



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

SEP 30 2010

REPLY TO THE ATTENTION OF:
AE-17J

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Mike Chenoweth, Operations Manager
Imperial Aluminum, LLC
217 Roosevelt Street
Minerva, Ohio 44657

Dear Mr. Chenoweth:

This is to advise you that the U.S. Environmental Protection Agency finds that the Imperial Aluminum, LLC (Imperial) facility at 217 Roosevelt Street, Minerva, Ohio is in violation of the Clean Air Act (the Act) and associated state pollution control requirements. A list of the requirements violated is provided below. Today, we are issuing to you a Notice of Violation and Finding of Violation (NOV/FOV).

The Act requires major sources of hazardous air pollutant (HAP) emissions to obtain a Title V permit to protect the public health and welfare. A major HAP source is a source with the potential to emit (PTE) 10 tons of a single HAP or 25 tons of combined HAPs. A Title V permit is a legally-enforceable document designed to improve compliance by clarifying a source must do to control air pollution.

The Act also requires the development of standards for emissions of HAPs, called National Emission Standards for Hazardous Air Pollutants (NESHAPs). The purpose of the NESHAPs is to reduce HAPs, including certain metals, organics such as dioxin and furans and acid gases such as hydrogen fluoride, which pose a threat to human health. The Secondary Aluminum Production NESHAP sets forth requirements to minimize emission of HAPs, including dioxin and furans.

The Act requires the development of Primary and Secondary National Ambient Air Quality Standards to protect public health and welfare. To attain and maintain these standards, each State is required to develop an implementation plan. Ohio's State Implementation Plan (Ohio SIP) includes the following requirement:

The Ohio Environmental Protection Agency issues Permits to Operate with terms and conditions as needed to protect human health and ensure compliance with air pollution control laws. Among other things, the purpose of these terms and conditions are to limit emission of dioxin and furans, which are life-threatening carcinogens and mutagens.

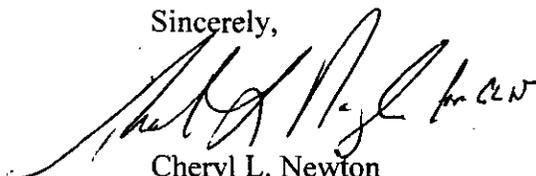
EPA finds that the Imperial facility has violated the above-listed federal and state requirements. Additionally, in violating the Ohio SIP requirements and requirements of your Permits to Operate, you have violated Title I of the CAA and its implementing regulations, which require compliance with the terms and conditions of the Ohio SIP and permits to install.

Section 113 of the CAA gives us several enforcement options to resolve these violations. These options include: issuing an administrative compliance order, issuing an administrative penalty order and bringing a judicial civil or criminal action.

We are offering you an opportunity to confer with us about the violations alleged in the NOV/FOV. The conference will give you the opportunity to present information on the identified violations, any efforts you have taken to return to compliance and the steps you will take to prevent future violations. Please plan for your facility's technical and management personnel to take part in these discussions. You may also have an attorney represent and accompany you at this conference.

The EPA contact in this matter is Michele Regan. You may call her at (312) 353-1377 if you wish to request a conference. You should request a conference within 10 days following your receipt of this notice. We should hold any conference within 30 days following your receipt of this notice. EPA hopes that this NOV/FOV will encourage Imperial's compliance with the requirements of the Clean Air Act.

Sincerely,

A handwritten signature in black ink, appearing to read 'Cheryl L. Newton', with a stylized flourish at the end.

Cheryl L. Newton
Director
Air and Radiation Division

**United States Environmental Protection Agency
Region 5**

IN THE MATTER OF:)	
)	
Imperial Aluminum, LLC)	NOTICE OF VIOLATION and
Minerva, Ohio)	FINDING OF VIOLATION
)	
)	EPA-5-10-OH-30
Proceedings Pursuant to)	
the Clean Air Act,)	
42 U.S.C. §§ 7401 <i>et seq.</i>)	

NOTICE AND FINDING OF VIOLATION

Imperial Aluminum, LLC (Imperial) owns and operates a secondary aluminum smelter at 217 Roosevelt Street, Minerva, Ohio (facility) with four permitted emission units. The emission units are: P010, reverb furnace; P006, rotary furnace; P004, rotary furnace; and P009, thermal chip dryer.

The U.S. Environmental Protection Agency is sending this Notice of Violation (NOV) and Finding of Violation (FOV) to notify you that we have found that Imperial is violating the Clean Air Act (Act), including Title V, the National Emission Standards for Hazardous Air Pollutants (NESHAP) for Secondary Aluminum Production at 40 C.F.R. Part 63, Subpart RRR, the Ohio State Implementation Plan (SIP), and requirements of its facility operating permits.

I. STATUTORY BACKGROUND

A. Title V

1. Section 502(a) of the Act, 42 U.S.C. § 7661a(a) and 40 C.F.R. § 70.7(b) provide that, after the effective date of any permit program approved or promulgated under Title V of the Act, no source subject to Title V may operate except in compliance with a Title V permit.
2. A “major source” means any stationary source or group of stationary sources located within a contiguous area and under common control that emits or has the potential to emit, 10 tons per year or more of any hazardous air pollutant. 42 U.S.C. § 7412(a)(1); 40 C.F.R. § 70.2.
3. A “stationary source” means any building, structure, facility or installation which emits or may emit any air pollutant. 42 U.S.C. § 7412(a)(3); 40 C.F.R. § 70.2.
4. Hydrogen fluoride is a “hazardous air pollutant” as defined by 42 U.S.C. § 7412(a)(6).

5. 40 C.F.R. § 70.5(a) requires an owner or operator of a major source submit a timely and complete Title V permit.

B. Ohio SIP and Permit to Operate Requirements

6. On July 12, 1982, EPA approved Ohio Administrative Code (OAC) rule 3745-35-02(D) as part of the federally enforceable SIP for Ohio. 47 Fed.Reg. 25145.
7. OAC rule 3745-35-02(D)(6) allows the Ohio Environmental Protection Agency (Ohio EPA) to issue Permits to Operate (PTO) with terms and conditions as necessary to ensure compliance with applicable air pollution control law.
8. 40 C.F.R. § 52.23 allows EPA to take enforcement action under Section 113 of the Act, 42 U.S.C. § 7413, when a person fails to comply with any permit limitation or condition contained within an operating permit issued under a SIP-approved permit program.
9. PTO P0084263 for emission unit P006 (issued August 29, 2007) Section II-B-3 requires the permittee maintain the total reactive flux injection rate at or below the average rate established during the performance test.
10. PTO P0084265 for emission unit P004 (issued August 29, 2007) Section II-B-3 requires the permittee maintain the total reactive flux injection rate at or below the average rate established during the performance test.
11. PTO P0084262 for emission unit P010 (issued August 29, 2007) Section II-B-3 requires the permittee maintain the total reactive flux injection rate at or below the average rate established during the performance test.

C. NESHAP for Secondary Aluminum Production Requirements

12. Under Section 112 of the Act, 42 U.S.C. § 7412, the Administrator of EPA promulgated the NESHAP for Secondary Aluminum Production at 40 C.F.R. Part 63, Subpart RRR; 40 C.F.R. § 63.1500 *et seq.*
13. An “affected source,” as defined at 40 C.F.R. § 63.2, means, among other things, the collection of equipment, activities, or both within a single contiguous area and under common control that is included in the secondary aluminum production source category.
14. A “group 1 furnace,” as defined at 40 C.F.R. § 63.1503, means a furnace of any design that melts, holds, or processes aluminum that contains paint, lubricants, coatings, or other foreign materials with or without reactive fluxing, or processes clean charge with reactive fluxing.

15. "Reactive fluxing," as defined at 40 C.F.R. § 63.1503, means the use of any gas, liquid, or solid flux (other than cover flux) that results in a HAP emission.
16. "Cover flux," as defined at 40 C.F.R. § 63.1503, means salt added to the surface of molten aluminum in a group 1, without agitation of the molten aluminum, for the purpose of preventing oxidation.
17. "Thermal chip dryer," as defined at 40 C.F.R. § 63.1503, means a device that uses heat to evaporate oil or oil/water mixtures from unpainted/uncoated aluminum chips. Pre-heating boxes or other dryers which are used solely to remove water from aluminum scrap are not considered to be thermal chip dryers for purposes of this subpart.
18. Pursuant to 40 C.F.R. § 63.1501, the owner or operator of an existing affected source must comply with the requirements of Subpart RRR by March 24, 2003; and the owner or operator of a new affected source that commences construction or reconstruction after February 11, 1999, must comply with the requirements by March 24, 2000, or upon startup, whichever is later.
19. 40 C.F.R. § 63.1506(a) requires the owner or operator to operate all new and existing affected sources and control equipment according to the requirements in 40 C.F.R. § 63.1506.
20. 40 C.F.R. § 63.1510(b) requires the owner or operator prepare and implement for each new or existing affected source and emission unit, a written operation, maintenance, and monitoring (OM&M) plan. The owner or operator must comply with all of the provisions of the OM&M plan as submitted to the permitting authority, unless and until the plan is revised in accordance with procedures outlined in 40 C.F.R. § 63.1510(b).
21. 40 C.F.R. § 63.1506(c)(3) requires the owner or operator of an affected source or emission unit equipped with an add-on air pollution control device, operate each capture/collection system according to the procedures and requirements in the OM&M plan.
22. 40 C.F.R. § 63.1510(f) requires that each owner or operator of an affected source or emission unit using a fabric filter or lime-injected fabric filter to comply with the requirements of Subpart RRR must install, calibrate, maintain, and continuously operate a bag leak detection system.
23. 40 C.F.R. § 63.1511(b) requires each owner or operator demonstrate initial compliance with each applicable emission, equipment, work practice, or operational standard for each affected source and emission unit.

24. 40 C.F.R. § 63.1511(b)(1) requires the owner or operator conduct each test while the affected source or emission unit is operating at the highest production level with charge materials representative of the range of materials processed by the unit and, if applicable, at the highest reactive fluxing rate.
25. 40 C.F.R. § 63.1511(f) allows with the prior approval of the permitting authority, an owner or operator to utilize emission rates obtained by testing a particular type of group 1 furnace which is not controlled by any add-on control device to determine the emission rate for other units of the same type at the same facility.
26. 40 C.F.R. § 63.1511(g) requires an owner or operator to establish a minimum or maximum operating parameter value, or an operating parameter range for each parameter to be monitored that ensures compliance with the applicable emission limit or standard. The owner or operator may use existing data in addition to the results of performance tests to establish operating parameter values for compliance monitoring.
27. 40 C.F.R. § 63.1517(b)(5) requires each owner or operator of an affected group 1 furnace record 15-minute block average weights of gaseous or liquid reactive flux injection, total reactive flux injection rate and calculations (including records of the identity, composition, and weight of each addition of gaseous, liquid or solid reactive flux), including records of any period the rate exceeds the compliant operating parameter value and corrective action taken.
28. 40 C.F.R. § 63.1518 states that the requirements of the general provisions in 40 C.F.R. Part 63, Subpart A that are applicable to the owner or operator subject to 40 C.F.R. Part 63, Subpart RRR are shown in Appendix A to 40 C.F.R. Part 63, Subpart RRR.
29. 40 CFR § 63.1506(c)(1) requires each affected source to design and install a system for the capture and collection of emissions to meet the engineering standards for minimum exhaust rates as published by the American Conference of Governmental Industrial Hygienists in chapters 3 and 5 of "Industrial Ventilation: A Manual of Recommended Practice" (incorporated by reference in 40 C.F.R. § 63.1502 of this subpart).
30. 40 C.F.R. § 63.1510(d)(2) requires each affected source to inspect each capture and collection system at least once each calendar year to ensure that each system is operating in accordance with the operating requirements in § 63.1506(c) and record the results of each inspection.
31. 40 C.F.R. § 63.6(e)(1)(i) requires that at all times, including periods of startup, shutdown, and malfunction, the owner or operator must operate and maintain any affected source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions.

II. FACTUAL BACKGROUND

32. Since June 2, 2009, Imperial Aluminum, LLC (Imperial) has owned and operated a secondary aluminum production facility at 217 Roosevelt Street, Minerva, Ohio. Imperial uses aluminum scrap and dross in its aluminum production processes.
33. Imperial owns and operates the following emissions sources at its Minerva, Ohio facility:
 - a. Tilting rotary furnace P004
 - b. Tilting rotary furnace P006
 - c. Reverberatory furnace P010
 - d. Thermal chip dryer P009
34. Imperial's facility is an emission source subject to the requirements of the Act, including 40 C.F.R. Part 63, Subpart RRR.
35. The facility is permitted as an "area source" as defined at 40 C.F.R. § 63.2.
36. The facility's potential to emit (PTE) hydrogen fluoride is greater than 10 tons per year.
37. The facility does not have a federally enforceable state operating permit to limit emission of hydrogen fluoride.
38. Imperial's furnaces P004, P006 and P010 are "group 1 furnaces," as defined at 40 C.F.R. § 63.1503. The group 1 furnaces use an aluminum fluoride reactive flux to reduce the amount of magnesium in the product.
39. Imperial's furnaces P004, P006 and P010 are equipped with a "fabric filter" and use "lime-injection" as those terms are defined at 40 C.F.R. § 63.1503.
40. Imperial's thermal chip dryer P009 is a "thermal chip dryer" as defined at 40 C.F.R. § 63.1503.
41. The maximum allowable reactive flux injection rate for P006, as established through performance testing of P006 conducted on September 22-23, 2004, and written in the operation, maintenance and monitoring (OM&M) plan (4th Revision, May 2007, Section 9.6) is 125 lbs/hr (based on 2,084 lbs/hr cover flux with 2-6% aluminum fluoride in the cover flux, $2,084 \text{ lbs/hr} \times 6\% = 125 \text{ lbs/hr}$).

42. The maximum allowable reactive flux injection rate for P004, as established through performance testing of P006 conducted on September 22-23, 2004, and written in the OM&M plan (4th Revision, May 2007, Section 9.6) is 125 lbs/hr (based on 2,084 lbs/hr cover flux with 2-6% aluminum fluoride in the cover flux).
43. The maximum allowable reactive flux injection rate for P010, as established through performance testing of P010 conducted on September 29-October 1, 2004, and written in the OM&M plan (4th Revision, May 2007, Section 9.6) is 31 lbs/hr for reverberatory furnace P010 (based on 510 lbs/hr cover flux with 2-6% aluminum fluoride in the cover flux, $510 \text{ lbs/hr} \times 6\% = 31 \text{ lbs/hr}$).
44. Imperial uses three, aluminum fluoride-based, reactive fluxes.
 - a. bath cryolite, 70-90% cryolite by weight (cryolite = NaAlF_6)
 - b. sodium aluminum fluoride ("SAF"), 75-85% cryolite and 5-10% chiolite ($\text{Na}_5\text{Al}_3\text{F}_{14}$) by weight
 - c. sodium aluminum tetrafluoride, 95-97% sodium aluminum tetrafluoride (NaAlF_4)
45. Imperial used chlorine reactive flux during calendar year 2009 and calcium chloride reactive flux during calendar year 2010.
46. The allowable pressure drop for baghouses, as specified in the OM&M plan (4th Revision, May 2007) Section 9.2, is as follows:
 - a. 1-9 inches of water for Haberny baghouse No.1 (controlling rotary tilting furnace P004)
 - b. 2-7 inches of water for Haberny baghouse No.2 (controlling thermal chip dryer P009)
 - c. 4-12 inches of water for Sly baghouse No. 1 (controlling rotary tilting furnace P006)
 - d. 4-12 inches of water for Sly baghouse No. 2 (controlling reverberatory furnace P010)
47. The OM&M plan (4th Revision, May 2007) Section 13.0 states pressure drop ranges above or below the accepted range is a parameter deviation warranting a corrective action.
48. The OM&M plan (4th Revision, May 2007) Section 13.1.2 requires a report be kept whenever a deviation occurs, and all reports be submitted to Ohio Environmental Protection Agency as attachments to quarterly deviation reports.

49. Part II-D-3 of each PTO requires that Imperial submit semi-annual excursion reports to Ohio EPA within 60 days of the end of each six month reporting period. The six month reporting periods are January 1 to June 30, and July 1 to December 31.
50. Imperial has asserted “we do not have any instances where the 1-hour block exceeded permitted amounts for total reactive flux used in the mixture.” (114 Response submitted by Imperial and dated August 23, 2010)
51. In its second quarter report 2009, dated July 30, 2009, and submitted to the Ohio Environmental Protection Agency, Imperial stated, “Imperial Aluminum – Minerva LLC is submitting this 2009 2nd quarter report for Aluminum One. The assets for the facility formally known as Aluminum One were acquired through Bankruptcy Case No. 08-64058 by Imperial Zinc Corp...” Imperial reported no deviations in its July 30, 2009, second quarter report.
52. In its third quarter report 2009, dated October 27, 2009, and submitted to the Ohio Environmental Protection Agency, Imperial reported no deviations or excursions.
53. In its fourth quarter report 2009, dated January 14, 2010, and submitted to the Ohio Environmental Protection Agency, Imperial reported no deviations or excursions.
54. In its first quarter report 2010, dated April 27, 2010, and submitted to the Ohio Environmental Protection Agency, Imperial reported no deviations or excursions.
55. In its second quarter report 2010, dated July 20, 2010, and submitted to the Ohio Environmental Protection Agency, Imperial reported no deviations or excursions.
56. In its semi-annual excess emissions/summary report and annual compliance certification dated January 14, 2010, and submitted to Ohio EPA, Imperial reported no deviations or excursions.
57. In its semi-annual excess emissions/summary report and annual compliance certification dated August 31, 2010, and submitted to Ohio EPA, Imperial reported no deviations or excursions.

III. VIOLATIONS

A. Title V Violations

58. From June 2, 2009, through the present, Imperial failed to apply for a Title V Permit.

B. NESHAP for Secondary Aluminum Production Violations

59. From June 2, 2009, through the present, Imperial failed to establish a reactive flux injection rate for rotary tilt furnace P004. Pursuant to the NESHAP, at 40 C.F.R. § 63.1511(g), the reactive flux injection rate established for rotary tilt furnace P006 cannot be applied to P004 because P006 is a Group 1 furnace with an add-on control device.
60. From June 2, 2009, through the present, Imperial failed to performance test rotary tilt furnace P004, rotary tilt furnace P006 and reverb P010 for dioxin and furans (D/F), hydrochloric acid (HCl) and particulate matter (PM) emissions, according to the requirements of 40 C.F.R. § 63.1511(b)(1). Imperial failed to conduct each test while each affected emission unit operated at the highest production level with the highest reactive fluxing rate. Since the facility is a major source based on its potential to emit hydrogen fluoride, the facility is required to test for D/F, HCl and PM.
61. During calendar year 2009 and 2010, Imperial used chlorine and calcium chloride, respectively, and did not record 15-minute block average weights of gaseous or liquid reactive flux injection, in violation of 40 C.F.R. § 63.1517(b)(5).
62. From January 1 through July 31, 2010, Imperial's baghouse data recorders for rotary tilt furnace P004 (Haberny baghouse No.1) recorded 31 days with pressure drop deviations, in violation of its OM&M plan and 40 C.F.R. § 63.1510(b).
63. From January 1 through July 31, 2010, Imperial's baghouse data recorders for rotary tilt furnace P006 (Sly baghouse No. 1) recorded 121 days with pressure drop deviations, in violation of its OM&M plan and 40 C.F.R. § 63.1510(b).
64. From January 1 through July 31, 2010, Imperial's baghouse data recorders for reverberatory furnace P010 (Sly baghouse No. 2) recorded 135 days with pressure drop deviations, in violation of its OM&M plan and 40 C.F.R. § 63.1510(b).
65. From January 1 through July 31, 2010, Imperial's baghouse data recorders for thermal chip dryer P009 (Haberny baghouse No. 2) recorded 24 days with pressure drop deviations, in violation of its OM&M plan and 40 C.F.R. § 63.1510(b).
66. From January 1 through July 31, 2010, Imperial's bag leak detection monitors failed on more than 311 occasions allowing bag leaks not to be detected or recorded at thermal chip dryer P009, rotary tilt furnace P004, rotary tilt furnace P006 and reverberatory furnace P010, in violation of 40 C.F.R. § 63.1510(f).
67. From July 30, 2009, through July 20, 2010, Imperial failed to accurately report its deviations in its quarterly deviation reports in violation of its OM&M Plan and 40 C.F.R. § 63.1510(b).

C. Ohio State Implementation Plan and Permit to Operate Violations

68. From June 2, 2009, through July 31, 2010, Imperial's heat summary sheets recorded 370 instances of average reactive flux injection rates greater than:

- a. 125 lbs/hr for rotary tilt furnace P004 and rotary tilt furnace P006; and
- b. 31 lbs/hr for reverberatory furnace P010

in violation of reactive flux injection rates established in PTOs P0084262, P0084263 and P0084265, Imperial's OM&M Plan and 40 C.F.R. § 63.1510(b)

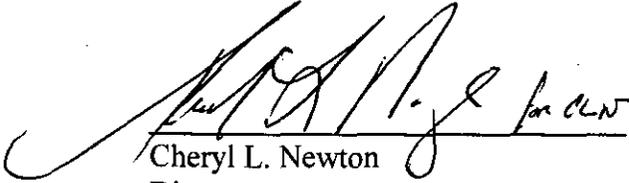
69. In its January 14, 2010, semi-annual excursion report, Imperial failed to report baghouse pressure drop deviations and reactive flux injection rate deviations, in violation of its PTOs P0084262, P0084263, P0084265 and P0084266.

70. In its August 31, 2010, semi-annual excursion report, Imperial failed to report baghouse pressure drop deviations and reactive flux injection rate deviations, in violation of its PTOs P0084262, P0084263, P0084265 and P0084266.

Environmental Impact of Violations

71. Excess emissions of dioxin and furans increases public exposure to potentially life-threatening mutagens and carcinogens. Additionally, long-term exposure to dioxin has been linked to many health problems, including birth defects, inability to maintain pregnancy, decreased fertility, reduced sperm counts, endometriosis, diabetes, learning disabilities, immune system suppression, lung problems, skin disorders and lowered testosterone levels.

9/30/2010
Date


Cheryl L. Newton
Director
Air and Radiation Division

CERTIFICATE OF MAILING

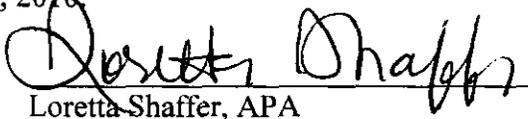
I, Loretta Shaffer, certify that I sent a Notice and Finding of Violation, No. EPA-5-10-OH-30, by Certified Mail, Return Receipt Requested, to:

Mike Chenoweth, Operations Manager
Imperial Aluminum
217 Roosevelt Street
Minerva, Ohio 44657

I also certify that I sent copies of the Notice of Violation and Finding of Violation by first class mail to:

Ed Fasko, APC Manager
Ohio Environmental Protection Agency
Northeast District Office
2110 E. Aurora Road
Twinsburg, Ohio 44087

on the 30 day of Sept, 2018


Loretta Shaffer, APA
AECAS, MN/OH

CERTIFIED MAIL RECEIPT NUMBER: 7001 0320 0006 0192 0317