



# Florida Department of Environmental Protection

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Secretary

October 11, 2010

Mr. Allan Annis, Regional Director of Operations  
Hydro Aluminum North America, Inc.  
200 Riviera Blvd  
St. Augustine, Florida 32086

**Re: 2<sup>nd</sup> Revised Draft Air Construction Permit No.: 1090447-009-AC  
St. Augustine Facility**

Dear Mr. Annis:

One copy of the "2<sup>nd</sup> Revised Draft Determination" for the air construction permit for the St. Augustine Facility located at 200 Riviera Boulevard, St. Augustine, St. Johns County, Florida is enclosed. This letter is a courtesy to inform you the changes made to the Draft Permit as a result of the revised construction permit application pages received on September 27, 2010.

Please submit any written comments you wish to have considered concerning the permitting authority's proposed action to Christopher L. Kirts P.E., at the above letterhead address no later than thirty (30) days from the date of this letter. If you have any other questions, please contact Rita Felton-Smith at (904) 807-3237.

Sincerely,

Christopher L. Kirts, P.E.  
District Air Program Administrator

CLK: rfs

Enclosure

copy furnished to:

Ms. Barbara Friday, DEP BAR: [Barbara.Friday@dep.state.fl.us](mailto:Barbara.Friday@dep.state.fl.us) (for posting with U.S. EPA, Region 4)  
Mr. Timothy Keesling, Hydro Aluminum, Inc.: [Timothy.Keesling@hydro.com](mailto:Timothy.Keesling@hydro.com)  
Mr. Kennard Kosky, P.E.: [Ken\\_Kosky@golder.com](mailto:Ken_Kosky@golder.com)

## I. Notice and Publication

The Department distributed a combined Public Notice, Draft Air Construction Permit, and DRAFT Title V Operation Permit Revision on August 10, 2010. The applicant published the Public Notice in the St. Augustine Record on August 17, 2010. The Department received the proof of publication on August 24, 2010. No requests for administrative hearings or requests for extensions of time to file a petition for administrative hearing were received.

## II. Applicant Comments.

Comments on the Draft Air Construction Permit were received from the applicant via email on August 30, 2010. The Department reissued the Draft Air Construction Permit on September 9, 2010. On September 27, 2010 the Department received revised construction permit application pages from the applicant requesting several changes to the draft permit. Listed below is each comment/requested change followed by the Department response and proposed permit change if applicable.

### Comment #1:

#### **Reduction of the Remelt Furnace (EU 004) permitted Processing of Contaminated Aluminum**

Hydro has determined based on review of past operation and future projections that 35 percent is the maximum rate the facility will charge the Remelt Furnace (by weight of the total charge mixture), aluminum that contains paint, lubricants, coatings, or other foreign materials. In order to reduce the testing requirement to be consistent with current operation, i.e., maximum of 35 percent contaminated scrap, Hydro is requesting that Condition 3.a. be revised to read as follows:

*“3.a. Remelt Furnace: The Remelt furnace is authorized to process either clean charge OR up to ~~50%~~ 35% (by weight of the total charge mixture), aluminum that contains paint, lubricants, coatings, or other foreign materials.”*

Response. Condition 3.a. of the draft construction permit is revised as requested. In addition, the Department has added the following Specific Condition No. 15 in order to revise the conditions of previously issued air permits that established this maximum percentage as 50% for the Remelt Furnace.

### **REVISIONS TO PREVIOUSLY ISSUED PERMITS NOS. 1090447-003-AC, AND 1090447-006-AC**

**15. Previous Permits: Except for the revisions identified within this construction permit, all other conditions of permit Nos. 1090447-003-AC, and 1090447-006-AC remain effective and are not changed.**

- a. Specific Condition D.1 of Permit No. 1090447-003-AC is revised to Specific Condition Nos. 2 and 3 of this construction permit.
- b. Specific Condition C.1 of Permit No. 1090447-006-AC is revised to Specific Condition Nos. 2 and 3 of this construction permit.

[Revised Application No. 1090447-009-AC received 9/27/10; Rules 62-4.070(3) and 62-4.080, F.A.C.]

The Department has also added the following language to the permit and project descriptions:

This is the final air construction permit, which authorizes:

- (9) The reduction in the maximum allowed percentage of aluminum that contains paint, lubricants, or other foreign materials from 50 to 35% by weight of the total charge mixture to be processed in the Remelt Furnace (Emissions Unit 004).
- (10) The addition of permit condition language for the Remelt Furnace (Emissions Unit 004) which clarifies the period during which the wet scrubber is in operation during the charging of aluminum that contains paint, lubricants, or other foreign materials.

#### **PROPOSED PROJECT**

- Hydro is requesting the reduction in the maximum allowed percentage of aluminum that contains paint, lubricants, or other foreign materials from 50 to 35% by weight of the total charge mixture to be processed in the Remelt Furnace (Emissions Unit 004).
- Hydro is requesting the addition of permit condition language for the Remelt Furnace (Emissions Unit 004) which clarifies the period during which the wet scrubber is in operation during the charging of aluminum that contains paint, lubricants, or other foreign materials.

#### **Comment #2:**

##### **Modification of the Testing Requirement, for the “Temporary Project Activities” – Operation Without the Scrubber**

Hydro has determined that 35 percent is the maximum rate the facility will charge the Remelt Furnace (by weight of the total charge mixture), aluminum that contains paint, lubricants, coatings, or other foreign materials. As such, Hydro is requesting that Condition 8.2) be revised to read as follows:

*“8.2) processing ~~50%~~ 35% (by weight of the total charge mixture), aluminum that contains paint, lubricants, coatings, or other foreign materials.”*

*Contaminated charge materials are defined as anything not covered by the definition of clean charge.*

Response. The requested language for the term “contaminated charge materials” is discussed in the response to Comment #3. Based on the comment, Condition 8.2). of the draft construction permit is revised as follows.:

2) processing 35% (by weight of the total charge mixture) aluminum that contains paint, lubricants, coatings, or other foreign materials.

**Comment #3:**

**Additional of Language to EU 004 to Clarify Scrubber Operation.**

**The initiation of shutdown of the wet scrubber is triggered by the charge door. The wet scrubber is operationally set to shut down 30 minutes after the charge door closes following the last push of charge materials. The current permit language does not provide sufficient detail to describe the timed shutdown past the last charge push. As such, Hydro requests Permit Condition 4.a.2. to be revised to read as follows:**

*2. With the exception of the performance test authorized in Specific Condition 8. of this permit, the wet scrubber shall be in operation at all times when aluminum that contains paint, lubricants, coatings, or other foreign materials is being processed in the Remelt Furnace. Specifically, the wet-scrubber shall operate during the charging of contaminated charge materials, from the beginning of the charge for a minimum of 30 minutes after the charge door closes following the last push of charge material.*

Response. Subsequent to this comment received on September 27, 2010, Hydro and the Department through email correspondence and a telephone conversation with Mr. Keesling on October 8, 2010, agreed to the following permit condition language:

2. With the exception of the performance test authorized in Specific Condition 8. of this permit, the wet scrubber shall be in operation at all times when aluminum that contains paint, lubricants, coatings, or other foreign materials is being processed in the Remelt Furnace. Specifically, the wet-scrubber shall operate during the charging of such charge/feed aluminum that contains paint, lubricants, coatings, or other foreign materials, from the beginning of the charge for a minimum of 30 minutes after the charge door closes following the last push of charge material.

**Change made by the Department to the draft construction permit:**

After further review of the 40 CFR 63 Subpart RRR definition of a Secondary Aluminum Processing Unit (SAPU), the Department has removed the In-line Fluxer (since it is a separate piece of equipment) from the Holding Furnace (Group 2 Furnace). It is now its own Emissions Unit. It is understood from the October 8, 2010 telephone discussion with Mr. Keesling, previously the Department suggested that in-line fluxer be grouped with the Holding Furnace. However, it appears that its re-designation as an emissions unit is consistent with the Subpart definition and may also help with clearly identifying the applicable requirements in the pending Title V Operation Permit Revision.

Based on this change, the emissions unit description of the draft construction permit is revised as follows:

ID No.	Emission Unit Description
003	<p>Holding Furnace</p> <p><i>The Holding Furnace is used as a holding furnace for molten aluminum processed in the Remelt Furnace. The Holding Furnace or the "North furnace" is manufactured by Thorpe Technologies. It has one emissions point (stack height: 51' 4", inside diameter 67") and the emissions are uncontrolled. The holding furnace is a Group 2 furnace as defined in 40 CFR 63.1503. <del>Upon exiting the Holding Furnace, molten aluminum is processed in an in line fluxer that uses only nonreactive, non-HAP-containing/non-HAP-generating gases or agents.</del></i></p> <p><i>The unit is subject to 40 CFR 63, Subpart RRR - National Emission Standards for Hazardous Air Pollutants for Secondary Aluminum Production.</i></p>
<u>010</u>	<p><u>In-line Fluxer</u></p> <p><u><i>The In-line fluxer processes molten aluminum from the Holding Furnace (Emissions Unit 003). The in-line fluxer uses only nonreactive, non-HAP-containing/non-HAP-generating gases or agents.</i></u></p> <p><u><i>The unit is subject to 40 CFR 63, Subpart RRR - National Emission Standards for Hazardous Air Pollutants for Secondary Aluminum Production.</i></u></p>

**Specific Condition No. 3.b. is revised as follows:**

- b. Holding Furnace: The Holding Furnace is only authorized to hold or process clean charge as defined by 40 CFR 63.1503 (molten aluminum received from the Remelt Furnace) and alloying elements added directly to the Holding Furnace. ~~The holding furnace also consists of an in-line fluxer that utilizes only non-reactive flux material(s).~~

**The Proposed Project language in the draft permit is revised as follows:**

Under this project, the In-line Fluxer which in previously issued permits has been included with the Holding Furnace (Emissions Unit 003), will be identified as a separate emissions unit consistent with the 40 CFR 63 Subpart RRR definition of a Secondary Aluminum Processing Unit, 40 CFR 63.1503.

<u>Facility ID No. 1090447</u>	
<u>ID No.</u>	<u>Emission Unit Description</u>
<u>010</u>	<u>In-line Fluxer</u>