

COMMONWEALTH OF PENNSYLVANIA
 Department of Environmental Protection
 Southwest Regional Office

TO AQ Case File TVOP-04-00059

FROM Noor Nahar *Nn.*
 Air Quality

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DATE November 6, 2014

RE Review of Title V Operating Permit Renewal Application
 IPSCO Koppel Tubular LLC
 Koppel Plant
 Beaver County

APS 765672 AUTH 903583 PF 238740

Background:

The IPSCO Koppel Tubulars Corporation, Koppel Works is located in the Boroughs of Koppel and Big Beaver, Beaver County. The primary operations at Koppel are the melting and hot forming of alloy or carbon steels into solid steel "blooms". Koppel melts scrap steel and additives using a 100-ton capacity Electric Arc Furnace (EAF).

Initial Title V Operating Permit was issued on October 19, 1999 with an expiration date of October 19, 2004. First Title V Operating Permit renewal was issued on January 20, 2005 with an expiration date of January 20, 2010. The permit was amended on January 11, 2007 to change the name from Koppel Steel Corporation to IPSCO Koppel Tubulars LLC. Second Title V Operating Permit renewal application was received on September 24, 2012.

Table below summarizes the list of sources that have been exempted from Plan Approval/Operating Permit requirements since last TVOP renewal was issued, under Pa Code §127.14 (a)(8) through Request for Determination (RFD) or De Minimis Notification (DMN) under 25 Pa Code§127.449(i) due to the insignificant amount of emissions.

| Source | Date | Emission changes |
|---|------------------|------------------|
| DMN Transmittal - Enlarge furn, add 2 burns to exist 15 | February 9, 2007 | no increase |

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|--|-------------------|---|
| DMN Transmittal – Installation of a 6.5 inch round billet Caster | February 26, 2007 | no increase |
| DMN Transmittal - Ladle Skulls Cutting by Oxy Lance | July 16, 2007 | temporary |
| RFD Approval – Replacement of three Bin Vent Collectors | March 7, 2008 | no increase |
| DMN Transmittal - Ladle Skulls Cutting | April 1, 2008 | temporary |
| RFD Approval – Replacement of three Bin Vent Filters | Sept. 26, 2008 | |
| DMN Transmittal – Enlarge EAF Furnace Hood from 52’x60’ to 52’x85’ | October 6, 2008 | no increase |
| DMN Transmittal – Coating Operation | May 28, 2010 | no increase |
| DMN Transmittal - Coating Line | August 25, 2010 | 0.7 tpy VOCs |
| DMN Transmittal - Trial Acetylene or natural gas for torch cutting | May 6, 2011 | no increase |
| DMN Transmittal - Ladle Skulls Cutting | July 11, 2011 | temporary |
| RFD Approval – Melt Shop Dust Collection | February 14, 2012 | no increase |
| RFD Approval – Tube Finishing Line Projects, Heat Treat Furn/UV Coater | April 25, 2012 | no increase |
| RFD Approval – Selective Demolition Projects | June 12, 2012 | no increase |
| RFD Approval – RFD Approval Replace EAF Sidewall Burners | June 14, 2012 | no increase |
| DMN Transmittal - Ladle Skulls Cutting | August 20, 2012 | temporary |
| DMN Transmittal - Melt Shop Dust Collection Improvement | February 2, 2013 | no increase |
| RFD Approval – 435 bhp Emergency Generator at Steelyard | April 4, 2014 | 1.66 tpy NOx; .13 tpy VOC & .015 tpy PM |

Regulatory Analysis:

Per Pa. Code Title 25 Section 127.402(a), a permit is required to operate a stationary air contamination source. The applicable emission limitations, monitoring, recordkeeping, reporting and work practice standard requirements of Pa. Code Title 25 Sections 121.7 123.1, 123.2, 123.13, 123.21, 123.22, 123.31, 123.41, 123.42, 123.43, 127.441, 127.442, 127.444135.5, 129.14, 129.52, 129.56, 129.57 and 129.63 have been included in this TVOP Renewal.

Electric Arc Furnaces (EAFs) are subject to requirements of 40 CFR 60 Subpart AA, the NSPS for Steel Plants if they were constructed after the earlier effective date of October 21, 1974 but prior to August 17, 1983. The EAF at this facility was originally constructed prior to 1974. So Subpart AA is not applicable. However, the EAF underwent significant modification under Plan Approval 65-00059C during the time period 1995 to 1998. The modification made EAF subject to Subpart AAa which applies to each affected facility that commences construction, modification, or reactivation after August 17, 1983.

The applicability of 40 CFR 63, Subpart YYYYYY – NESHAP for Area Sources: An Electric Arc Furnace Steelmaking facility has been evaluated. The Latrobe facility is an area source of HAP emissions that operates an Electric Arc Furnace, therefore Subpart YYYYYY applies.

All the requirements have been incorporated from the initial TV Operating Permit and from Plan Approval 65-00059C to this TV Renewal Operating Permit.

The Compliance Assurance Monitoring (CAM) provisions of 40 CFR 64 applies when all of the following are true:

1. The source is located at a Title V facility,
2. The source is subject to an emission standard,
3. The source uses a control device to achieve compliance with the emission standard, and
4. Emissions from the source, without the control device, exceed major source thresholds.

Allegheny Ludlum's Latrobe facility has identified the following sources and associated control device to be subject to CAM:

Source ID 109 ELECTRIC ARC FURNACE

IPSCO facility has proposed the use of existing testing, monitoring and recordkeeping requirements as CAM. Appropriate conditions have been added to the TVOP.

The applicability of 40 CFR 63, Subpart XXXXXX—National Emission Standards for Hazardous Air Pollutants Area Source Standards for Nine Metal Fabrication and Finishing Source Categories has been evaluated for this site. This rule applies to certain operations at facilities that fall under specific SIC and NAICS classifications. As a steel manufacturing facility operating under NAICS Code is 331110, the SIC code is 3312, this facility is not subject to this rule.

Additional conditions included in this TVOP are appropriate testing, emission reduction, work practice standards, monitoring, recordkeeping and reporting requirements.

Process and Emissions:

Scrap handling, melting and casting are conducted in and around the Melt Shop area on the south end of the Main Plant. Scrap is received at the facility by trailer truck and rail. Scrap received by trailer truck is unloaded directly into the scrap bay located adjacent to the melt shop. Scrap received by rail is off loaded in the scrap yard located on the north portion of the plant. As needed, the scrap is transferred from the scrap yard to the melt shop scrap bay via the on-site rail transportation system. Once melted in the EAF, the molten steel is transferred from the EAF to a Ladle Refining Station (LRS) where final chemical adjustments to the metallurgical content of the steel are made. Following final adjustments, the molten steel is transferred to the facility's four-strand continuous caster. The caster is currently configured to produce 9-inch by 9-inch square blooms or 6.5 inch "rounds" that are each approximately 20-feet in length.

Steel "Blooms" are cut to desired length in the "Steel Yard" and shipped. The cast blooms or rounds are considered semi-finished product, which can be sold for further processing. Slag removed from the furnace or the ladles is transferred to a reclaim area located immediately south of the Melt Shop where the slag cools and is processed by Harsco for off-site reuse.

The Koppel Plant also has steel tube finishing operations called "Q&T" where steel tube from another location may be heat treated, straightened, cleaned (brushed), coated, and cut to end user specifications. These activities take place in buildings located on the North Plant property.

The coating operation is exempted from Plan Approval in 2012 and installed in 2013-14 uses a no VOC "UV cured" clear coating which is applied to steel tube to reduce rust.

Ancillary operations that occur at the facility include quality control testing of the cast steel, ladle and tundish cleaning and relining, raw material storage, waste management, wastewater treatment, and facility maintenance. Quality control testing performed in the casting area involves cutting small cross sections of the steel bloom called "coupons" from the end of the cast steel shapes and preparing the coupons for metallurgical testing by subjecting the coupon to a hot hydrochloric acid solution. Quality control testing of steel tube includes a number of types of nondestructive testing.

Facility-wide emissions reported for the 2013 calendar year include approximately 116.87 tons of NO_x, 6.96 tons of filterable PM₁₀, 63.33 tons of VOC, 28.30 tons of CO, and 0.57 tons of SO_x.

Conclusions and Recommendations:

I have completed my review of IPSCO Koppel Tubular Title V renewal application for their facility in Koppel, Beaver County. IPSCO has met the regulatory requirements associated with this application submittal. The attached proposed permit reflects terms and conditions as described in IPSCO's permit application. It is my recommendation to issue the proposed Title V Operating Permit renewal for this facility.