



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

FEB 21 2014

REPLY TO THE ATTENTION OF:

**CERTIFIED MAIL**  
**RETURN RECEIPT REQUESTED**

James Kochevar  
General Manager  
Tilden Mining Company, L.C.  
1 Tilden Mine Road  
Ishpeming, Michigan 49849-0901

**Re: Notice of Violation and Finding of Violation**  
Tilden Mining Company, L.C.  
Ishpeming, Michigan

Dear Mr. Kochevar,

The U.S. Environmental Protection Agency is issuing the enclosed Notice of Violation and Finding of Violation (NOV/FOV) to Tilden Mining Company, L.C. (Tilden). We find that Tilden is in violation of the Clean Air Act (CAA), Section 112, 42 U.S.C. § 7412, and associated state or local pollution control requirements at your Ishpeming, Michigan facility.

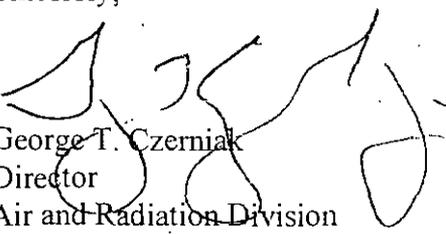
We have several enforcement options under Section 113(a) of the CAA, 42 U.S.C. § 7413(a). These options include issuing an administrative compliance order, issuing an administrative penalty order and bringing a judicial civil or criminal action.

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 specific findings of violation, the efforts you have taken to comply, and the steps you will take to prevent future violations.

Please plan for your facility's technical and management personnel to attend the conference to discuss compliance measures and commitments. You may have an attorney represent you at this conference.

The EPA contact in this matter is Jeffrey Gahr. You may call him at (312) 886-6794 to request a conference. You should make the request within 10 calendar days following receipt of this letter. We should hold any conference within 30 calendar days following receipt of this letter.

Sincerely,



George T. Czerniak  
Director  
Air and Radiation Division

cc: Tom Hess, Enforcement Unit supervisor  
Michigan Department of Environmental Quality  
Air Quality Division  
P.O. Box 30260  
Lansing, Michigan 48909

Chris Hare, District Supervisor  
Michigan Department of Environmental Quality  
Saginaw Bay District Office  
401 Ketchum Street  
Bay City, Michigan 48708

Scott Gischia, Director  
Environmental Compliance  
US Iron Ore Operations  
Cliffs Natural Resources, Inc.  
227 West 1st Street, Suite 500  
Duluth, Minnesota 55802

Enclosure

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION 5

IN THE MATTER OF:

Tilden Mining Company, L.C.  
Ishpeming, Michigan

Proceedings Pursuant to  
the Clean Air Act  
42 U.S.C. § 7401 *et seq.*

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NOTICE OF VIOLATION and  
FINDING OF VIOLATION

EPA-5-14-MI-01

**NOTICE AND FINDING OF VIOLATION**

Tilden Mining Company, L.C. (Tilden) owns and operates a taconite iron ore processing plant at 1 Tilden Mine Road, Ishpeming, Michigan (the "facility"). Tilden operates at least 19 scrubbers to control emissions from material processing and handling operations and two indurating furnaces with associated dry electrostatic precipitators at the facility.

The U.S. Environmental Protection Agency is sending this Notice of Violation and Finding of Violation (NOV/FOV or "Notice") to notify you that we have found opacity limits in excess of the limits specified in your Title V permit, Permit to Install, and the Michigan State Implementation Plan (SIP). These exceedances constitute violations of the Clean Air Act ("the Act" or CAA). We have also found violations of the National Emission Standards for Hazardous Air Pollutants for Taconite Iron Ore Processing ("Subpart RRRRR" or "Taconite MACT").

Section 113 of the Act provides you with the opportunity to request a conference with us to discuss the violations alleged in the NOV/FOV. This conference will provide you a chance to present information on the identified violations, any efforts you have taken to comply, and the steps you will take to prevent future violations. Please plan for the facility's technical and management personnel to take part in these discussions. You may have an attorney represent and accompany you at this conference.

**STATUTORY AND REGULATORY BACKGROUND**

1. The Act is designed to, among other things, protect and enhance the quality of the nation's air so as to promote the public health and welfare and the productive capacity of its population. Section 101(b)(1) of the Act, 42 U.S.C. § 7401(b)(1).

### **National Emission Standards for Hazardous Air Pollutants**

2. Pursuant to Section 112(b) of the Act, 42 U.S.C. § 7412(b), EPA designates hazardous air pollutants (HAPs) that present or may present a threat of adverse effects to human health or the environment.
3. Section 112(a) of the Act, 42 U.S.C. § 7412(b), defines "major source" as 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 considering controls, in the aggregate, 10 tons per year or more of any HAP or 25 tons per year (TPY) or more of any combination of HAP.
4. Section 112(c) of the Act, 42 U.S.C. § 7412(c), requires EPA to publish a list of categories of sources that EPA finds present a threat of adverse effects to human health or the environment due to emissions of HAP, and to promulgate emission standards for each source category. These standards are known as "national emission standards for hazardous air pollutants" or "NESHAPs." EPA codifies these requirements at 40 C.F.R. Parts 61 and 63.
5. The NESHAPs are national technology-based performance standards for HAP sources in each category that become effective on a specified date. The purpose of these standards is to ensure that all sources achieve the maximum degree of reduction in emissions of HAPs that EPA determines is achievable for each source category.
6. Section 112(i)(3) of the Act, 42 U.S.C. § 7412(i)(3), and 40 C.F.R. §§ 61.05 and 63.4, prohibit the owner or operator of any source from operating such source in violation of any NESHAP applicable to such source.

### **NESHAP for Taconite Iron Ore Processing at 40 C.F.R. Part 66, Subpart RRRRR**

7. On October 30, 2003, EPA promulgated the NESHAP for Taconite Iron Ore Processing at 40 C.F.R. Part 63, Subpart RRRRR. 68 Fed. Reg. 61868 (October 30, 2003).
8. The NESHAP for Taconite Iron Ore Processing applies to, among other things, owners and operators of taconite iron ore processing plants. 40 C.F.R. § 63.9581.
9. The NESHAP for Taconite Iron Ore Processing, at 40 C.F.R. § 63.9652, defines "taconite ore" to mean a low-grade iron ore suitable for concentration of magnetite or hematite by fine grinding and magnetic or floatation treatment, from which pellets containing iron can be produced.
10. The NESHAP for Taconite Iron Ore Processing, at 40 C.F.R. § 63.9652, defines "taconite iron ore processing" to mean the separation and concentration of iron ore from taconite, a low-grade iron ore, to produce taconite pellets.

11. The NESHAP for Taconite Iron Ore Processing, at 40 C.F.R. § 63.9652, defines "deviation" to mean any instance in which an affected source subject to this subpart, or an owner or operator of such a source: (1) Fails to meet any requirement or obligation established by the subpart, emission limitation (including operating limits) or operation and maintenance requirement; (2) Fails to meet any term or condition that is adopted to implement an applicable requirement in the subpart and that is included in the operating permit for any affected source required to obtain such a permit; or (3) Fails to meet any emission limitation in the subpart during startup, shutdown, or malfunction, regardless of whether or not such failure is permitted by the subpart.
12. The NESHAP for Taconite Iron Ore Processing, at 40 C.F.R. § 63.9652, defines "emission limitation" to mean an emission limit, opacity limit, or operating limit.
13. The NESHAP for Taconite Iron Ore Processing, at 40 C.F.R. § 63.9652, defines "grate kiln indurating furnace" to mean a furnace system that consists of a traveling grate, a rotary kiln, and an annular cooler. The grate kiln indurating furnace begins at the point where the grate feed conveyor discharges the green balls onto the furnace traveling grate and ends where the hardened pellets exit the cooler. The atmospheric pellet cooler vent stack is not included as part of the grate kiln indurating furnace.
14. The NESHAP for Taconite Iron Ore Processing, at 40 C.F.R. § 63.9652, defines "ore crushing and handling" to mean the process whereby dry taconite ore is crushed and screened. Ore crushing and handling includes, but is not limited to, all dry crushing operations (e.g., primary, secondary, and tertiary crushing), dry ore conveyance and transfer points, dry ore classification and screening, dry ore storage and stockpiling, dry milling, dry cobbing (i.e., dry magnetic separation), and the grate feed. Ore crushing and handling specifically excludes any operations where the dry crushed ore is saturated with water, such as wet milling and wet magnetic separation.
15. The NESHAP for Taconite Iron Ore Processing, at 40 C.F.R. § 63.9590(b)(1) provides that each wet scrubber required to meet the particulate matter emission limitations in Table 1 of Subpart RRRRR must maintain the daily average pressure drop and daily average scrubber water flow rate at or above the minimum levels established during the initial performance test.
16. The NESHAP for Taconite Iron Ore Processing, at 40 C.F.R. § 63.9590(b)(3) provides that each dry electrostatic precipitator (ESP) required to meet the emission limitations in Table 1 of Subpart RRRRR must maintain the 6-minute average opacity exiting the stack at or below the opacity level established during initial performance testing.
17. The NESHAP for Taconite Iron Ore Processing, at 40 C.F.R. § 63.9634(e)(1) provides that each wet scrubber with pressure drop and water flow rates with emission limitations required in 40 C.F.R. § 63.9590(b)(1) must show continuous compliance. Each wet scrubber must maintain the daily average pressure drop and water flow rates established during the initial or subsequent performance tests.

18. The NESHAP for Taconite Iron Ore Processing, at 40 C.F.R. § 63.9634(e)(4) provides that if the daily average pressure drop and/or water flow rates established during the initial or subsequent performance tests, as required by § 63.9634(e)(1), corrective action procedures described in § 63.9634(j) must be followed.
19. The NESHAP for Taconite Iron Ore Processing, at 40 C.F.R. § 63.9634(g)(1) provides that each dry ESP with emission limitations required in § 63.9590(b)(1) must maintain the 6-minute average opacity at or below the maximum level established during the initial or subsequent performance tests. Each stack with an opacity limitation must maintain continuous opacity monitors.
20. The NESHAP for Taconite Iron Ore Processing, at 40 C.F.R. § 63.9634(g)(1)(iii) provides that if opacity levels for a dry ESP are above the limits established during the initial or subsequent performance tests, corrective actions procedures described in § 63.9634(j) must be followed.
21. The NESHAP for Taconite Iron Ore Processing, at 40 C.F.R. § 63.9634(j)(1) provides the initial corrective action for wet scrubbers and dry ESP deviating from performance test limitations. The facility must initiate and complete initial corrective action within 10 calendar days and demonstrate that the initial corrective action was successful. During any period of corrective action, the facility must continue to monitor and record all required operating parameters for equipment that remains in operation. After 10 calendar days, the facility must measure and record the daily average operating parameter value for the emission unit or group of similar emission units on which corrective action was taken. After the initial corrective action, if the daily average operating parameter value for the emission unit or group of similar emission units meets the operating limit established for the corresponding unit or group, then the corrective action was successful and the emission unit or group of similar emission units is in compliance with the established operating limits.
22. The NESHAP for Taconite Iron Ore Processing, at 40 C.F.R. § 63.9634(j)(2) provides that if an initial corrective action required in § 63.9634(j)(1) was not successful, then the facility must complete additional corrective action within 10 calendar days and demonstrate that the subsequent corrective action was successful. During any period of corrective action, the facility must continue to monitor and record all required operating parameters for equipment that remains in operation. After the second set of 10 calendar days allowed to implement corrective action, the facility must again measure and record the daily average operating parameter value for the emission unit or group of similar emission units. If the daily average operating parameter value for the emission unit or group of similar emission units meets the operating limit established for the corresponding unit or group, then the corrective action was successful and the emission unit or group of similar emission units is in compliance with the established operating limits.
23. The NESHAP for Taconite Iron Ore Processing, at 40 C.F.R. § 63.9634(j)(3) provides that if a second attempt at corrective action required in § 63.9634(j)(2) was not successful, then the facility must repeat the procedures in § 63.9634(j)(2) until the corrective action is successful. If the third attempt at corrective action is unsuccessful, the facility must

conduct another performance test in accordance with the procedures in § 63.9622(f) and report to the Administrator as a deviation the third unsuccessful attempt at corrective action.

24. The NESHAP for Taconite Iron Ore Processing, at 40 C.F.R. § 63.9634(j)(4) provides that after the third unsuccessful attempt at corrective action, as detailed in § 63.9634(j)(3), the facility must submit to the Administrator the written report required in § 63.9634(j)(3) within five calendar days after the third unsuccessful attempt at corrective action. This report must notify the Administrator that a deviation has occurred and document the types of corrective measures taken to address the problem that resulted in the deviation of established operating parameters and the resulting operating limits.
25. The NESHAP general provisions at 40 C.F.R. § 63.6(e)(1)(i) state 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."

#### **Federal Title V Requirements**

26. Pursuant to Section 502(a) of the Act, 42 U.S.C. § 7661a(a), it is unlawful for any person to, among other things, operate a major source subject to Title V except in compliance with a Title V permit after the effective date of any permit program approved or promulgated under Title V of the Act. EPA first promulgated regulations governing state operating permit programs on July 21, 1992. 57 Fed. Reg. 32295; 40 C.F.R. Part 70.
27. Section 502(a) of the Act provides that after the effective date of any permit program approved or promulgated under Title V, it shall be unlawful for any person to violate any requirement of a permit issued under Title V.
28. Federal regulations at 40 C.F.R. § 70.6(b)(1) provide that Title V permits are federally enforceable and that all terms and conditions in a Title V permit, including any provisions designed to limit a source's potential to emit, are enforceable by EPA.
29. Federal regulations at 40 C.F.R. § 70.2 define "major source," in part, as any stationary source belonging to a single major industrial grouping and that directly emits or has the potential to emit greater than 100 TPY of any criteria air pollutant, 10 TPY of a single HAP, or 25 TPY of all HAP combined.
30. Section 503 of the Act, 42 U.S.C. § 7661b, sets forth the requirement to submit a timely, accurate, and complete permit application for a permit, including information required to be submitted with the application.
31. Section 504(a) of the Act, 42 U.S.C. § 7661c(a), requires that each Title V permit include enforceable emission limitations and standards, a schedule of compliance, and compliance certification requirements to assure compliance with the permit terms and conditions.

32. Federal regulations at 40 C.F.R. § 70.1(b) provide that all sources subject to Title V shall have a permit to operate that assures compliance by the source with all applicable requirements.
33. Federal regulations at 40 C.F.R. § 70.2 define “applicable requirement” to include, among other things, any standard or other requirements provided for in the applicable implementation plan approved or promulgated by EPA through rulemaking under Title I of the Act that implements the relevant requirements of the Act.
34. Federal regulations at 40 C.F.R. § 70.5(b) provide that no source subject to 40 C.F.R. Part 70 requirements may operate without a permit as specified in the Act.

### **Michigan State Implementation Plan**

35. Section 110 of the Act, 42 U.S.C. § 7410, requires each state to adopt and submit to EPA a plan that provides for the implementation, maintenance, and enforcement of primary and secondary National Ambient Air Quality Standards in the state. Upon approval by EPA, the plan becomes part of the applicable State Implementation Plan (SIP) for the state.
36. On June 1, 2006, EPA approved Rule 336.1301 of the Mich. Admin. Code as part of the federally enforceable SIP for Michigan. 71 Fed. Reg. 31093 (June 1, 2006).
37. On February 24, 2003, EPA approved the Michigan SIP requirement at R 336.1105, Definitions, as part of the federally approved Michigan SIP (effective April 25, 2003). 68 Fed. Reg. 8550 (February 24, 2003).
38. On June 11, 1992, EPA approved R 336.1101, R 336.1116, and R 336.1119 of the Michigan Administrative Code as part of the federally enforceable Michigan SIP. 57 Fed. Reg. 24752 (June 11, 1992).
39. Michigan rules at R 336.1101, R 336.1116, and R 336.1119 provide the following definitions for Michigan’s air pollution control rules:
  - a) “Person” means any of the following: (i) An individual person; . . . (vii) Firm; . . . (ix) Company; (x) Corporation . . .” R 336.1116(h).
  - b) “Process equipment” means all equipment, devices, and auxiliary components, including air pollution control equipment, stacks, and other emission points, used in a process. R 336.1116(q).
  - c) “Air contaminant” means a dust, fume, gas, mist, odor, smoke, vapor, or any combination thereof. R 336.1101(f).
  - d) “Stationary source” means all buildings, structures, facilities, or installations which emit or have the potential to emit 1 or more air contaminants, which are located at 1 or more contiguous or adjacent properties, which are under the control of the same person, and which have the same 2-digit major group code associated with their primary activity. R 336.1119(r).

40. On May 6, 1980, EPA approved R 336.1201 of the Michigan Administrative code as part of the federally approved Michigan SIP. 45 Fed. Reg. 29790 (May 6, 1980).
41. Michigan Rule R 336.1201(3) provides that application for a permit to install may be approved subject to any conditions, specific in writing, that is reasonably necessary to assure compliance.
42. Michigan Rule R 336.1301 provides that a person shall not cause or permit to be discharged into the outer air from a process or process equipment a visible emission of a density greater than a 6-minute average of 20% opacity, except for one 6-minute average per hour of not more than 27% opacity. 71 Fed. Reg. 31093 (June 1, 2006).

### **Title V Permit Requirements**

43. On July 1, 2008, the Michigan Department of Environmental Quality (MDEQ) issued a renewable operating permit, permit number MI-ROP-B4885-2008 ("Title V permit") and a source-wide permit-to-install, permit number MI-PTI-B4885-2008 (PTI), to the Tilden facility.
44. Tilden's Title V permit, at Section A, General Conditions, Emission Limits, Number 11, provides that a person shall not cause or permit to be discharged into the outer air from a process or process equipment a visible emission of a density greater than the most stringent of R 336.1301(1). Specifically, a 6-minute average of 20% opacity, except for one 6-minute average per hour of not more than 27% opacity must be continuously maintained.
45. Tilden's Title V permit, at *Section C. Emission Unit Conditions, Subsection IX. Taconite Maximum Achievable Control Technology (MACT) Requirements*, provides that on or after October 30, 2006, Tilden shall comply with all applicable requirements of the NESHAP for Taconite Iron Ore Processing.
46. Tilden's Title V permit, at *Section C. EU-Kiln1 Emission Unit Conditions and EU-Kiln 2 Emission Unit Conditions*, incorporates PTI 511-87C, as part of the consolidated PTI B4885-2008. This PTI requires that both kilns meet the opacity limit specified in R 336.1301(1).

## **FINDINGS OF FACT AND LEGAL CONCLUSIONS**

### **General**

47. Tilden owns and operates a taconite iron ore processing plant at 1 Tilden Mine Road, Ishpeming, Michigan.
48. Cliffs Natural Resources, Inc. is the majority owner of the Tilden facility.
49. Tilden is a "person," as that term is defined in R 336.1116(g).
50. Tilden's facility is a "stationary source," as that term is defined in R 336.1119(r).

51. EPA issued Tilden Section 114 Information Requests on April 18, 2012, and November 4, 2013.
52. EPA received Section 114 Information Request responses from Tilden on July 16, 2012, and January 8, 2014. Tilden's responses included 6-minute opacity averages for Unit #1 and Unit #2 from October 1, 2008, to June 30, 2013. Additionally, Tilden's responses included summaries of scrubber operating parameter exceedences.

**ESP-Related Facts and Conclusions**

53. Visible emissions from the stacks of the dry ESPs at Tilden's facility are "air contaminants," as that term is defined in R 336.1101(f).
54. Equipment used in the indurating furnace process and corresponding dry ESPs at Tilden's facility is "process equipment," as that term is defined in R 336.1116(q).
55. Emissions from Tilden's indurating furnaces and corresponding dry ESPs are subject to the opacity regulations in the Michigan SIP at R 336.1301.
56. Based on evaluation of the opacity data provided by Tilden, for furnace Unit #1 North and South stacks, and Unit #2 North and South Stacks, Table 1 summarizes the number of minutes each furnace emitted air contaminants greater than 20% opacity.

*Table 1: Summary of 20% SIP Opacity Deviations*

Reporting Period	Unit	Stack ID	Time Out of Compliance with 20% Opacity Limit (Minutes)
January -- June 2009	Unit #1	North Stack	996
		South Stack	1446
	Unit #2	North Stack	210
		South Stack	978
July -- December 2009	Unit #1	North Stack	792
		South Stack	1422
	Unit #2	North Stack	2238
		South Stack	2100
January -- June 2010	Unit #1	North Stack	504
		South Stack	2262
	Unit #2	North Stack	2124
		South Stack	1542
July -- December 2010	Unit #1	North Stack	378
		South Stack	2448
	Unit #2	North Stack	576
		South Stack	462

January -- June 2011	Unit #1	North Stack	300
		South Stack	972
	Unit #2	North Stack	1050
		South Stack	1482
July -- December 2011	Unit #1	North Stack	516
		South Stack	1212
	Unit #2	North Stack	798
		South Stack	768
January -- June 2012	Unit #1	North Stack	702
		South Stack	1350
	Unit #2	North Stack	360
		South Stack	282
July -- December 2012	Unit #1	North Stack	462
		South Stack	714
	Unit #2	North Stack	630
		South Stack	408
January -- June 2013	Unit #1	North Stack	462
		South Stack	660
	Unit #2	North Stack	1836
		South Stack	948

57. The NESHAP for Taconite Iron Ore Processing, at 40 C.F.R. § 63.9634(g)(1)(iii) provides that if opacity levels for a dry ESP are above the limits established during the initial or subsequent performance tests, corrective actions procedures described in § 63.9634(j) must be followed.
58. Based on the evaluation of the 10-second opacity data from Unit #1 and Unit #2 during the February 8, 2007, March 27-28, 2007, and January 24, 2008, performance tests, Table 2 presents the opacity limits set from the 99% confidence interval of compliant data for both magnetite and hematite ores.

*Table 2: NESHAP Opacity Limits Established by 99% Confidence Interval of Compliant Performance Testing for Hematite and Magnetite Processing*

Test Date	Unit and Stack	Opacity Limit set by 99% Confidence Interval From All Three Runs(Percent)
February 8, 2007 (magnetite)	Unit #1 North	3.03
February 8, 2007 (magnetite)	Unit #1 South	2.88
January 24, 2008 (magnetite)	Unit #2 North	4.97
January 24, 2008 (magnetite)	Unit #2 South	2.38

March 27, 2007 (hematite)	Unit #1 North	7.10
March 27, 2007 (hematite)	Unit #1 South	8.37
March 28, 2007 (hematite)	Unit #2 North	10.91
March 28, 2007 (hematite)	Unit #2 South	7.98

59. Based on the evaluation of the 2009-2013 opacity data provided by Tilden for process equipment furnaces Unit #1 and Unit #2, Table 3 summarizes the number of minutes each furnace emitted air contaminants greater than unit-specific emission limits listed in Table 2.

*Table 3: Summary of Unit-Specific NESHAP Opacity Deviations Exceeding 30 Days, from January 2009 to June 2013*

Unit	Stack ID	Time Out of Compliance with Unit-Specific Opacity Limit Based on 99% Confidence Level
Unit #1	North Stack	March 27, 2009, to June 8, 2009 (74 days) July 10, 2009, to August 25, 2009 (63 days) February 4, 2013, to March 14, 2013 (39 days)
	South Stack	March 14, 2009, to April 26, 2009 (34 days) November 6, 2009, to December 12, 2009 (37 days)
Unit #2	North Stack	January 28, 2010 to March 10, 2010 (33 days)
	South Stack	No exceedances over 30 days

#### **Scrubber-Related Facts and Conclusions**

60. Table 4 summarizes the information reported by Tilden in its December 30, 2013, response to EPA's information request pertaining to water flow rate monitoring provisions of the NESHAP for Taconite Iron Ore Processing, at 40 C.F.R. § 63.9590(b)(1).

*Table 4: Summary of Tilden's Water Flow Rate Deviations from January 1, 2009, to June 30, 2013*

Scrubber Specific Unit ID Number	Date Range of Exceedences	Duration of Exceedences Over 30 days (Total Number of Days)
PRIMARY CRUSHER	7/23/09 - 9/13/09	53
	10/6/09 - 1/6/10	103

	8/5/10 - 9/14/10	41
	10/19/10 - 12/1/2010	44
	6/27/11 - 8/1/11	36
	8/10/11 - 9/27/11	49
	10/11/11 - 5/11/12	214
	5/25/12 - 6/30/12	37
CON 13 TO 17.1	6/25/10 - 8/1/10	38
CON 15 TO 15.1	3/17/10 - 6/14/10	90
CON 16.1 TO 17.1	1/23/09 - 2/27/09	36
	4/29/09 - 6/7/09	40
	9/21/10 - 1/4/11	106
CON 4A TO 4A1	12/15/11 - 2/10/12	58
CON 4B TO 4C	3/19/10 - 5/5/10	48
	10/28/12 - 1/14/13	79
CON 4C TO 4D	2/25/10 - 4/21/10	56
CON 15.8 TO 15.9	10/22/09 - 12/5/09	45
CON 15.9 TO 16.1	4/29/09 - 6/3/09	36
	10/22/09 - 12/7/09	47
	1/16/10 - 2/17/10	33
	8/30/10 - 10/3/10	35
CON 17.1 TO 17.2	9/27/09 - 11/28/09	63
	12/17/09 - 6/14/10	180
	6/25/10 - 10/4/10	102
	10/17/10 - 1/2/11	78
	1/17/11 - 2/18/11	33
	7/21/11 - 10/1/11	73
	11/10/11 - 4/1/12	144
U1 TRANSFER TOWER	4/3/10 - 5/11/10	39
U2 COOLER	3/18/10 - 4/18/10	32

U2 TRANSFER TOWER	10/3/09 - 11/28/09	57
	1/27/10 - 4/26/10	90
	12/23/10 - 1/23/11	32

61. Table 5 summarizes the information reported by Tilden in its December 30, 2013, response to EPA's information request pertaining to pressure drop monitoring provisions of the NESHAP for Taconite Iron Ore Processing, at 40 C.F.R. § 63.9590(b)(1).

*Table 5: Summary of Tilden's Pressure Drop Deviations from January 1, 2009, to June 30, 2013*

<b>Scrubber Specific Unit ID Number</b>	<b>Date Range of Exceedences</b>	<b>Duration of Exceedences Over 30 Days (Total Number of Days)</b>
CON 1 TO 2	1/6/09 - 2/20/09	46
	2/28/09 - 4/7/09	39
	7/23/09 - 8/27/09	36
	1/24/10 - 3/20/10	56
	3/25/10 - 6/6/10	74
CON 12A TO 13	7/1/08 - 9/4/08	66
	3/5/09 - 4/16/09	43
	9/11/10 - 4/27/10	229
	4/30/10 - 6/15/10	47
	6/17/10 - 4/15/11	303
	4/18/11 - 6/23/11	67
	6/27/11 - 10/1/11	97
	10/17/11 - 1/26/12	102
	1/28/12 - 3/12/12	45
	CON 12B TO 13	7/1/08 - 9/3/08
	9/7/08 - 11/22/08	77
	11/24/08 - 3/3/09	100
	3/5/09 - 4/27/09	54

	4/29/09 - 6/7/09	40
	5/6/10 - 6/15/10	41
	6/25/10 - 4/13/11	293
	12/15/11 - 2/28/12	76
	9/29/12 - 11/19/12	52
CON 14 TO 15 TO 16	5/2/10 - 6/14/10	44
	1/22/11 - 3/1/11	39
CON 15 TO 15.1	9/13/09 - 12/13/09	92
	12/17/09 - 6/14/10	180
	6/25/10 - 8/7/10	44
	10/18/10 - 11/26/10	40
	1/11/11 - 2/9/11	30
	10/7/11 - 1/16/12	102
	3/27/12 - 5/10/12	45
	5/18/12 - 6/30/12	44
CON 16.1 TO 17.1	1/23/09 - 2/23/09	32
	10/22/09 - 12/5/09	45
	8/30/10 - 12/27/10	120
	1/27/11 - 3/12/11	45
	4/18/11 - 6/23/11	67
	7/22/11 - 9/23/11	64
	10/23/11 - 1/13/12	83
	1/30/12 - 3/5/12	36
	5/18/12 - 6/30/12	43
CON 4A TO 4A1	7/25/08 - 9/2/08	40
	9/5/08 - 11/22/08	79
	11/24/08 - 1/8/09	46
	4/30/09 - 6/7/09	39
	7/6/09 - 9/22/09	79

	4/22/10 - 6/14/10	54
	4/15/11 - 4/15/11	295
	4/18/11 - 6/23/11	67
	6/27/11 - 10/2/11	98
	10/10/11 - 11/30/11	52
	12/22/11 - 5/10/12	141
	5/14/12 - 6/30/12	48
CON 4B TO 4C	1/28/09 - 3/12/09	44
	3/16/09 - 4/27/09	43
	4/29/09 - 6/7/09	40
	7/6/09 - 9/22/09	79
	9/24/09 - 6/14/10	264
	6/25/10 - 4/15/11	295
	4/18/11 - 6/23/11	67
	6/27/11 - 8/2/11	37
	8/4/11 - 10/3/11	61
	10/10/11 - 5/10/12	214
	5/14/12 - 6/30/12	48
CON 4C TO 4D	7/25/08 - 9/2/08	40
	12/28/08 - 3/6/09	69
	3/16/09 - 4/14/09	30
	7/6/09 - 9/22/09	79
	9/24/09 - 12/17/09	85
	12/23/09 - 2/4/10	44
	2/21/10 - 5/6/10	75
	7/24/10 - 4/15/11	266
	4/18/11 - 6/23/11	67
	6/27/11 - 9/29/11	95
	10/21/11 - 4/21/12	184

	5/14/12 - 6/30/12	48
CON 15.8 TO 15.9	2/3/10 - 4/12/10	69
	4/15/10 - 5/26/10	42
	6/28/10 - 8/3/10	37
	1/30/12 - 3/3/12	34
	4/5/12 - 5/9/12	35
	5/18/12 - 6/20/12	34
CON 15.9 TO 16.1	7/11/08 - 9/1/08	53
	10/26/09 - 12/7/09	43
	1/16/10 - 4/12/10	87
	4/15/10 - 5/26/10	42
	6/24/10 - 8/28/10	66
	8/30/10 - 10/1/10	33
CON 17.1 TO 17.2	7/19/09 - 8/24/09	37
	9/7/09 - 11/2/09	57
	2/26/10 - 4/4/10	38
	1/6/11 - 2/6/11	32
DRYER 2 NORTH	3/25/09 - 4/27/09	34
	4/29/09 - 6/7/09	40
	6/24/09 - 8/16/09	54
	2/3/10 - 4/12/10	69
	4/15/10 - 5/25/10	41
	6/28/10 - 8/27/10	61
	8/30/10 - 10/8/10	40
	10/20/10 - 12/13/10	55
	4/18/11 - 6/4/11	48
DRYER 2 SOUTH	7/23/08 - 9/1/2008	41
	3/25/09 - 4/27/09	34
	4/29/09 - 6/7/09	40

	6/24/09 - 8/16/09	54
	10/22/09 - 12/05/09	45
	2/3/10 - 4/12/10	69
	4/15/10 - 5/25/10	41
	6/28/10 - 8/27/10	61
	8/30/10 - 10/10/10	42
	10/16/10 - 1/4/11	81
	4/18/11 - 6/4/11	48
UI COOLER	7/15/08 - 9/1/09	49
	7/6/09 - 8/23/09	49
	4/3/10 - 5/12/10	40
UI FEED MIXER	9/24/09 - 11/28/09	66
	1/8/10 - 2/12/10	36
UI LOW HEAD FEEDER	3/23/09 - 4/27/09	36
	7/6/09 - 8/23/09	49
	10/22/09 - 11/28/09	38
	2/7/10 - 3/9/10	31
	4/22/10 - 5/21/10	30
	6/18/10 - 8/16/10	60
	10/9/10 - 11/8/10	31
	11/13/10 - 12/30/10	48
	1/28/11 - 4/15/11	78
	5/12/11 - 6/23/11	43
	7/22/11 - 10/1/11	72
	10/15/11 - 12/31/11	78
UI TRANSFER TOWER	4/29/09 - 6/7/09	40
	7/6/09 - 8/23/09	49
	10/22/09 - 11/28/09	38
	4/8/10 - 6/14/10	68

	6/18/10 - 8/27/10	71
	11/13/10 - 12/30/10	48
	1/28/11 - 3/23/11	55
	11/8/11 - 1/2/12	56
U2 COOLER	9/18/12 - 10/29/12	42
	11/29/12 - 1/14/13	47
U2 FEED MIXER	10/13/11 - 11/15/11	34
	1/27/12 - 3/21/12	55
U2 LOW HEAD FEEDER	8/28/09 - 10/1/09	35
	9/16/10 - 11/23/10	69
	12/2/10 - 1/23/11	53
U2 PRODUCT CON	7/11/08 - 8/11/08	32
	9/12/08 - 10/14/08	33
	11/24/08 - 1/4/09	42
	8/28/09 - 10/1/09	35
	10/3/09 - 11/28/09	57
	1/27/10 - 4/26/10	90
	7/28/10 - 9/14/10	49
	4/22/11 - 6/23/11	63
	12/6/11 - 1/7/12	33
	5/18/12 - 6/26/12	40
U2 TRANSFER TOWER	11/24/08 - 1/4/09	42
	8/21/09 - 10/1/09	35
	10/3/09 - 11/28/09	57
	1/27/10 - 4/26/10	90
	7/28/10 - 9/14/10	49
	1/26/11 - 2/25/11	31
	4/22/11 - 6/23/11	63
	10/23/11 - 12/31/11	70

## VIOLATIONS

### Michigan SIP and Permit Requirements

62. The excess opacity emissions from Unit #1 and Unit #2 from January 1, 2009, to June 30, 2013, as summarized in Table 1, are violations of the opacity limit in *Section A, General Conditions, Emission Limits, Paragraph 11* of the facility's Title V Permit, Source-Wide PTI, and applicable SIP requirement specified therein at *Section C. EU-Kiln1 Emission Unit Conditions and EU-Kiln 2 Emission Unit Conditions*.

### NESHAP for Taconite Iron Ore Processing Plants

63. On the occasions listed in Table 3, Tilden is in violation of the NESHAP for Taconite Iron Ore Processing, at 40 C.F.R. § 63.9590(b)(3), which provides that each dry ESP required to meet the emission limitations in Table 1 of Subpart RRRRR must maintain the 6-minute average opacity exiting the stack at or below the opacity level established during initial performance testing.
64. On forty-one occasions during the January 1, 2009, to June 30, 2013 time period when Tilden identified a water flow rate deviation, Tilden failed to conduct the third and final attempt at a corrective action required by the NESHAP for Taconite Iron Ore Processing, at 40 C.F.R. § 63.9634(j)(3). Specifically, for each of the units listed in Table 4, Tilden failed to conduct an effective correction action to return the unit's daily average scrubber water flow rate at or above the minimum levels established during the initial or subsequent performance tests. Additionally, Tilden failed to conduct the required performance tests described at 40 C.F.R. § 63.9622(f) and required by 40 C.F.R. § 63.9634(j)(3) and failed to submit to the Administrator the written report within five calendar days after the third unsuccessful attempt at corrective action, as described at 40 C.F.R. § 63.9634(j)(3) and required by 40 C.F.R. § 63.9634(j)(4).
65. On 163 occasions during the January 1, 2009, to June 30, 2013 time period when Tilden identified a differential pressure drop deviation, Tilden failed to conduct the third and final attempt at a corrective action required by the NESHAP for Taconite Iron Ore Processing, at 40 C.F.R. § 63.9634(j)(3). Specifically, for each of the units listed in Table 5, Tilden failed to conduct an effective corrective action to return the unit's daily average pressure differential rate at or above the minimum levels established during the initial or subsequent performance tests. Additionally, Tilden failed to conduct the required performance tests described at 40 C.F.R. § 63.9622(f) and required by 40 C.F.R. § 63.9634(j)(3) and failed to submit to the Administrator the written report within five calendar days after the third unsuccessful attempt at corrective action, as described at 40 C.F.R. § 63.9634(j)(3) and required by 40 C.F.R. § 63.9634(j)(4).
66. For the units referenced in Tables 1, 2, and 4, Tilden is in violation of 40 C.F.R. § 63.6(e)(1)(i) which state 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." Extensive and prolonged violations of pollution control emission limits and operating requirements in Tables 3, 4, and 5 demonstrate a failure to properly maintain pollution control equipment.

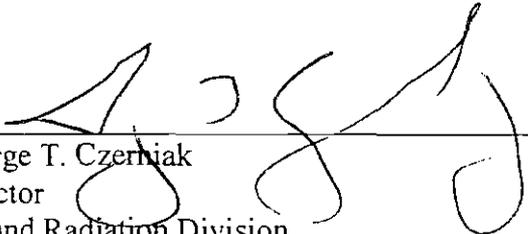
**ENVIRONMENTAL IMPACT OF VIOLATIONS**

- 67. Violations of the opacity standards increase public exposure to unhealthy particulate matter. Particulate matter, especially fine particulate, contributes to respiratory problems, lung damage, and premature deaths. Particulate matter emitted from taconite iron ore processing facilities also contains metallic hazardous air pollutants, mainly manganese, which can cause certain adverse neurological effects.

**ENFORCEMENT AUTHORITY**

- 68. Section 113(a)(1) of the Act, 42 U.S.C. § 7413(a)(1), provides in part that, at any time after the expiration of 30 days following the date of the issuance of a Notice of Violation, EPA may, without regard to the period of violation, issue an order requiring compliance with the requirements of the applicable SIP, issue an administrative penalty order pursuant to Section 113(d), or bring a civil action pursuant to Section 113(b) for injunctive relief and/or civil penalties.
- 69. Section 113(a)(3) of the Act, 42 U.S.C. § 7413(a)(3), provides in part that, if EPA finds that a person has violated or is in violation of any requirement or prohibition of any rule promulgated under Title I and/or Title V of the Act, EPA may issue an administrative penalty order under Section 113(d), issue an order requiring compliance with such requirement or prohibition, or bring a civil action pursuant to Section 113(b) for injunctive relief and/or civil penalties.

2/21/14  
Date

  
George T. Czerniak  
Director  
Air and Radiation Division

CERTIFICATE OF MAILING

I, Loretta Shaffer, certify that I sent a Notice and Finding of Violation, Return Receipt Requested, to:

James Kochevar, General Manager  
Tilden Mining Company L.C.  
1 Tilden Mine Road  
Ishpeming, Michigan 49849-0901

I also certify that I sent a copy of the Notice and Finding of Violation by First Class Mail to:

Chris Hare, District Supervisor  
Michigan Department of Environmental Quality  
Saginaw Bay District Office  
401 Ketchum Street  
Bay City, Michigan 48708

Tom Hess, Enforcement Unit Supervisor  
Michigan Department of Environmental Quality  
Air Quality Division  
P.O. Box 30260  
Lansing, Michigan 48909

Scott Gischia, Director  
Environmental Compliance  
US Iron Ore Operations  
Cliffs Natural Resources, Inc.  
227 West 1st Street, Suite 500  
Duluth, Minnesota 55802

on the 21<sup>ST</sup> day of Feb 2014.

  
Loretta Shaffer  
Administrative Program Assistant  
AECAB, PAS

Certified Mail Receipt Number: 7009 1680 0000 7676 3526