GROUP AGAINST SMOG & POLLUTION
1133 South Braddock Ave., Suite 1A
Pittsburgh, PA 15218
412-924-0604
gasp-pgh.org

August 24, 2017

VIA EMAIL
Allegheny County Health Department
Air Quality Program
301 39th St., Bldg. 7
Pittsburgh, PA 15201
aqpermits@alleghenycounty.us

Re: Comments of Group Against Smog and Pollution Regarding the Draft Installation Permit for U.S. Steel's Edgar Thomson Works (Permit # 0051-I006)

Dear Sir or Madam:

Please accept these comments regarding the draft Installation Permit ((#0051-I006) (the "Installation Permit") for U.S. Steel's Edgar Thomson Works (the "Facility"), which I am submitting on behalf of the Group Against Smog and Pollution. According to the notice posted on its website, the Allegheny County Health Department (the "Department") is accepting comments on the Permit through August 24, 2017.

Very truly yours,

/s

John K. Baillie
Senior Attorney

COMMENTS OF THE GROUP AGAINST SMOG AND POLLUTION REGARDING THE SULFUR DIOXIDE SIP INSTALLATION PERMIT FOR U.S. STEEL EDGAR THOMSON WORKS (IP #0051-I006)

The Facility emits sulfur dioxide ("SO_2") in large part because the fuels that certain of its sources are authorized to combust – natural gas, blast furnace gas, and coke oven gas – contain sulfur compounds that form SO_2 during combustion. The amount of SO_2 emissions from those sources during any given hour will thus depend on the amount of each type of fuel that the sources combust during that hour and the amount of sulfur in that fuel. The amount of sulfur compounds in each type of fuel varies by type, and may vary over time within each type.

In order to attain the 2010 National Ambient Air Quality Standard for SO_2, the Installation Permit will impose hourly limits on SO_2 emissions from the Facility's Riley Boiler 1, Riley Boiler 2, Riley Boiler 3, Blast Furnace 1 Stoves, Blast Furnace 3 Stoves, and Continuous Casting (roof) that are lower than those authorized by its most current Title V Operating Permit.[1] The Installation Permit will also impose hourly limits on SO_2 emissions from sources that do not have such limits under the Title V Operating Permit.[2] The Installation Permit does not restrict the amount of natural gas, blast furnace gas, or coke oven gas that any of those sources combust.[3] Accordingly, during any particular hour, those sources may combust any or all of those fuels. Thus, to ensure that the sources are being operated in compliance with the new SO_2 emission limits, the Facility would thus need to measure both: 1) the amount of each type of fuel that each source combusts during a particular hour; and 2) the sulfur content of such fuel during that hour.

---

1 *Compare* Installation Permit (hereinafter the "IP"), § V.A.1.c *with* Title V Operating Permit #0051 (Apr. 13, 2016) (hereinafter the "TVOP") §§ V.B.1.f (Blast Furnace Stoves), V.F.1.c (Continuous Casting (roof)), and V.H.1c (Riley Boilers).

2 *Compare* IP, § V.A.1.c *with* TVOP, §§ V.A (Blast Furnace Casthouses (roof and fume) and Casthouse Baghouse) and V.D (BOP Process (roof)).

3 *See id.*, § V.A.1.a.

The requirements imposed by the Installation Permit will be incorporated into the Facility's Title V Operating Permit when the Title V Operating Permit is renewed. A Title V Operating Permit must include "compliance certification, testing, monitoring, reporting, and recordkeeping requirements sufficient to assure compliance with the terms and conditions of the permit."[4] As explained below, the Installation Permit and the Facility's Title V Operating Permit do not contain testing, monitoring, and recordkeeping requirements that are sufficient to ensure compliance with the new SO_2 emission limits that will be imposed by the Installation Permit.

I. THE INSTALLATION PERMIT SHOULD BE REVISED SO THAT IT REQUIRES EITHER THAT THE SO_2 EMISSION TEST FOR THE RILEY BOILERS USE THE FUEL WITH THE HIGHEST SULFUR CONTENT OR THAT THE RILEY BOILERS BE OPERATED USING A FUEL MIX THAT IS CONSISTENT WITH THE FUEL MIX TESTED

Although the Facility's Title V Operating Permit does require SO_2 testing once every two years on the Riley Boilers "under maximum normal (i.e., mixed fuel) operating conditions,"[5] the Facility is not required to operate the Riley Boilers in accordance with such conditions – the fuel mix that the Riley Boilers use is not restricted.[6] Thus, the fuel combusted by the Riley Boilers during any particular hour could have higher sulfur content than the tested fuel mix, leading to higher sulfur emissions. The Installation Permit should be revised so that it requires either: 1) that the SO_2 emission test for the Riley Boilers occurs when the boilers are combusting the type of fuel with the highest sulfur content; or 2) that the Riley Boilers be operated using a fuel mix that is consistent with the fuel mix actually tested.

---

4 40 C.F.R. § 70.6(c)(1).

5 TVOP, § V.H.2.a.

6 *See* IP, § V.A.; TVOP, § V.H.

II. THE INSTALLATION PERMIT SHOULD BE REVISED TO REQUIRE THAT THE FACILITY MONITOR, AND RECORD, EACH SOURCE'S HOURLY USAGE OF EACH TYPE OF FUEL

Neither the Installation Permit nor the Title V Operating Permit requires the Facility to monitor or record the amount of natural gas, blast furnace gas, or coke oven gas that the sources listed in the permit's Tables V-A-1 and V-A-2 combust during each particular hour.[7] This omission makes it impossible to accurately determine the amount of SO_2 emitted by those sources during each hour even if the sulfur content of each type of fuel is known. The Installation Permit should be revised to require that the Facility monitor, and record, each source's hourly usage of each type of fuel so that the sources' compliance with SO_2 emission limits can be verified. Notably, the draft installation permits for the Irvin Plant[8] and Clairton Works[9] that were published on July 24, 2017 include such requirements.

III. THE INSTALLATION PERMIT SHOULD REQUIRE THAT THE FACILITY CONTINUOUSLY MONITOR THE SULFUR CONTENT OF ITS BLAST FURNACE GAS SO THAT ITS COMPLIANCE WITH THE NEW SO_2 EMISSION LIMITS IS ENSURED

Although the Installation Permit will require the Facility to monitor and record the sulfur content of the coke oven gas that it combusts on a continuous basis,[10] the Facility is required to test the sulfur content of the blast furnace gas that it combusts only once each calendar quarter.[11] Further, it does not appear that either the Installation Permit or the Facility's Title V Operating Permit require testing or monitoring that would establish operating parameters that could be used to determine the sulfur content of the blast furnace gas produced by the Facility on an hourly

---

7 *See* IP, §§ V.3, V.4; TVOP §§ V.B.3, V.B.4, V.H.3., V.H.4.

8 IP # 0050-I008 (July 23, 2017 draft), § V.A.4.a.

9 IP # 0052-I017 (July 24, 2017 draft), § V.A.4.a.

10 IP, § V.3.c.

11 *Id.*, § V.3.b.

basis.[12] Especially in the absence of such established parameters, quarterly testing may not be sufficient to ensure that the sulfur content of the blast furnace gas that the Facility's sources burn during any particular hour is low enough that the sources will comply with the new emission limits for SO_2. The Installation Permit should be revised to require that the Facility continuously monitor the sulfur content of its blast furnace gas so that its compliance with the new SO_2 emission limits can be verified.

[12] *See id.,* § V.2 and V.3; TVOP § V.