

Heraeus Precious Metals North America LLC
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July 2, 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 Precious Metals North America LLC
ESRN 65-0049
Title V Permit Renewal Application

Dear Mr. Wright:

With this letter, Heraeus Precious Metals North America LLC (Heraeus) submits a renewal application for Title V permit number 570857. With this timely application, Heraeus will continue to operate under the current permit until a new operating permit is issued. The appropriate forms and calculations are attached.

Heraeus requests a permit shield as authorized by Section 504(f) of the Clean Air Act and as provided by TAPCR 1200-03-09-.02(11)(e)(6).

This application includes the minor modifications that have been made since the permit was issued on January 11, 2017. The modifications include the following:

Minor Modification 1 – Application Dated August 1, 2014

- Add Source 12

Minor Modification 2 – Application Dated May 22, 2017

- Remove CAM plan for Sources 04, 06, & 09

Minor Modification 3 – Application Dated October 29, 2018

- Add Source 13 Rhodium Furnace with baghouse
- Source 12 – increase burner size of afterburner

Minor Modification 4 – Applications Dated August 16, 2019 & October 31, 2019 (Source 01)

- Source 01 – Remove burners from cooling chambers
- Reroute cooling chambers and electric reburn furnace to 14,000 cfm baghouse
- Add new burning chamber ducted to oxidizer and scrubber

Administrative Amendment 1 – Letter Dated February 6, 2020 (Source 01)

- Source 01 – Set pressure drop for cooling baghouse

Administrative Amendment 2 Letter Dated November 24, 2020 (Source 13)

- Source 13 – Increase process capacity and add scrubber for material collection

Requested changes and corrections associated with the permit renewal are listed below.

Source	Equipment	Current	Update	Impact
-01	Tray furnace burner rating	1.5 MMBtu/hr each	1.6 MMBtu/hr each	No change to allowable emissions
	Oxidizers	Minimum temperature 1,400°F	Minimum temperature 1,400°F (-50°F)	No change to emissions
-04	Balls Mills with High Grade metal sampling and 2 Baghouses	10,000 cfm each	Low Grade BH 15,700 cfm High Grade BH 15,100 cfm	Increase in potential PM emissions by 0.41 tons/year
	Tray Loading with Baghouse	10,000 cfm	15,100 cfm	
-06	Crucible furnace with baghouse	Permitted	Remove from permit	Reduced facility-wide potential emissions
-09	Rh furnace	0.15 MMBtu/hr	0.9 MMBtu/hr	Insignificant increase in emissions from fuel combustion
-12	Coke Oven	Permitted	Remove from permit	No change to allowable emissions
	Afterburner	1.41 MMBtu/hr	1.0 MMBtu/hr	Reduced potential emissions from natural gas fuel combustion
	Afterburner	Minimum temperature 1,400°F	Minimum temperature 1,400°F (-50°F)	No change to emissions

Heraeus has a CAM plan for the oxidizers on Source 01 and for the afterburner on Source 12 signed February 15, 2019. Heraeus will update the CAM plan to state a deviation for the thermal oxidizers/afterburner will be “defined as any three hour period of operation during which the average value of the measured parameter is less than 1400°F (-50°F) for Source 01 oxidizers and less than 1400°F(-50°F) for Source 12 afterburner”.

The current permit limits HAPs to below 9.9 tons per year for each individual HAP and below 24.9 tons per year for total HAPs; however, Heraeus requests the HAP limit be removed from the permit. A construction permit was submitted recently dated May 25, 2021 in which potential HAP emissions will exceed the current limit, and a request was made within that application to remove the existing

HAP limit. Becoming a major source of HAPs will not subject Heraeus to any National Emission Standards for Hazardous Air Pollutants (NESHAP).

Heraeus requests the agreement letters listed below still be in effect in the new permit.

- October 31, 2019 and August 13, 2019 for SO₂ and visible emissions on Source 01
- October 1, 2008 and March 10, 2009 for PM and SO₂ emissions on Source 09
- November 8, 2016 for PM, SO₂, and NO_x emissions on Source 12
- October 29, 2018 for Raw material input, VOC, and SO₂ emissions on Source 13

Furthermore, Heraeus agrees to limit PM emissions for Source 04 to 0.01 gr/dscf (3.82 lb/hr) and to limit opacity to 10% in accordance with TAPCR 1200-03-07-.01(5) and TAPCR 1200-03-05-.01(4), respectively.

There are no new insignificant units to add to the permit. Those listed in Condition E3-7 of the current permit are accurate.

In accordance with the Opacity Matrix in operating permit 570857, Heraeus will conduct 30-minute visible emissions evaluations (VEEs) for the applicable sources. VEEs will be conducted for Sources 01 and 12. Sources 04, 09, 11, and 13 have allowable emissions less than 10 tons per year, therefore, no opacity reading is required. VEEs will be reported in a future semiannual report.

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.

Please provide written notification of receipt of a complete, timely application so that Heraeus may continue to operate under the current permit while a new operating permit is being drafted. If you have questions or comments, please contact Jim Taylor, Technical, Environmental, Health, Safety, and Quality Manager at (423) 346-1053, or my consultant, Shea Cofer at (615) 418-1414.

Sincerely,



Norbert Ritschel

Senior Vice President and Plant Manager