Heraeus

Heraeus Precious Metals North America LLC
1975 Knoxville Highway
Wartburg, TN 37887
Phone (423) 346-1041
Fax (423) 346-8655

May 25, 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
Permit No. 570857
Construction Permit Application – Calciner, Smelter, and associated equipment

Dear Mr. Wright:

With this letter, Heraeus Precious Metals North America, LLC (Heraeus) submits a construction permit application to install new processing equipment at their facility located at 1975 Knoxville Highway, Wartburg, Tennessee. The equipment will consist of a calciner, ball mills, and blender with baghouse control, a smelter with lime injected baghouse control, a hammer mill with baghouse control, and silos and day bins controlled with bin vents. The appropriate forms, a process flow diagram, and calculations for the equipment described above are attached to this letter.

The new equipment will process material for precious metal recovery. The calciner will be used to dry filter cake before it is introduced into the smelter. A small amount of volatile organic compounds (VOCs) may be released in the calciner, so no VOCs are expected in the smelter because they will already be removed. The smelter will process material that will generate sulfur dioxide (SO2) and hydrogen chloride (HCl) emissions, so a lime injection system prior to the baghouse will be used to reduce SO2 and HCl emissions. The potential HCl emissions make Heraeus a major source of hazardous air pollutants (HAPs). However, there are no New Source Performance Standards (NSPS) or National Emission Standards for Hazardous Air Pollutants (NESHAP) that apply and Heraeus already operates under a Title V permit, so becoming a major source of HAPs will not subject the facility to new requirements due to a change from area source to major source of HAPs.

Dispersion models were performed to determine the stack height for the smelter to meet the 70.0 ug/m^3 HCl, 24-hour average, as indicated in TAPCR 1200-3-3-.03(1)(c). Summary information from the model is included as an attachment to this letter.

Condition E3-6 of Permit No. 570857 states Heraeus is subject to a single HAP limit of 9.9 tons per year (tpy) and a total HAP limit of 24.9 tpy. With this application, Heraeus requests the limit be removed from the permit. Furthermore, Heraeus agrees to the following emission limits and opacities.

Heraeus

Equipment	Stack ID	Pollutant	Limit	Reference
Calciner, ball mills, blender with baghouse control	14-1	PM	0.01 gr/dscf 10% opacity	TAPCR 1200-03-07-.01(5) TAPCR 1200-03-05-.01(4)
		SO2	0.002 lb/hr	TAPCR 1200-03-14-.01(3)
Smelter	14-2	PM	0.01 gr/dscf 10% opacity	TAPCR 1200-03-07-.01(5) TAPCR 1200-03-05-.01(4)
		SO2	21.88 lb/hr	TAPCR 1200-03-14-.01(3)
Hammer Mill	14-3	PM	0.01 gr/dscf 10% opacity	TAPCR 1200-03-07-.01(5) TAPCR 1200-03-05-.01(4)
Silos & Day Bins	14-Silos, 14-Day Bins	PM	0.02 gr/dscf	TAPCR 1200-03-07-.01(5)

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

Attachments