0.05	0.03
April	0.12	0.07	0.07	0.05	0.06	0.04
Мау	0.14	0.11	0.10	0.05	0.06	0.05
June	0.17	0.10	0.10	0.07	0.05	0.05
July	0.20	0.14	0.14	0.09	0.06	0.04
August	0.26	0.12	0.18	0.13	0.07	0.05
September	0.24	0.09	0.19	0.12	0.09	0.07
October	0.25	0.08	0.20	0.10	0.10	0.07
November	0.18	0.09	0.16	0.05	0.10	0.05
December	0.14	0.10	0.14	0.04	0.10	0.02
Annual Max 3- Month Average	0.26	0.14	0.20	0.13	0.10	0.07

Table 3-2. Three-month rolling average lead concentrations measured at the Council Bluffs lead monitoring site (ID 19-155-0011). NAAQS violations are in red.

3.2. Dispersion Modeling

While not mandatory, EPA's redesignations guidance suggests that dispersion modeling based upon current conditions is generally necessary for lead redesignations in order to evaluate comprehensively sources' impacts and to determine the areas of expected high concentrations. Because the dispersion modeling conducted for the Council Bluffs attainment demonstration conforms to current EPA guidance and no significant changes in the modeling inputs have occurred since the lead nonattainment SIP was submitted to EPA in February 2015, new dispersion modeling is not necessary.⁷ The attainment modeling included both lead sources in the area (Griffin Pipe and Alter Scrap), all lead emissions were modeled at their current maximum allowable emission rates, the modeling conforms to current EPA guidance, and the meteorological data used encompassed a five year dataset (2008-2012) representative of current conditions.

⁷ A comprehensive review of the dispersion modeling inputs, methods, and results can be found in the Council Bluffs lead nonattainment SIP (*"State Implementation Plan, Lead Non-Attainment, Council Bluffs, Iowa,"* Iowa DNR, January 30, 2015) available at: <u>http://www.iowadnr.gov/Environmental-Protection/Air-Quality/Implementation-</u><u>Plans</u>. Specifically, see Chapter 6 *"Attainment Demonstration."*



Figure 3-1. Council Bluffs 3-month rolling average lead concentrations, January 2010 – December 2015.



Figure 3-2. Council Bluffs 3-month rolling average lead concentrations by month, 2010-2015.

4. Permanent and Enforceable Emission Reductions

To be eligible for redesignation an area attaining the NAAQS must demonstrate that the improvement in air quality is due to permanent and enforceable emission reductions. This is required by CAA \$107(d)(3)(E)(iii).

The Council Bluffs lead nonattainment SIP included Administrative Consent Order (ACO) number 2015-AQ-02 signed by the Iowa DNR and Griffin Pipe in January 2015, and air construction permit number 14-A-521 issued to Alter Metal Recycling on September 2, 2014.⁸ The ACO and the air construction permit have been approved into Iowa's SIP and they remain effective. They each require the implementation of control measures that permanently reduce emissions. The control measures incorporate emission limits, operating restrictions, and other enforceable conditions with schedules and timetables for compliance necessary for timely attainment of the 2008 lead NAAQS.

The ACO defines two independent strategies for Griffin Pipe, identified as Option A and Option B. Differences between Option A and Option B relate to the addition of a baghouse and several operational restrictions. A new baghouse is not required under Option A but Griffin Pipe must comply with other restrictions, such as limiting their melting operations to 1,250 hours in any 3-month rolling period and shipping certain materials only between 7 am to 5 pm. Option B eliminates those restrictions but requires a new baghouse and establishes a more stringent RACT limit to reduce emissions from roof vent EP-7B. Option A and Option B both require haul road sweeping and cleaning to control fugitive lead emissions. Haul road silt limits and minimum cleaning/sweeping requirements are designed to reduce haul road silt loading by no less than 95% under Option A and 90% under Option B. Both options require additional measures, such as a scrap management plan and best management practices (BMP) to minimize fugitive lead emissions. A comprehensive discussion of Griffin Pipe's two control strategies can be found in the lead nonattainment SIP.

Griffin Pipe must fully implement one of the two available control strategies when they resume operation. On May 3, 2014, Griffin Pipe idled melting operations, however, Griffin Pipe's emission limits and other constraints established in the ACO are permanent and enforceable.

Haul roads are the only significant lead source at Alter Metal Recycling. In air construction permit 14-A-521 the Iowa DNR established a RACT limit and minimum sweeping/cleaning requirements to reduce the silt loading on Alter Metal Recycling's haul roads by no less than 95%. Haul road sweeping at Alter Metal Recycling must be completed using a Tymco DST-6 or equivalent sweeper and sweeping must occur at least 3 times a week under normal circumstances. Alter Metal Recycling must also pave all their unpaved haul roads or discontinue their use. Additional conditions limit the shipping of material at the facility to between the hours of 5 am and 8 pm Monday through Friday, and 8 am to 12 pm on Saturday, with the total amount of material shipped not to exceed 946,000 tons per rolling 12-month period. Alter Metal Recycling is also required to implement BMP to minimize fugitive emissions, such as posting speed limit signs, cleaning on a weekly basis around truck scale areas and process buildings, and cleaning up spills of raw materials or product on the haul road surface as expeditiously as possible and in a manner consistent with good practice for minimizing emissions.

⁸ The Council Bluffs lead nonattainment SIP is available at: <u>http://www.iowadnr.gov/Environmental-</u> <u>Protection/Air-Quality/Implementation-Plans</u>

An inspection conducted on December 10, 2015, by DNR staff in Field Office 4 found that Alter Metal Recycling was fully implementing their permanent and enforceable control measures. All unpaved roads had been paved or their use discontinued as of November 17, 2014, and all paved roads were being swept/cleaned.⁹ These measures have substantially reduced lead emissions in the area and improved ambient air quality. The requirements of CAA §107(d)(3)(E)(iii) are therefore met because the improvements in air quality are reasonably attributable to permanent and enforceable emission reductions from Alter Metal Recycling.

⁹ The paving of haul road segments 7, 14, 15, and 16 was completed November 17, 2014. The use of unpaved road segment 17 stopped November 17, 2014. The road segment definitions can be found in the nonattainment SIP available at: <u>http://www.iowadnr.gov/Environmental-Protection/Air-Quality/Implementation-Plans</u>.

5. Clean Air Act §110(k), §110, and Part D Applicable Requirements

According to CAA 107(d)(3)(E)(ii) and (v) a redesignation request may not be promulgated unless EPA has fully approved the applicable implementation plan for the area under 10(k) and the state has meet all applicable requirements for the area under 100 and Part D of the CAA.

5.1. Section 110(k)

Clean Air Act section 110(k) addresses EPA actions on SIP submissions and discusses: SIP completeness; deadlines for EPA actions on SIPs; full, partial, and conditional SIP approval; SIP disapproval; and SIP corrections. An area cannot be redesignated if a required element of its plan is the subject of a disapproval; a finding of failure to submit or to implement the SIP; or partial, conditional, or limited approval. This does not mean that earlier issues with regard to the SIP will be reopened, as the SIP must be fully approved only with respect to applicable requirements.

All applicable SIP revisions for the Council Bluffs lead nonattainment area have been submitted to EPA only when they are anticipated to be fully approvable. The area is not subject to any disapprovals; failures to submit or implement the SIP; or partial, conditional, or limited approvals related to elements applicable to the nonattainment designation.

5.2. Section 110

Under sections 110(a)(1) and (2) of the CAA states are required to submit plans to provide for the implementation, maintenance, and enforcement of any new or revised NAAQS. Section 110(a) directs each state to submit the SIP revision to the EPA within 3 years of promulgation of a new or revised NAAQS. Section 110(a)(2) specifies the substantive elements that the SIP submission needs to address. Many of the elements listed in section 110(a)(2) relate to the general information and authorities that constitute the basic structural requirements for a SIP needed for an air agency's overall air quality management program to be effective. Such elements include having an ambient monitoring program, an enforcement program, air quality modeling capabilities, and adequate personnel, resources, and legal authority. Since these SIPs address basic air quality management infrastructure they are generally referred to as "Infrastructure SIPs."

The Iowa DNR submitted the Infrastructure SIP for the 2008 lead NAAQS on October 31, 2011. On August 14, 2015 (<u>80 FR 48791</u>) EPA proposed approval of Iowa's lead Infrastructure SIP and subsequently finalized their approval on November 2, 2015 (<u>80 FR 67335</u>). EPA concluded, based upon their review of the state's infrastructure SIP submissions and relevant statutory and regulatory authorities and provisions referenced in those submissions or referenced in Iowa's SIP, that Iowa's SIP met all applicable required elements of sections 110(a)(1) and (2) with respect to the 2008 lead NAAQS.

5.3. Part D

Subpart 1 of Part D of the CAA consists of general requirements applicable to all areas that are designated nonattainment. Subpart 5 of Part D contains additional requirements applicable to lead nonattainment areas. Section 172(c) identifies several key provisions that states must address in a nonattainment SIP submittal, including:

- Provisions for attainment and the timely implementation of all reasonably available control technology (RACT) and reasonably available control measure (RACM) (CAA §172(c)(1))
- Reasonable Further Progress (RFP) (CAA §172(c)(2))
- An emissions inventory for the nonattainment area (CAA §172(c)(3))

- Nonattainment new source review (CAA §172(c)(5))
- A control strategy with enforceable emissions limits and schedules and timetables for compliance as necessary to provide for attainment (CAA §172(c)(6))
- Contingency measures (CAA §172(c)(9))

The Iowa DNR submitted the Council Bluffs lead nonattainment SIP to EPA on February 3, 2015. It defined control measures for Griffin Pipe and Alter Metal Recycling that contained emissions limits, operating restrictions, and other enforceable conditions with methods, schedules, and timetables for compliance necessary to attain the 2008 lead NAAQS as expeditiously as practicable. The nonattainment SIP was designed to fulfill all applicable provisions in Part D, including the RACT/RACM provisions of CAA §172(c)(1), the RFP provisions of §172(c)(2), and the provisions of §172(c)(6). The DNR included contingency measures as required by CAA §172(c)(9)) and developed a current, comprehensive, and accurate lead emissions inventory for the nonattainment area.

In accordance with CAA §172(c)(5)) and §173 the DNR implements a nonattainment new source review (NA NSR) program that regulates the construction of any new major source or major modification in the area subject to NA NSR. On May 15, 2014 (79 FR 27763) EPA approved into Iowa's SIP the NA NSR regulations in 567 Iowa Administrative Code (IAC) Chapter 31. After redesignation implementation of the DNR's SIP-approved prevention of significant deterioration (PSD) program (567 IAC Chapter 33) will regulate the construction of any new major source or major modification in the area.

EPA proposed approval of the Council Bluffs lead nonattainment SIP on October 2, 2015 (<u>80 FR 59695</u>) and fully approved the plan on February 26, 2016 (<u>81 FR 9770</u>). EPA found that the revision met the substantive SIP requirements of the CAA, including part D, §110, and implementing regulations.

6. Maintenance Plan

Before redesignating an area to attainment CAA §107(d)(3)(E)(iv) stipulates that EPA must fully approve a maintenance plan for the area. This maintenance plan is designed to satisfy the requirements of CAA §175A and to be consistent with EPA's redesignations guidance by addressing the following elements:

Maintenance demonstration

Air quality monitoring commitment

- Attainment inventory
- Verification of continued attainment
- Contingency plan

6.1. Attainment Inventory

According to EPA's redesignations guidance states should develop an inventory of actual emissions to identify the level of emissions sufficient to attain the NAAQS. Using this approach in the Council Bluffs lead nonattainment area would not achieve the desired result. Instead, it would underestimate the level of emissions sufficient to attain the NAAQS because Griffin Pipe's emissions (starting in 2015) would be zero given that the facility idled operations in May 2014.¹⁰ Since the nonattainment SIP includes control measures that provide for both attainment and the continued operation of Griffin Pipe it is inappropriate to establish an attainment inventory that excludes Griffin Pipe.

In 2015 the maximum 3-month rolling average lead concentration was 0.07 μ g/m³. The attainment demonstration yielded a maximum modeled impact from Griffin Pipe of 0.073 μ g/m³. These sum to 0.143 μ g/m³ and thus suggest that Griffin Pipe can resume operation and ensure maintenance of the lead NAAQS by implementing, as required, one of their two available control strategies.

In this situation evaluating potential emissions, rather than actual emissions, is the more appropriate approach to addressing the attainment inventory. Building an inventory using maximum permitted allowable rates is consistent with the modeled attainment demonstration, equals the level of emissions that provide for attainment of the NAAQS, is unaffected by Griffin Pipe's idling, and is conservative.

Each facility's potential (maximum permitted allowable) lead emissions, in tons per year (tpy), are listed in Table 6-1.¹¹ Two values are given for Griffin Pipe, one for each control strategy (Options A and B). The potential lead emissions from each facility are substantially lower than their 2010 actual emissions. For Alter Metal Recycling this comparison yields a 92% reduction in lead emissions.

Facility (ID)	Current Potential to Emit (PTE) (tpy)	2010 Actual Emissions (tpy)	Current PTE vs 2010 Actuals (% change)	
Griffin Pipe (78-01-012)	Option A: 0.254	1.0382	-76%	
Gillin Pipe (78-01-012)	Option B: 0.392	1.0382	-62%	
Alter Metal Recycling (78-01-043)	0.061	0.7182	-92%	

Table 6-1. Current maximum permitted allowable lead emissions and 2010 baseyear actual emissions.

¹⁰ Although Griffin Pipe is currently idle, finished pipe produced elsewhere may be shipped and temporarily stored at the Council Bluffs plant before delivery to construction projects in the region. Haul road usage, and emissions, associated with these staging activities are trivial versus normal plant operations.

¹¹ No other meaningful lead emissions sources are known to exist in the area, therefore this inventory (of maximum permitted allowable emissions) is current and accurate.

6.2. Maintenance Demonstration

Maintenance of the NAAQS is generally demonstrated by showing that future lead emissions will not exceed the level of the attainment inventory or by modeling to show that the future mix of sources and emission rates will not cause a violation of the lead NAAQS. Regardless of the approach, the plan must demonstrate maintenance of the NAAQS for a period of 10 years following the redesignation.

Since the maintenance horizon is for 10 years following redesignation and not 10 years following the submittal of the maintenance SIP, time must be provided for EPA to review and approve the SIP revision and redesignation request. It is reasonable to provide EPA with 2 years¹² to accomplish those tasks, therefore this maintenance demonstration is through 2029.

Maintenance can be demonstrated using the attainment inventory since it is based on maximum permitted allowable emissions and the DNR does not anticipate that lead emissions will increase in the area over this timeframe. However, to demonstrate maintenance through 2029 the DNR is relying upon the modeled attainment demonstration submitted with the nonattainment SIP in February 2015. Dispersion modeling is a more sophisticated means of demonstrating maintenance because it incorporates meteorology, topography, and source characteristics in addition to permitted allowable emissions rates. The attainment demonstration modeling conforms to current EPA guidance, used maximum permitted allowable emission rates, no significant changes in the modeling inputs have occurred since its submittal, and no significant changes in the inputs are anticipated through 2029.

6.3. Verification of Continued Attainment

A state's submittal should indicate how progress of the maintenance plan will be tracked, regardless of whether the maintenance demonstration is based on modeling or a showing that future emission inventories will not exceed the attainment inventory.

The DNR will track progress of the plan by continuing to implement the SIP approved preconstruction permitting program and by ensuring that Griffin Pipe and Alter Metal Recycling comply with all their permanent and enforceable control measures.

On a case-by-case basis the DNR will evaluate and model the lead emissions from any relevant lead source that proposes to construct or alter equipment in the area. The construction of new or modified sources which may impact the maintenance of attainment is regulated by 567 IAC 22.3(1)"b," which requires that the expected emissions from the proposed source or modification, in conjunction with all other emissions, will not prevent the attainment or maintenance of the NAAQS. Paragraph 567 IAC 22.3(3)"f" allows the DNR to establish a more stringent emission standard and to require the installation of additional control equipment for portable equipment to ensure the attainment or maintenance of the NAAQS.

The DNR has a comprehensive program to identify sources of violations and to undertake aggressive follow-up for compliance and enforcement. DNR field inspectors have authority to conduct onsite inspections to review the compliance status of the facility (Iowa Code 455B.103(4)). Recordkeeping, reporting, and monitoring requirements established in ACO 2015-AQ-02 and construction permit 14-A-521 provide the DNR with a mechanism to ensure continued compliance on a source-specific basis.

¹² Clean Air Act section 107(d)(3)(D) grants the EPA up to 18 months from receipt of a complete submittal to process a redesignation request. This is rounded to 2 years.

Persons responsible for equipment are required to provide to the DNR information necessary to characterize emissions at the facility (567 IAC 21.1(3)). Facilities in the Title V operating permit program are required to identify instances of deviations from permit requirements in semi-annual reports to the DNR, including deviations attributable to upset conditions, the cause of the deviations, and any corrective actions or preventive measures taken (567 IAC 22.108(5)). In addition, facilities are required to report and take corrective action in response to incidences of excess emissions (567 IAC 24).

6.4. DNR Commitment to Ongoing Surveillance of Lead Impacts

The DNR commits to keep in operation a lead monitoring site as necessary to verify the attainment status of the area and will continue to work with the EPA through the air monitoring network review process, as required by 40 CFR Part 58, to determine the adequacy of the lead monitoring network and when monitoring can be discontinued.

6.5. Contingency Plan

Section 175A(d) of the CAA requires that maintenance plans include contingency provisions to promptly correct any violation of the NAAQS that occurs after redesignation of the area. The contingency plan ensures that the contingency measures are adopted expeditiously if they are triggered. Consistent with EPA guidance, a trigger has been established that will initiate a timely response to indications of a possible future violation of the lead NAAQS. Thus, actions may be taken that might avoid a violation and potential redesignation to nonattainment.

The DNR will evaluate the need for additional control measures if a 3-month rolling average lead concentration of 0.14 μ g/m³ (approximately 95% of the standard) or greater is measured at the ambient monitoring site in Council Bluffs. The DNR will require that any necessary measures be implemented as expeditiously as practicable. The DNR has the authority (Iowa Code 455B.134) to issue orders consistent with rules to cause the abatement or control of air pollution to ensure that the NAAQS are not violated.

It is not possible to fully develop an appropriate list of contingency measures or to specify implementation deadlines until the cause of the elevated levels is known and the appropriate response is identified. Contingency measures to be considered will be based on an analysis of the suspected cause of the elevated lead level. This analysis may require data collection activities and a reexamination of previous assumptions or conclusions. The DNR may request or conduct new or supplemental reviews of lead emissions from sources and activities affecting the nonattainment area. Contingency measures may include improvements in the applicable permitted control devices, additional haul road sweeping requirements, the addition of secondary control devices or improvements in housekeeping and maintenance, among other measures. Once determined, the DNR will submit to EPA an analysis to demonstrate the proposed measures are adequate to return the area to attainment.¹³

If a NAAQS violation occurs after redesignation, at a minimum the DNR will require the implementation of all measures, including the contingency measures, contained in the nonattainment plan for the area prior to the redesignation of the area to attainment. The nonattainment plan contingency measures for Griffin Pipe are specified in Conditions A-5.0 and B-5.0 in ACO 2015-AQ-02. The contingency measures for Alter Metal Recycling are specified in Condition 14.L in air construction permit 14-A-521. These contingency measures include, for example, additional haul road sweeping/cleaning requirements.

¹³ If a new measure is already required and scheduled to be implemented at the federal or state level, and that measure is determined to be sufficient to address the upward trend in air quality, additional local measures may be unnecessary.

7. Administrative Materials

The submittal of the maintenance plan, which is a revision to the SIP, complies with the procedural elements of Subpart F of 40 CFR 51 and the applicable criteria in Appendix V of 40 CFR 51, as discussed below.

7.1. Evidence of State Adoption

On August 15, 2017, the Iowa Environmental Protection Commission (EPC) approved this plan for submittal to EPA as a revision of the SIP to provide for maintenance of the 2008 lead NAAQS in Council Bluffs. The DNR followed all applicable procedural requirements of the state's laws and constitution in obtaining the adoption of this plan.

7.2. Necessary Legal Authority

The DNR is the regulatory agency with primary responsibility for outdoor air quality permitting and compliance activities in the State of Iowa. The DNR's authority is set forth in chapter 455B of the Iowa Code and implemented through 567 IAC Chapters 10 and 20-35, and 561 IAC Chapters 2 and 7. The DNR's permitting and compliance programs and associated rules have previously been approved by EPA as part of the Iowa's SIP.

The DNR has the necessary legal authority under state statute to adopt and implement this plan. Iowa Code section 455B.133(3) provides that the Iowa Environmental Protection Commission shall "adopt, amend, implement, or repeal emission limitations or standards for the atmosphere of this state on the basis of providing air quality necessary to protect the public health and welfare." The federal NAAQS for lead are adopted by reference at 567 IAC 28. Iowa Code section 455B.134(9) states that the duties of the director include "issu[ing] orders consistent with rules to cause the abatement or control of air pollution, or to secure compliance with permit conditions."

In combination with the DNR's existing legal authority and associated administrative regulations, this SIP revision is adequate to maintain the 2008 lead NAAQS in Council Bluffs.

7.3. Evidence of Public Notice & Public Hearing Certification

The DNR's public participation process used procedures to ensure that the requirements in 40 CFR 51.102 and Appendix V were met. Notice of the DNR's intention to revise the SIP was published on May 25, 2017, in *The Daily Nonpareil*. Proof of publication is included in Appendix A. The public comment period lasted 34 days, starting on May 25, 2017, and ending on June 27, 2017. A public hearing was held on June 27, 2017, at the Council Bluffs Public Library.

7.4. Submittal Letter

A formal letter of submittal from the Governor of the State of Iowa requesting EPA approval of the proposed revision to Iowa's SIP is included with this SIP submittal.

8. Response to Comments

No comments were provided during the public hearing and no written comments were received during the public comment period.

Appendix A. Proof of Publication

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PROOF OF PUBLICATION

STATE OF IOWA POTTAWATTAMIE COUNTY

I, Amy McKay, on my oath do solemnly swear that I am the Controller of the COUNCIL BLUFFS DAILY NONPAREIL, a newspaper issued DAILY and printed in said county, COUNCIL BLUFFS, IOWA.

The attached notice was published in said newspaper for 1 consecutive time(s) as follows:

The first publication thereof began on the 25th day of May, 2017

Signed in my presence by the said Amy McKay and by her sworn to before me this 25th day of May, A.D. 2017.

1 mg

Amy McKay Daily Nonpareil Controller

Jeannett Johnson Notary Public



Customer Number: 50002790 Order Number: 20432523

RECEIVED

JUN 0 2 2017

IDNR AIR QUALITY

Filed this 25th day of May, A.D. 2017. Publication Cost: \$ 55.93

Public Notice Iown Department of Matural Resources The Iown Department of Matural Resources (DNR) is requesting public comment into a second second second public comment on the State of Iowys's Mediag-nance Plan for the lead nonstrainment area in Council Bluffs as monstrainment area in Council Bluffs as monstrainment because lead concentrations measured in the wird of on meet the 2008 federal health standard for lead. The DNR collaborated with the lead-anriting avortes in the nonattainment area and eir politicitor control measures were developed and implemented. Ambi-erst lad concentrations measured in Council Bluffs now meet the federal standard. The Maintenance Plan is designed to ensure that the deva wild con-tinue to staim and maintain the indereal lead health standard. The State will ask EPA to approve the Maintenance Plan is are sit of the state will also ask EPA to redesignate the erase to attainment.

An electronic copy of the Maintenance Plan may be viewed at <u>http://www.iowadm.gov/Environmental-</u> Protection/Ni-Calath/Solitedpide-insolvement, un-der the Public Ingut saction of the page in the crea tilded Council Billifs Lead Maintenance Plan. A copy of the document may elso be viewed at the Council Billifs Public Library, located at 400 Willow Ava, Council Billifs, Public Library, Josetad at 400 Willow Ava, Council Billifs, Iowa, 51503.

Any person may make written comments on the pro-posed Marianaence Plan on or before June 27, 2017. Written comments should be directed to Mattine Johnson, Department of Natural Resources, Air Luaity Bureau, 7900 Hickman Raad, Subie 1, Wind-son Heights, Jowa, 50324, by fax at 15/572-5601; or by electronic mell to <u>mattinewyohnson@dnráowa</u>, env. gov.

R2X. In the second action notice is hereby given of proposed permitting action by the DNR in response to an air yuality construction permit application submitted by Alark Metal Recycling, located at 2603 Sin Ave, Council Bluffs, Iowa, 51571. The application is dentified as project 17-383. The proposed permitting action is the issuence of a modification to an air oraitration permit to reduce the fragmency of sit sampling from a monthly is a quartery lead the modification set. The modification because the emission. The DNM intercess petmotic lised emission. The DNM interces a cabout the

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permitting action he inclusion in the SIP. For preject 17-188 en electronic copy of all the materials the applicant has submitted, the proposed permit, the Fact Sheet (Technical Support Document), the application, and all other correspondence are available for public inspection on the Air Quality Bursau website at <u>https://programs.iova/anr.gov/anruality/constructionper-mits/?agestPublic/comment/coextant.gov/anruality/constructionper-mits/?agestPublic/comment/coextant.gov/anruality/constructionper-mits/?agestPublic/comment/coextant.gov/anruality/constructionper-mits/?agestPublic/comment/coextant.gov/anruality/constructionper-mits/?agestPublic/comment/coextant.gov/anruality/constructionper-mits/?agestPublic/comment/coextant.gov/anruality/constructionper-mits/?agestPublic/comment/coextant.gov/anruality/agestPublic/ mspection et lists/joiva/stoffs/coextant.gov/anruality/agestPublic/ encode Bluffs/cov/anruality/stoffs/coextant.gov/anruality/agestPublic/ encode Bluffs/cov/anruality/stoffs/coextant.gov/anruality/agestPublic/ encode Bluffs/cov/anruality/stoffs/coextant.gov/anruality/agestPublic/ encode Bluffs/cov/anruality/stoffs/coextant.gov/anruality/agestPublic/ encode Bluffs/cov/anruality/stoffs/coextant.gov/anruality/agestPublic/ encode Bluffs/cov/anruality/stoffs/coextant.gov/anruality/agestPublic/ encode Bluffs/cov/agestPublic/ encode </u>

Any parson may make written comments on the pro-posed permitting action on or before June 27, 2017. Written comments on the permitting action may be directed to Shawn Corbin, Department of Nature, Resources, Arr. Quality Bureau, 1900 Hickman Read, Suite J, Windsor Heights, Iowa, 50324; by fax at 515-725-950; or by electronic mail to Shawn.Corbin@dir.lowa.goz

A public hearing addressing both actions will be held on June 27, 2017, at 10:30 a.m. at the Council Bluffs Public Library, located at 400 Willow Ave, Council Bluffs, Iowa, 51503.

Any person who intends to attend the public hearing and has special requirements such as those related to hearing or mobility impairment should contact Mathew Johason at 515-725-6554 or by electronic mell to <u>matthewiphnson@dnriove.dov</u>.

A responsiveness summary for each action will be prepared by the DNR following the close of the pub-lic comment periods. The responsiveness summary will include any written or orel comments received during the public participation process and the DNR's response to the comments. The completed responsiveness summaries will be forwarded to EPA and made available to the public upon request. 2017(5)/25-1 Thursday