

Appendix 9J

Emission Limits – Excerpts from ROP for Tilden Mining Company

EU-KILN1
EMISSION UNIT CONDITIONS

PROCESS AND CONTROL EQUIPMENT

EU-KILN1 Unit 1 Grate Kiln Indurating Furnace receives pellets from the balling section, dries and preheats them on a traveling grate which discharges them into a rotary kiln for final induration. Unit 1 main burners are rated at 590 million BTU per hour heat input. The Tilden facility produces hematite pellets and magnetite pellets. Unit 1 is fired with coal, coal/petroleum coke blend, natural gas, or used oil supplied from the 1.5 million gallon storage tank.

Also, blending coke breeze into the green pellets to provide additional heat input for the induration process was authorized in 2002 under Permit to Install #70-02. The unit is controlled with electrostatic precipitators.

{Permits to Install #511-87C, #70-02}

I. EMISSION LIMITS

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. Arsenic	1. Arsenic emissions, from firing used oil, shall not exceed 0.0058 tons per rolling 12-calendar month period. ¹	Rolling 12-calendar month period	Unit 1 Indurating Furnace	Appendix 7	R336.1224
2. Cadmium	2. Cadmium emissions, from firing used oil, shall not exceed 0.0058 tons per rolling 12-calendar month period. ¹	Rolling 12-calendar month period	Unit 1 Indurating Furnace	Appendix 7	R336.1224
3. Chromium (total)	3. Chromium (total) emissions, from firing used oil, shall not exceed 0.0058 tons per rolling 12-calendar month period. ¹	Rolling 12-calendar month period	Unit 1 Indurating Furnace	Appendix 7	R336.1224
4. Particulate	4. Particulate a. Particulate emissions shall not exceed 0.01 grains per dry standard cubic foot (gr/dscf) for existing grate kiln indurating furnaces processing <i>magnetite</i> . b. Particulate emissions shall not exceed 0.03 grains per dry standard cubic foot (gr/dscf) for existing grate kiln indurating furnaces processing <i>hematite</i> .	Test Protocol	Unit 1 Indurating Furnace	40 CFR 63 Subparts RRRRR and A	40 CFR Part 63 Subparts RRRRR and A (see TACONITE MACT REQUIREMENTS below)

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
5. Lead	5. Lead emissions, from firing used oil, shall not exceed 0.017 tons per rolling 12-calendar month period. ¹	Rolling 12-calendar month period	Unit 1 Indurating Furnace	Appendix 7	R336.1224
6. Particulate	6. Particulate emissions shall not exceed 0.065 pounds per 1000 pounds of exhaust gases, nor 200 pounds per hour. ²	Test Protocol	Unit 1 Indurating Furnace	GC 13, 14, 15	R336.1331
7. Sulfur Dioxide	7. Sulfur dioxide emissions shall not exceed 28,800 pounds per calendar day. ²	Calendar Day	Unit 1 Indurating Furnace	VI. 1 VI. 2	R336.1402

II. MATERIAL LIMITS

1. The halogen content of the used oil burned in Unit 1 Indurating Furnace shall not exceed 1000 parts per million, by weight.¹ [R336.1224]
2. The maximum feedrate of coke breeze shall not exceed 5 tons per hour.¹ [R336.1224]

III. PROCESS OR OPERATIONAL RESTRICTIONS

1. The permittee shall not operate Unit 1 Indurating Furnace unless the electrostatic precipitators are operating properly.² [R336.1910]
2. The oil burned in Unit 1 Indurating Furnace shall be supplied only from the 1.5 million gallon used oil tank.
[R336.1201(3)]
3. See TACONITE MACT REQUIREMENTS below. [40 CFR 63 Subparts RRRRR and A]

IV. DESIGN OR EQUIPMENT PARAMETERS

NA

EU-OREDRIYER1
EMISSION UNIT CONDITIONS

PROCESS AND CONTROL EQUIPMENT

EU-OREDRIYER1 – Ore Concentrate Dryer #1 is rated at 400 tons per hour throughput and 70 million BTU per hour heat input. The Dryer is fired with natural gas and used oil supplied from the 1.5 million gallon storage tank. Dryer #1 is controlled with a cyclone precleaner and a wet scrubber.
{Permit to Install #511-87C}

I. EMISSION LIMITS

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. Arsenic	1. Arsenic emissions, when firing used oil, shall not exceed 0.0009 tons per rolling 12-calendar month period. ¹	Rolling 12-calendar month period	Ore Dryer #1	Appendix 7	R336.1224
2. Cadmium	2. Cadmium emissions, when firing used oil, shall not exceed 0.0009 tons per rolling 12-calendar month period. ¹	Rolling 12-calendar month period	Ore Dryer #1	Appendix 7	R336.1224
3. Chromium (total)	3. Chromium (total) emissions, when firing used oil, shall not exceed 0.0009 tons per rolling 12-calendar month period. ¹	Rolling 12-calendar month period	Ore Dryer #1	Appendix 7	R336.1224
4. Particulate	4. Particulate emissions shall not exceed 0.052 grains per dry standard cubic foot (gr/dscf) for existing Ore Dryers.	Test Protocol	Ore Dryer #1	40 CFR 63 Subparts RRRRR and A	40 CFR Part 63 Subparts RRRRR and A (see TACONITE MACT REQUIREMENTS below)
5. Lead	5. Lead emissions, when firing used oil, shall not exceed 0.00265 tons per rolling 12-calendar month period. ¹	Rolling 12-calendar month period	Ore Dryer #1	Appendix 7	R336.1224
6. Particulate	6. Particulate emissions shall not exceed 0.10 pounds per 1000 pounds of exhaust gases, calculated on a dry gas basis. ²	Test Protocol	Ore Dryer #1	GC 13, 14, 15	R336.1331

EU-BOILERS1-2
EMISSION UNIT CONDITIONS

PROCESS AND CONTROL EQUIPMENT

EU-BOILERS1-2 - Boilers #1 and #2 are each rated at 225 million BTU per hour heat input capacity and are fired with natural gas and used oil supplied from the 1.5 million gallon storage tank. Boilers #1 and #2 exhaust from a common stack.
{Permit to Install #511-87C}

I. EMISSION LIMITS

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. Arsenic	1. Arsenic emissions, when firing used oil, shall not exceed 0.12 tons per rolling 12-calendar month period. ²	Rolling 12-calendar month period	Boilers #1 and #2	Appendix 7	R336.1224
2. Cadmium	2. Cadmium emissions, when firing used oil, shall not exceed 0.12 tons per rolling 12-calendar month period. ²	Rolling 12-calendar month period	Boilers #1 and #2	Appendix 7	R336.1224
3. Chromium (total)	3. Chromium (total) emissions, when firing used oil, shall not exceed 0.12 tons per rolling 12-calendar month period. ²	Rolling 12-calendar month period	Boilers #1 and #2	Appendix 7	R336.1224
4. Lead	5. Lead emissions, when firing used oil, shall not exceed 0.37 tons per rolling 12-calendar month period. ²	Rolling 12-calendar month period	Boilers #1 and #2	Appendix 7	R336.1224

II. MATERIAL LIMITS

- The used oil burned in Boilers #1 and #2 shall not exceed a sulfur content of 1.2%, calculated on the basis of 18,000 BTU per pound. [R336.1401]
- The halogen content of the used oil burned in Boilers #1 and #2 shall not exceed 1000 parts per million, by weight.¹ [R336.1224]