

**From:** [Taylor, Jimmy E.](#)  
**To:** [Air.Pollution Control](#)  
**Cc:** [Shea Cofer](#); [Collin Scherdell](#)  
**Subject:** [EXTERNAL] ESRN 65-0049 Administrative Amendment request  
**Date:** Tuesday, June 22, 2021 11:58:51 AM  
**Attachments:** [ESRN 65-0049AA executed.pdf](#)

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Good Afternoon,

Please see the attached Heraeus Wartburg ESRN 65-0049 Source 1 administrative amendment request.

Have a nice evening.

Best Regards,

**Jimmy E. Taylor**  
Technical, Environmental, Health, Safety & Quality Manager

Global Business Unit  
Heraeus Precious Metals

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June 22, 2021

Doug Wright  
Division of Air Pollution Control  
Tennessee Department of Environment & Conservation  
William R. Snodgrass Tennessee Tower  
312 Rosa L. Parks Avenue, 15th Floor  
Nashville, TN 37243

Subject: Heraeus Metal Processing, Inc.  
ESRN 65-0049  
Permit No. 570857  
Administrative Amendment Request – Source 01 install emergency bypass stack on  
Burning Chamber

Dear Mr. Wright:

With this letter, Heraeus Metal Processing, Inc. (Heraeus) submits an Administrative Amendment Request for Source 01 to install an emergency bypass stack on the Burning Chamber for worker safety.

Heraeus may process precious metal-bearing materials in the Burning Chamber that contain hazardous substances that, in the event of the exhaust fan or control device malfunction, would create a hazardous atmosphere for employees. The emergency bypass stack would only be activated in the unlikely event of the exhaust fan or control device malfunction. During a malfunction, the emergency bypass would be activated, and the Burning Chamber would be shut down.

### Description of Change

Source 01 includes eight roasting ovens, one chamber furnace, and one burning chamber controlled by two afterburners, one quench tank, and one packed tower scrubber. This modification adds an emergency bypass stack to the burning chamber and a shut-off valve for the exhaust duct. The valve closes the duct that normally exhausts to Oxidizer #2, so no other pollutants will be pulled from the Chamber Furnace during an emergency bypass event. The sole purpose of the emergency bypass stack is to protect employees from hazardous atmospheres. The emergency engine will be activated in the event of a power failure to allow equipment to be shut down and allow contents in the ovens/furnaces to complete the burn cycles. Additionally, emergency water is stored in case water supply to the scrubber is lost. The generator and the water supply are designed to allow approximately 4 hours to shut down without the equipment to avoid excess emissions. The emergency bypass stack will only be used if the emergency response described above fails.

The air flow rate for the emergency stack will be approximately 500 cfm in order to evacuate the Burning Chamber within one minute.

The installation of the valve and the emergency bypass stack does not affect normal operations of the Burning Chamber, and any required use of the emergency bypass stack will be reported as per rule TAPCR 1200-03-20-.03.

## Emissions Estimates

Installation of the emergency bypass stack will not increase actual emissions during normal operations. Emissions will only be exhausted from the emergency bypass stack in the event of an exhaust fan or control equipment failure. Excess emissions will be logged and reported as per rule TAPCR 1200-03-20-.03, .04, and .06.

## Suggested Permit Language

Minor additional permit language is required to facilitate this amendment. Suggested permit language is provided below:

*The bypass stack must remain closed at all times, except for emergency purposes during a malfunction event and only when necessary, to protect the safety of the employees working in the area.*

In the event of a malfunction to the exhaust fan or control equipment, excess emissions may still occur even without the use of the emergency bypass stack. The emergency bypass stack only serves to exhaust the hazardous gases out of the employee working area, thus avoiding a hazardous atmosphere. Any malfunction or emergency condition would be required to be documented and reported, including excess emissions, as indicated in Conditions B7, B8, B9, and B11 in Permit No. 570857.

I hereby certify that, based on information and belief formed after reasonable inquiry, the statements and information in this document are true, accurate, and complete.

If you have questions or comments, please contact Jimmy Taylor, Environmental Manager at (423) 346-1053, or my consultant, Shea Cofer at (615) 418-1414.

Sincerely,



Norbert Ritschel  
Senior Vice President and Plant Manager

Attachment

## Process Flow Diagram

