



GROUP AGAINST SMOG & POLLUTION

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November 26, 2012

VIA EMAIL

Alan Binder
Air Quality Engineering Specialist
Pennsylvania Department of Environmental Protection
Southwest Regional Office
400 Waterfront Drive
Pittsburgh, PA 15222

Re: Group Against Smog and Pollution Comments Regarding Plan Approval PA-26-00588A for the Laurel Mountain Midstream, LLC Shamrock Compressor Station

Dear Mr. Binder,

Please accept these comments regarding Plan Approval PA-26-00588A for Laurel Mountain Midstream, LLC's Shamrock Compressor Station, German Township, Fayette County, on behalf of the Group Against Smog and Pollution.

If you have any questions or require additional information, please feel free to get in touch.

Sincerely,

A handwritten signature in black ink, appearing to read 'Joe Osborne', with a long horizontal flourish extending to the right.

Joe Osborne
GASP Legal Director

**GROUP AGAINST SMOG AND POLLUTION (GASP)
COMMENTS REGARDING PLAN APPROVAL PA-26-00588A FOR THE
LAUREL MOUNTAIN MIDSTREAM, LLC SHAMROCK COMPRESSOR STATION**

I. The Department must combine emissions increases from GP5-26-00588A and PA-26-00588 with those from PA-26-00588A for the Shamrock PSD applicability analysis in order to avoid PSD circumvention.

Laurel Mountain Midstream (LMM) seeks approval to install 1 Solar Titan 130-20502S turbine, 1 Caterpillar, Model G3516B emergency generator, 1 dehydrator, 1 reboiler, and 1 produced water tank at its Shamrock Compressor Station. Both LMM and the Department characterize this proposed project as a PSD major modification for greenhouse gases and minor for all other regulated pollutants.

However, the Department's PSD applicability determination improperly treats this proposed modification as separate from emissions increases associated with previous minor source permits for at the Shamrock site. Since 2010 LMM has submitted several minor source plan approval applications for the Shamrock Compressor Station. Most notably:

- **GP5-26-00588A**: received 8/19/2010; issued 9/7/2010; for the installation of 3 Caterpillar G3516B compressor engines, 1 dehydrator, 1 reboiler, and 1 produced water tank, and
- **PA-26-00588**: received 8/25/2010; issued 3/21/2011; for the installation of 3 additional Caterpillar G3516B compressor engines, and 1 Solar Mars 100-16000S turbine

As both the Pennsylvania Environmental Hearing Board (EHB) and U.S. EPA have explained:

“An operator may not phase, stage, or delay a project or engage in incremental construction to avoid the applicability triggers of the NSR/PSD programs.”¹

“If a source files more than one minor source permit application simultaneously or within a short time period of each other, this may constitute strong evidence of an intent to circumvent the requirements of [Major Source] preconstruction review.”²

A determination that multiple modifications should be combined to determine PSD applicability does not require any intent on the part of the applicant to circumvent PSD requirements:

¹ *United Refining Co. v. DEP*, EHB Docket No. 2007-100-L (Aug. 7, 2008), at 12, citing 25 Pa. Code § 127.216. See also 40 CFR § 52.21(r)(4); 25 Pa. Code. § 121.9.

² Memo from John B. Rasnic, U.S. EPA, *Applicability of New Source Review Circumvention Guidance to 3M – Maplewood*, Minnesota (June 23, 1993), at 3, available at <http://www.epa.gov/region7/air/nsr/nsrmemos/maplwood.pdf>.

“Where a source is permitted for several minor modifications that *may in good faith be intended to be separate* but result in the source’s aggregate increases to be major even considering decreases over a short time period (e.g., one year or 18 months), the modifications may require major new source review.”³

To determine whether separately permitted projects must be considered a single project for determining major source applicability, “the Department must independently consider such factors as the relationship of the various tasks measured in time and space, the tasks’ operational, technical, and economic interdependence, whether the tasks are geared toward achieving a shared objective, whether the tasks were conceived originally as part of a common plan, and other relevant considerations.”⁴ Other considerations when determining whether a source is circumventing PSD through multiple minor modifications include “[f]iling of more than one minor source or minor modification application associated with emissions increases at a single plant within a short time period” and “[r]eports of consumer demand and projected production levels.”⁵ “If reported levels are necessary to meet projected consumer demand but are higher than permitted levels, this is additional evidence of circumvention.”⁶

In a statement to DEP, LMM has already characterized GP5-26-00588A and PA-26-00588 as a single project, which, at the Department’s direction, was split between two permits:

“we outlined the equipment desired at Shamrock and were advised to submit an initial GP-5 permit application for the first three Caterpillar engines and then to follow up With a second GP-5 permit application for three additional Caterpillar engines . . . LMM was notified by PADEP on July 26,2010 that the policy had been changed and the second GP-5 permit application would not be accepted . . . Due to this change in guidance, we were directed to develop and submit a plan approval application for engines 4-6, which was submitted August 19, 2010.”⁷

Additionally, LMM project planning documents dating as far back as 2009 describe the phased construction schedule and planned final capacity for the Shamrock Station. Specifically, LMM states that

“[Shamrock] is ultimately expected to consist of approximately 90,000 horsepower of compression and appurtenant facilities capable of moving 600 MMcfd from a suction pressure of 150 psig to a discharge pressure of 1050 psig. The initial phase of site development will include the installation of the first 8,000 horsepower of compression.”⁸

³ *Id.* at 5 (emphasis added).

⁴ *United Refining Co. v. DEP*, EHB Docket No. 2007-100-L (Aug. 7, 2008), at 12.

⁵ Memo from John B. Rasnic, U.S. EPA, *Applicability of New Source Review Circumvention Guidance to 3M – Maplewood*, Minnesota (June 23, 1993), at 3, available at <http://www.epa.gov/region7/air/nsr/nsrmemos/maplwood.pdf>.

⁶ *Id.*

⁷ Attachment 1 - LMM, Response to Cease Construction Order (Mar. 4, 2011) at 2-3.

⁸ Attachment 2 – Laurel Mountain Midstream, Preliminary Project Plan, Shamrock Compressor Station (Nov. 6, 2009) at 1.

The document goes on to state that “the design case calls for expected volumes at the site of 30 MMcfd by the end of 2010, 80 MMcfd by the end of 2011 with increments of 50 MMcfd/year up to a peak approaching 600 MMcfd in 2021.”⁹

In short, GP5-26-00588A, PA-26-00588, and PA-26-00588A:

- were filed “within a short time period” (Aug. 25, 2010 – Nov. 2, 2011),
- are “geared toward achieving a shared objective,” and
- were “conceived originally as part of a common plan.”

Further, ultimate projected production levels (~90,000 HP and 600 MMcfd) are “higher than permitted levels” under GP5-26-00588A (~4000 HP), PA-26-00588 (~25,000 HP), and PA-26-00588A (~45,000 HP).

Thus GP5-26-00588A, PA-26-00588, and PA-26-00588A clearly constitute a single major project. Therefore the Department must combine emissions from each of these projects (as well as future projects) and treat them as single project for purposes of PSD and NSR applicability determinations. Under the revised PSD applicability analysis, the facility-wide NO_x PTE of 98.51 TPY exceeds the 40 TPY NO_x significance threshold, meaning NO_x emissions from Shamrock must meet PSD requirements.

II. As proposed in PA-26-00588A, emissions from Shamrock would likely violate the 1-Hour National Ambient Air Quality Standard for NO₂

Operation of the Shamrock station as proposed in PA-26-00588A would likely cause exceedances of the 1-hour NO₂ standard of 100 parts per billion. A January 11, 2011 letter from LMM to the Department included Screen3 modeling for NO_x emissions from Shamrock.¹⁰ Modeled 1-hour NO_x concentrations at the nearest property line were 179.45 µg/m³ or 95.45 ppb¹¹ based on a NO_x PTE of 73.85 TPY. Under PA-26-00588A the proposed NO_x PTE at Shamrock would increase by ~33% to 98.51 TPY. Assuming a roughly proportional increase in NO_x concentrations at the nearest property line results in a NO_x concentration of ~127.33 ppb

The 100 ppb 1-hour standard was set in 2010 in order to protect human health from NO₂ emissions with an adequate margin of safety.¹² The Department has both the discretion and the duty to deny a plan approval application that would result in the violation of the NAAQS.¹³

⁹ Attachment 2 – LMM, Preliminary Project Plan, Shamrock Compressor Station (Nov. 6, 2009) at 2.

¹⁰ Attachment 3 – LMM, Response to Plan Approval Public and PADEP Comments, Shamrock Compressor Station (Jan. 11, 2011).

¹¹ *Id.* at 7.

¹² 75 Fed. Reg. 6,474 (Feb. 9, 2010).

¹³ See e.g. 25 Pa. Code § 127.12 (“(a) An application for approval shall . . . (6) Show that the source will not prevent or adversely affect the attainment or maintenance of ambient air quality standards when requested by the Department.”) 25 Pa. Code § 127.13b (“(a) The Department will deny a plan approval for a source if. . . (1) The Department has determined that the source is likely to cause air pollution or to violate the act, the Clean Air Act or the regulations promulgated under the act or the Clean Air Act applicable to the source”) In this case, exceedances of the hourly NO₂ NAAQS at Shamrock would violate the Air Pollution Control Act and cause “air pollution,” which is broadly defined as “[t]he presence in the outdoor atmosphere of any form of contaminant . . . in a place, manner or concentration inimical or which may be inimical to public health, safety or welfare or which is or may be

III. Formaldehyde emissions from Shamrock pose an unacceptably high cancer risk

The January 11, 2011 letter from LMM to the Department also included Screen3 modeling for formaldehyde (HCHO) emissions from Shamrock and concluded that “formaldehyde cancer risk resulting from operation of the Shamrock Compressor Station is less than one in a million”¹⁴ However, LMM used an incorrect HCHO unit risk factor of 5.5E-9 per $\mu\text{g}/\text{m}^3$.¹⁵ The EPA IRIS inhalation unit risk is 1.3E-5 per $\mu\text{g}/\text{m}^3$.¹⁶ LMM’s modeling estimated “annual average formaldehyde concentration[s] of 2.2 $\mu\text{g}/\text{m}^3$ and 1.6 $\mu\text{g}/\text{m}^3$ at the property line and nearest residence, respectively.”¹⁷ Applying the appropriate unit risk factor, these concentrations translate to increased cancer risks of 28.6 in a million at the nearest property line and 20.8 in a million at the nearest residence. Even after accounting for the slight decrease in facility-wide HCHO PTE proposed in PA-26-00588A, property line and residence cancer risks from HCHO will remain far above 1 in a million. This is an unacceptable cancer risk for those living near the facility. The Department must require additional HCHO emissions reductions or deny the play approval.¹⁸

injurious to human, plant or animal life or to property or which unreasonably interferes with the comfortable enjoyment of life or property.”

¹⁴ Attachment 3 – LMM, Response to Plan Approval Public and PADEP Comments, Shamrock Compressor Station (Jan. 11, 2011) at 6.

¹⁵ Id. at 9-10.

¹⁶ <http://www.epa.gov/iris/subst/0419.htm#quainhal>

¹⁷ Attachment 3 – LMM, Response to Plan Approval Public and PADEP Comments, Shamrock Compressor Station (Jan. 11, 2011) at 6.

¹⁸ 25 Pa. Code § 127.13b(a)(1).