



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION 10

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OFFICE OF  
AIR AND WASTE

February 8, 2018

Bernard P. Leber, Jr.  
Environmental Engineering Manager  
Kaiser Aluminum Fabricated Products, LLC  
PO Box 15108  
Spokane Valley, Washington 99215

Re: Hooding Impracticability Determination under NESHAP RRR for Kaiser Trentwood in Spokane Valley, Washington

Dear Mr. Leber:

This is in response to Kaiser Aluminum Fabricated Products, LLC's (Kaiser) request for a determination that installation of hooding for purposes of performance testing on Unit DC-0, a new round top furnace located at Kaiser's Trentwood facility in Spokane Valley, Washington, is impractical. This request is made pursuant to 40 CFR, part 63, subpart RRR: *National Emission Standards for Hazardous Air Pollutants for Secondary Aluminum Smelters* (Subpart RRR), specifically, under 40 CFR 63.1512(e)(5) and (e)(6). Based on Kaiser's August 2016 submittal, EPA inspections of the Trentwood facility, documents received from the Spokane Regional Clean Air Agency (Spokane Clean Air), and applicable Clean Air Act permits, EPA agrees that installation of hooding on Unit DC-0 for the purposes of performance testing is impractical within the meaning of 40 CFR 63.1512(e)(5) and (e)(6).

#### Background

Unit DC-0 is subject to Subpart RRR because it is a *group 1 furnace* located at a *secondary aluminum production facility*, as those terms are defined in 40 CFR 63.1503. Although round top furnaces constructed before February 14, 2012 and reconstructed round top furnaces are exempt from the testing requirements of Subpart RRR, DC-0 is required to test under the subpart because it commenced construction after this date and commenced operation in May 2014.

According to Kaiser's part 70 permit issued by Spokane Clean Air, the Trentwood facility is an area source of hazardous air pollutants (HAP) as defined in 40 CFR 63.2. Therefore, only the requirements of Subpart RRR pertaining to dioxin and furan (D/F) emissions and associated operating, monitoring, reporting, and recordkeeping requirements apply to Unit DC-0. *See* 40 CFR 63.1500(c).

A portion of the emissions from Unit DC-0 are captured and controlled by a caustic-injected baghouse. The remainder escapes DC-0 uncontrolled, either because of limitations of the capture system or because the furnace must be opened at various times during each process cycle. According to Spokane Clean Air, the baghouse is required to control emissions of particulate matter pursuant to Washington's federally-enforceable new source review permitting program, which only applies to criteria pollutants. In addition, caustic injection is required to control emissions of hydrogen chloride pursuant to Washington's air toxics program, found in the Washington Administrative Code (WAC) 173-460, which does not establish or implement federally-enforceable Clean Air Act requirements.

## Testing Requirements under 40 CFR 63.1512

The testing requirements in 40 CFR 63.1512(e) apply to each “group 1 furnace ... without add-on air pollution control devices.” According to 40 CFR 63.1512(e)(5), owners and operators of new round top furnaces constructed on or after February 14, 2012 must comply with one of the following during the next required performance test:

- i. Install hooding that meets ACGIH (American Conference of Governmental Industrial Hygienists) Guidelines (incorporated by reference; see 40 CFR 63.14);
- ii. At least 180 days prior to testing petition the permitting authority for major sources, or the Administrator for area sources, that such hoods are impractical under the provisions of 40 CFR 63.1512(e)(6), and propose testing procedures that will minimize unmeasured emissions during the performance test according to 40 CFR 63.1512(e)(7); or
- iii. Assume an 80-percent capture efficiency for the furnace exhaust (*i.e.*, multiply emissions measured at the furnace exhaust outlet by 1.25). If the source fails to demonstrate compliance using the 80-percent capture efficiency assumption, the owner or operator must re-test with a hood that meets the ACGIH Guidelines within 180 days, or petition for a determination that such hoods are impractical under the provisions of 40 CFR 63.1512(e)(6) of this section and propose testing procedures that will minimize unmeasured emissions during the performance test according to 40 CFR 63.1512(e)(7).

As provided in 40 CFR 63.1512(e)(6), installation of hooding that meets ACGIH Guidelines is considered impractical if any of the following conditions exist:

- i. Building or equipment obstructions (for example, wall, ceiling, roof, structural beams, utilities, overhead crane or other obstructions) are present such that the temporary hood cannot be located consistent with acceptable hood design and installation practices;
- ii. Space limitations or work area constraints exist such that the temporary hood cannot be supported or located to prevent interference with normal furnace operations or avoid unsafe working conditions for the furnace operator; or
- iii. Other obstructions and limitations subject to agreement of the permitting authority for major sources, or the Administrator for area sources.

## Determination

Because the Trentwood facility is an area source of HAP, and Spokane Clean Air does not have delegation of Subpart RRR, Region 10 is the appropriate authority for determinations under 40 CFR 63.1512(e).

After reviewing the criteria in 40 CFR 63.1512(e)(6), EPA agrees that installation of hooding on Unit DC-0 that meets ACGIH Guidelines is impractical based on Kaiser’s August 2016 submittal, direct visual observation of equipment location and operation of Unit DC-0 made by EPA staff during several site visits, reports made by Spokane Clean Air staff, and the part 70 permit and statement of basis associated with the source. In the case of Unit DC-0 as configured in the Trentwood facility, the primary factor for consideration is the overhead crane. In order to charge the furnace prior to the beginning of the melt cycle, the crane must remove the lid of the furnace, deliver multiple loads of aluminum scrap into the furnace, and finally replace the lid. ACGIH compliant hooding installed over the furnace would preclude operation of the overhead crane. Additionally, there are equipment and structural obstructions in the form of structural beams, and space limitations associated with the walls, ceiling, and adjacent

work areas. Because Unit DC-0 is a tipping furnace, it must be asymmetrically elevated in order to be efficiently drained of molten metal. While onsite, EPA observed very little clearance between the upper edge of the furnace when tipped and the overhead crane and structural beams. Thus, any temporary hooding would have to accommodate tipping while contained within an enclosed space where an overhead crane must be able to enter and exit the hooded area (the furnace) multiple times each melt cycle. Furthermore, there must be space where the hooding could be relocated when the top was removed for charging. For these reasons, EPA has determined that the installation of hooding that meets ACGIH Guidelines within the meaning of 40 CFR 63.1512(e)(5) and (e)(6) is impractical for Unit DC-0 as such furnace is configured in the Trentwood facility. It is appropriate for Kaiser to test in accordance with 40 CFR 63.1512(e), provided Kaiser conducts its performance test between the furnace exhaust outlet and the baghouse inlet.

According to 40 CFR 63.1512(e)(5)(ii), with a request for a determination that hooding is impractical, the owner or operator of a furnace shall propose testing procedures that will minimize unmeasured emissions during the performance test as provided in 40 CFR 63.1512(e)(7). Therefore, any performance testing conducted based on this impracticability determination may not occur until at least 180 days after Kaiser submits its proposed testing procedures as provided in 40 CFR 63.1512(e)(7). Kaiser's August, 2016 submittal identified six of the 10 alternatives in 40 CFR 63.1512(e)(7) as feasible for possible future furnaces. This may be a valuable starting place for considering procedures that will minimize unmeasured emissions during testing of Unit DC-0. Kaiser did not, however, (1) identify which alternatives were feasible for DC-0 or (2) provide any site-specific details on how any of the alternatives would be implemented at DC-0. Based on our observations of fugitive emissions during our site visits, EPA recommends that special attention should be paid to minimizing unmeasured fugitive emissions during the time immediately following burner firing at the start of the melt cycle. Note that the submittal required by 40 CFR 63.1512(e)(7) is in addition to the site-specific test plan required by 40 CFR 63.7 and 40 CFR 63.1511.

In making this determination, EPA has drawn no conclusions regarding whether any performance tests that have previously been conducted on Unit DC-0 comply with any applicable requirements of 40 CFR part 63, subpart RRR or the general provisions of part 63. In addition, this determination is limited to Unit DC-0 as configured in the Trentwood facility and does not apply to any other furnaces that may be installed at the Trentwood facility even if they use the same equipment and are in a similar configuration to Unit DC-0. Requests for hooding impracticability determinations for each new group 1 furnace subject to the testing requirements of 40 CFR 63.1512(e) must be submitted at least 180 days prior to conducting testing.

If you have any questions about this determination, please contact Geoffrey Glass of my staff at (206) 553-1847 or [glass.geoffrey@epa.gov](mailto:glass.geoffrey@epa.gov).

Sincerely,



Kelly McFadden, Manager  
Stationary Source Unit

Cc: Julie Oliver, Spokane Regional Clean Air Agency  
April Westby, Spokane Regional Clean Air Agency (email)