

**VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY**  
**Blue Ridge Regional Office**  
 INTRA-AGENCY MEMORANDUM

<b>Permit Writer</b>	Patrick Corbett			
<b>Memo To</b>	Air Permit File	<b>Date</b>	December 6, 2012	
<b>Facility Name</b>	Celanese Acetate, LLC			
<b>Registration Number</b>	<b>20304</b>			
<b>County-Plant I.D.</b>	071-00004			
<b>UTM Coordinates (Zone 17)</b>	521	<b>Easting (km)</b>	4132.9	<b>Northing (km)</b>
<b>Elevation (feet)</b>	1600			
<b>Distance to Class I Areas</b>	>100	<b>SNP (km)</b>	>100	<b>JRF (km)</b>
<b>FLM Notification (Y/N)</b>	Y	<b>Required if less than 10K (minor), 100K (state major)</b>		
<b>NET Classification (A, SM, B)</b>	A	<b>Before permit action</b>	A	<b>After permit action</b>
<b>Title V Major Pollutants</b>	PM-10, CO, NO <sub>x</sub> , SO <sub>2</sub> , VOC, HAP, GHG	<b>Before permit action</b>	PM-10, CO, NO <sub>x</sub> , VOC, HAP, GHG	<b>After permit action</b>
<b>PSD Major Source (Y/N)</b>	Y	<b>Before permit action</b>	Y	<b>After permit action</b>
<b>PSD Major Pollutants</b>	CO, NO <sub>x</sub> , SO <sub>2</sub> , VOC, GHG	<b>Before permit action</b>	CO, NO <sub>x</sub> , VOC, GHG	<b>After permit action</b>

**I. Introduction**

The Celanese Acetate, LLC Narrows facility (Celco) is located at 3520 Virginia Avenue (Route 460), 4 miles east of Narrows, Virginia in Giles County. Celco has been in operation since 1939.

The facility manufactures cellulose acetate flake and fiber (SIC Codes 2821 and 2823, NAICS Codes 325211 and 325221). The facility also manufactures acetic anhydride as an intermediate product for use in manufacturing cellulose acetate flake (SIC Code 2869 and NAICS Code 325199). In addition, extrusion jets are produced on site to support the fiber manufacturing areas (SIC Code 3471 and NAICS Code 332813). Celco currently has three minor NSR permits, one State Operating Permit, and a Title V permit.

The facility's powerhouse was previously operated by Duke Energy Generation Services of Narrows, LLC (DEGS), formerly Cinergy Solutions of Narrows, LLC. In 2003, the utilities were moved to a different registration number (21418); however, the two operations have always been considered a single stationary source for permit applicability reviews. DEGS operated under their own Title V permit and a SOP dated July 10, 2003. The SOP also had an HCl Storage tank and a 2 MW diesel generator. Both of these units have been permanently shutdown<sup>1</sup>.

On May 9, 2012, an application dated May 8, 2012 was received that requested a permit to replace seven coal-fired boilers with six natural gas (NG) fired<sup>2</sup> boilers. Additional information was received on July 20, 2012 and August 15, 2012, making the application complete.

<sup>1</sup> Via two mutual agreement letters, both dated 10/19/2009.

<sup>2</sup> The boilers have distillate oil as an approved back-up fuel.

## II. Emission Unit(s) / Process Description(s)

The current powerhouse configuration consists of two natural gas (NG) fired boilers and seven coal-fired boilers. These units provide steam to the production process. Celco has proposed construction of six new natural gas fired boilers, each rated at 400 MMBtu/hr. The project consists of these six units and the necessary limitations to implement the netting calculation (e.g., the shutdown of coal boilers). The project installs three 250,000 gallon distillate oil tanks. No other units are proposed as part of the project.

This set of six natural gas boilers is replacing the seven coal-fired boilers of various sizes (from 91 to 322 MMBtu/hr) in the current powerhouse. The new boilers emit combustion by-products (mainly oxides of nitrogen (NO<sub>x</sub>), carbon monoxide (CO), with lesser amounts of particulate matter, volatile organic compounds (VOC), and hazardous air pollutants (HAPs or toxics). Particulate emissions are also generated by the coal and ash handling equipment, which will be permanently shut down at the end of this project. The August 15, 2012 submittal contained corrected emissions calculations that have been reviewed for accuracy. The results are summarized in this document.

## III. Regulatory Review

### A. 9VAC5 Chapter 80, Part II, Article 6 – Minor New Source Review

As stated in 9VAC5-80-1100 E, a facility subject to a New Source Performance Standard (NSPS), as contained in 9VAC5-50-400 et seq., shall not be exempt from the provisions of Article 6. As discussed in Section III.C, each boiler is subject to 40CFR60 Subpart Db (hereafter referred to as “the NSPS”) which is incorporated by reference into 9VAC5-50-410; therefore, a permit to construct and operate is required.

The facility is a state major source<sup>3</sup> with a potential to emit (PTE) of several pollutants greater than 100 tons per year. State major modifications occur if change in PTE (i.e., the difference between the allowables after permit issuance and allowables prior to the project) is greater than the “significant” value in 9VAC5-80-1615 C. The PTE of the facility is going down for each pollutant not otherwise subject to major NSR<sup>4</sup> (see Section V). Therefore, the project is not a state major modification.

Additional discussion of Article 6 permitting requirements due to NSPS applicability can be found in Section III.C. Limitations in the permit to validate the netting calculation are discussed in Section III.B.

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<sup>3</sup> The term “major source” is the defined term; however, several different definitions of major source may apply at a given facility (e.g., Article 6, Article 8, Title V, HAP). In clarifying which definition of major source applies, “state major” is the common terminology to indicate the source is major under the definition contained in 9VAC5-80 Article 6, minor new source review.

<sup>4</sup> In accordance with 9VAC5-80-1100 H, any pollutant subject to major NSR is exempt from Article 6.

**B. 9VAC5 Chapter 80, Part II, Article 8 and Article 9 – PSD Major New Source Review and Non-Attainment Major New Source Review**

Giles County is a PSD area for all pollutants as designated in 9VAC5-20-205. Celco is a PSD major source with a PTE for at least one regulated NSR pollutant greater than 100 tons per year (TPY). A project is a major modification if it causes two types of emission increases: a significant emissions increase (SEI) and a significant net emission increase (SNEI). The procedure for calculating whether a SEI will occur depends on the type of emissions units being modified. The facility has utilized the emissions test contained in 9VAC5-1605 G.4 since this project involves only new emissions units. This test utilizes the baseline actual emissions (BAE) to future potential emissions test for each new unit.

Step 1 of determining if a major modification will occur is to sum all of the emission increases associated with the project for each pollutant. If the result for a pollutant is less than the significant emissions rate, then there is not a significant increase and a major modification has not occurred for that pollutant. For pollutants that exceed the significant emissions rate, another step is required to determine if a significant net emissions increase has also occurred.

As new units that have not commenced operation, the BAE for each unit is zero. The future PTE for each unit is calculated in Table 4.2<sup>5</sup> of the August 15 submittal and summarized below. Considering the proposed permit limitations, the PTE for the project is greater than the significant rate for several pollutants.

<b>Pollutant</b>	<b>Each Boiler Increases</b>	<b>Total Project Increases</b>	<b>PSD Significance Threshold</b>	<b>PSD Netting Required?</b>
	<b>ton/yr</b>	<b>ton/yr</b>	<b>ton/yr</b>	
CO	65.6	326.7	100	Yes
NO <sub>x</sub>	81.4	333.3	40	Yes
PM	9	22.1	25	No
PM-10	17.4	70.0	15	Yes
PM-2.5	15.0	67.6	10	Yes
SO <sub>2</sub>	1.48	5.6	40	No
VOC	9.6	48.7	40	Yes
H <sub>2</sub> SO <sub>4</sub>	0.02	0.07	7	No
Lead	0.005	0.008	0.6	No
F <sup>-</sup> (as HF)	.02	0.1	3	No

Step 2 involves summing all of the SEIs associated with the project with all of the other creditable increases and decreases in actual emissions made at the facility during the contemporaneous time period. If the result is greater than the significant emission rate, then a major modification would occur and the project is subject to PSD permitting. The main decreases in each pollutant occur due to the shutdown of the coal boilers and related handling

<sup>5</sup> Fluoride emissions are calculated with the HAPs.

equipment. Celco identified four contemporaneous projects: re-start of Building 2, Silo 3 project, manufacturing facility changes (combined project), and WWTP cat-ox unit shutdown. The Building 2 increase was added to the “combined project” at that time; therefore, these two projects constitute one line item in the net emissions increase calculations for this boiler project. As seen in the summary table below (Table 4-6 of the August 15 submittal), the contemporaneous projects cause a SNEI for VOC (i.e., without these contemporaneous projects, VOC would not be subject to PSD review).

<b>Pollutant</b>	<b>Project Increases</b>	<b>Contemporaneous Increases</b>	<b>Contemporaneous Decreases</b>	<b>NEI</b>	<b>Significant Value</b>	<b>PSD Permitting Required?</b>
	<b>ton/yr</b>	<b>ton/yr</b>	<b>ton/yr</b>	<b>ton/yr</b>	<b>ton/yr</b>	
CO	326.7	5.8	92.4	240	100	Yes
NO <sub>x</sub>	333.3	7.5	3,881.3	-3,540.5	40	No
PM-10	70.0	12.2	499.0	-417	15	No
PM-2.5	67.6	12.2	390.6	-311	10	No
VOC	48.7	132.6	52.9	128.3	40	Yes

The project is subject to PSD review as a major modification for CO and VOC. Due to the possibility of an extended construction schedule between the new boilers, intermediate netting was performed for each pollutant not subject to review. The coal combustion limitations (Condition 4) ensure the project cannot result in a significant increase at any point during the project by generating the necessary emissions reductions prior to the increase from each new boiler (calculated in Attachment A).

PSD review requires the imposition of Best Available Control Technology for each pollutant subject to review (Section IV.B), dispersion modeling to demonstrate compliance with National Ambient Air Quality Standards (Section VI), an analysis to ensure the area’s increment is not exceeded (Section VI), and an additional impacts analysis (Section VI).

Greenhouse Gases (9VAC5 Chapters 80 and 85)

As discussed previously in this section, the project is a major modification subject to PSD review. As of January 2, 2011, GHG is subject to regulation for a major modification if the project causes a SEI and SNEI for CO<sub>2</sub> equivalents<sup>6</sup> (CO<sub>2</sub>e). The calculation for the increase caused by the project follows the SEI and SNEI calculations for other pollutants<sup>7</sup>. First, the project must cause an emissions increase of 75,000 tons or more (SEI). Second, the project must cause a net emissions increase at least 75,000 tons (SNEI).

<sup>6</sup> CO<sub>2</sub>e is the emission rate of each GHG species multiplied by its respective global warming potential (GWP) from 40CFR Part 98.

<sup>7</sup> Except the values for all species of CO<sub>2</sub>e (positive or negative) are summed to obtain the CO<sub>2</sub>e increase because GHG is a single pollutant.

The project causes a CO<sub>2</sub>e emissions increase of more than 75,000<sup>8</sup> tons (SEI); therefore, GHG is “subject to regulation” if the project also causes a SNEI. After consideration of the decrease in CO<sub>2</sub>e emissions from the coal-fired boilers shutdown and the operational limitations on fuel combustion for the new boilers that are contained in the permit (calculated in Attachment A), the project does not cause a net emissions increase of 75,000 tons or more (Table 4-6 of the August 15 submittal). Therefore, GHG is not subject to regulation as a regulated NSR pollutant for the purpose of PSD applicability<sup>9</sup>.

<b>Pollutant</b>	<b>Project Increases</b>	<b>Contemporaneous Increases</b>	<b>Contemporaneous Decreases</b>	<b>NEI</b>	<b>Significant Value</b>	<b>Subject to Regulation?</b>
	<b>ton/yr</b>	<b>ton/yr</b>	<b>ton/yr</b>	<b>ton/yr</b>	<b>ton/yr</b>	
CO <sub>2</sub> e	1035000	7,903.6	968,009.2	74,894	75,000	No

C. 9VAC5 Chapter 50, Part II, Article 5 – NSPS

The new boilers are affected facilities under 40CFR60 Subpart Db. As natural gas units, they are subject only to the opacity and NO<sub>x</sub> standards. The requirements of this permit are at least as stringent as the NSPS standards. A general reference to compliance with the NSPS is included in this permit. The specific requirements of the NSPS will be explicitly addressed in the Title V permitting action to include these boilers.

The storage tanks are not subject to 40CFR60 Subpart Kb because the vapor pressure of distillate oil is less than the applicability cutoff (3.5 kPa).

D. 9VAC5 Chapter 60, Part II, Article 1 – NESHAPS

The new boilers are not subject to any Part 61 rule.

E. 9VAC5 Chapter 60, Part II, Article 2 – MACT

The boilers will be subject to 40CFR63 Subpart DDDDD. The project is not subject to the federal hazardous air pollutant new source review program because the project does not meet the requirement of 40CFR63.5(b)(3)(i) (i.e., no boiler is major-emitting). The units are proposed as new affected sources in the Gas 1 category. In both the currently promulgated rule and the recently proposed amendments, the Gas 1 category has only work practice standards in Subpart DDDDD.

F. State Only Enforceable (SOE) Requirements (9VAC5-80-1120 F)

None required for this project.

<sup>8</sup> Celco calculates the PTE from each boiler as more than 200,000 tons CO<sub>2</sub>e per year (Table 4-2 of the August 15 submittal).

<sup>9</sup> If GHG were “subject to regulation”, PSD applicability is then reviewed using the “normal” process. First, the stationary source must have a PTE for any regulated NSR pollutant (GHG on mass basis not equivalents) of at least 100/250 tons per year. The second step is to determine if the project causes a SEI and SNEI for GHG emissions on a mass basis except all values (positive or negative) are summed to obtain the increase in GHG. The “significant” rate for GHG is any increase because a significant value is not listed in 9VAC5-80-1615 C.

#### IV. Best Available Control Technology Review (BACT)

##### A. 9VAC5-50-260 (Article 6)

BACT applicability for modifications that are subject to permitting is a unit-by-unit evaluation. Units that are modified and emit a pollutant subject to permitting shall apply BACT for that pollutant if the unit has a NEI greater than the respective exemption threshold in 9VAC5-80-1320 D. (9VAC5-50-260 C). As shown in Section V<sup>10</sup> only pollutants that are subject to PSD have an increase in NEI; therefore, these pollutants are not subject to Article 6 BACT.

##### B. 9VAC5-50-280 and 9VAC5-80-1705 (PSD)

For a major modification, BACT applies to each unit that is physically or operationally changed (i.e., modified) and experiences a net emissions increase for a pollutant subject to PSD review. For this project, each boiler is subject to BACT review for CO and VOC. The discussion below follows the CO analysis. Because both pollutants are controlled by similar technologies, a VOC specific discussion is not repeated. Where appropriate, VOC specific information has been included parenthetically.

##### Step 1: Identify all control technologies:

The permit application identified Catalytic Oxidation as a possible add-on emissions control for CO, and Good Combustion Practices (GCP) as a possible inherently lower-polluting process for that pollutant. DEQ's independent review of the RACT/BACT/LEAR Clearinghouse (RBLC) concurs that Catalytic Oxidation and GCP are available options.

##### Step 2: Eliminate technically infeasible options

There are no technically infeasible options.

##### Step 3: Rank remaining control technologies by effectiveness

Of the two control technologies, Catalytic Oxidation is clearly the more effective approach, with CO removal efficiencies as high as 90%. Consideration of GCP as the baseline case is consistent with page B.37 of the NSR manual which says:

“...baseline emissions are essentially uncontrolled emissions, calculated using the realistic upper boundary operating assumptions. When calculating the cost effectiveness of adding post process emissions controls to certain inherently lower polluting processes, baseline emission may be assumed to be the emissions for the lower polluting process itself.”

##### Step 4: Evaluate most effective controls and document

The permit application calculates the cost effectiveness of Catalytic Oxidation for CO control (See Attachment A - Cat Oxid - CO tab (Cat Oxid – VOC tab)) using the procedures as shown in Chapter 2 of the EPA Air Pollution Control Cost Manual; 6th Edition (QAQPS manual) for Incinerators.

Several line item entries in that calculation warrant additional comment.

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<sup>10</sup> As discussed in that section, the calculation is conservative for BACT applicability because the coal emissions are actual emissions not uncontrolled emissions. The uncontrolled emissions of the coal boilers may indicate a reduction in all pollutants calculated in accordance with Article 6 (i.e., NEI less than zero).

- There are certain items that have been included in the application as line items for cost. They were determined to be questionable and additional information was submitted. They are:
  - Soot blowing equipment
  - Pollution control equipment is tax exempt in Virginia
  - Pre-production
  - Fireproofing, cleanup
  - Spares, shakedown, field overhead, and insurance and taxes
- The Celco resubmitted the analysis with a control of 90% instead of the originally proposed 70%.

Therefore, at a control efficiency of 90% and adjusting the values mentioned above; the cost effectiveness is \$6,945 per ton of CO removed (\$104,916 per ton of VOC).

Step 5: Select BACT

While Federal guidance is clear that there can be no fixed or “bright line” cost established as representative of BACT, the RBLC was reviewed and no similar facilities were identified to have installed oxidation catalyst as a result of the BACT process<sup>11</sup>. Therefore, a cost effectiveness of \$6,945 per ton for CO (\$104,916 per ton of VOC) is considered prohibitive. Therefore GCP meeting 50 ppm CO @3% O<sub>2</sub> on a rolling 24-hour basis including periods of start-up and shutdown as proposed by Celco is considered BACT for the purpose of Article 8. GCP meeting 2.2 lbs VOC/hr as proposed by Celco is considered BACT for the purpose of Article 8.

**V. Summary of Actual Emissions Increase**

The difference between the coal boilers past emissions (Table 4-3 of August 15 submittal) and the new boilers future potential is given in the below table (Table 4-2 of August 15 submittal). This table excludes other reductions from ancillary material handling equipment that will be shutdown with this project. This table is a conservative calculation for Article 6 state major status and BACT applicability since those provisions are based on a PTE to PTE test and an uncontrolled to uncontrolled test, respectively<sup>12</sup>.

Pollutant	BAE (TPY)	Future PTE (TPY)	Change (TPY)
CO	92.1	326.7	234.6
NO <sub>x</sub>	3,881	333.3	-3,547.7
PM	285.3	22.1	-263.2
PM-10	498.8	70.0	-428.8
PM-2.5	390.4	67.6	-322.8
SO <sub>2</sub>	6,690	5.6	-6,684.4
VOC	52.9	48.7	-4.2
H <sub>2</sub> SO <sub>4</sub>	75.4	0.07	-75.3
Lead	0.08	0.008	-0.07

<sup>11</sup> A facility located in a non-attainment area for NO<sub>x</sub> did install oxidation catalyst without being subject to PSD review (i.e., costs were not considered during review). The county also abuts a non-attainment area for CO. A review of the available information for the project indicates the project avoided PSD permitting by the installation of the catalyst. For these reasons, that facility is not considered similar.

<sup>12</sup> The coal-fired boilers’ actual emissions are below the PTE and the uncontrolled emissions.

## **VI. Dispersion Modeling**

The project is subject to PSD review for CO and a modeling analysis is a required portion of that review process. The following is a brief summary of the findings of the full modeling report dated July 27, 2012 by DEQ's Office of Air Quality Assessments (OAQA).

The requirements of preconstruction monitoring for ozone are required to be addressed because the net emissions increase of VOC is greater than its significant emission rate of 40 tons per year. The area is in attainment for ozone and is NO<sub>x</sub>-limited with regards to ozone formation. The proposed project is reducing thousands of tons of NO<sub>x</sub> emissions which will likely result in a decrease in ozone formation across the region.

There are no PSD increments for CO so a PSD increment analysis is not required.

CO is not one of the pollutants of concern that is evaluated for affecting visibility, and therefore a visibility impairment analysis was not required.

All pollutants that affect visibility and acidic deposition (i.e., AQRVs) will decrease as a result of this project. The United States Forest Service and the National Park Service each stated that they would not require any AQRV analysis for this project.

The air quality modeling analysis submitted by Celco conforms to the required modeling methodology.

### **NAAQS Analysis:**

The modeling results for CO (1-hour and 8-hour averaging periods) were less than the applicable Significant Impact Level (SIL) and therefore, a full impact analysis for CO and its averaging periods was not required.

**NAAQS conclusion:** Based on the OAQA's review of the Class II modeling analysis the impacts from the project were insignificant, and the project does not cause or significantly contribute to a predicted violation of any applicable NAAQS.

### **Additional Impact Analysis:**

**Soils and Vegetation:** No adverse impact on soils or vegetation was identified.

**Growth:** No significant emissions from secondary growth during construction and operation of the facility are anticipated.

## **VII. Boilerplate Deviations**

Wording was added to the coal throughput limitation to provide definition regarding the end of the shakedown period.

## **VIII. Compliance Demonstration**

The permit has equations that are used to determine fuel combustion and NO<sub>x</sub> emission limitations (lb/MMBtu). The fuel combustion equation is used to adjust the CO<sub>2e</sub> potential from natural gas to

account for the higher emission rate from distillate (on a lb/MMBtu basis). The emission rate should be calculated using Part 98 emission factors and actual fuel combusted amounts. The NO<sub>x</sub> emission equation is from NSPS Db. The change is that in the NSPS the gas and distillate limit is the same so only one variable exists in the NSPS. For the purpose of this permit, the limits are different and each must be used in the calculation instead of the less stringent NSPS value.

Compliance with each boiler's short-term emission limits will be demonstrated by stack testing of CO, and VOC. Particulate testing is not required due to the available information indicating particulate is mainly related to combustion efficiency. Therefore, CO and VOC testing are considered surrogates for particulates. Compliance with the annual limits will be demonstrated monthly using emissions calculations approved by the DEQ in writing. This flexible approach is used for annual emissions to allow for DEQ and Celco to adjust to the most accurate calculation method if new information becomes available. The lb/hr CO limit, included in the permit to reflect the modeled emission rate, is the average of three stack test runs. The ppm CO limit, PSD BACT, is a 24-hour continuous stack test. Stack testing for distillate will be required if a boiler fires any amount of distillate for more than 48 hours in a 12-month period, excluding periods of curtailment and supply interruptions beyond the permittee's control.

Compliance with each boiler's lb/MMBtu emission limits for NO<sub>x</sub> will be demonstrated by CEM data in accordance with the NSPS Db procedures.

A Method 9 evaluation is required to demonstrate compliance with the opacity standard. The opacity standard is lower than the NSPS limitation and the project is not subject to BACT for particulates; however, a properly operated and maintained natural gas boiler should meet the 10% requirement contained in the permit.

Records shall be maintained to demonstrate compliance with the remaining permit limits including the annual fuel throughput (heat input and volume), fuel sulfur content, and other records necessary to demonstrate compliance with NSPS Db.

#### **IX. Title V Review – 9VAC5 Chapter 80 Part II Article 1**

The facility is a Title V major source due to a potential to emit (PTE) greater than 100 tons per year for at least one regulated pollutant. A complete application for a significant modification to the Title V permit is due no later than 12 months after commencing operation, which for this project mirrors the permit definition for "becoming operational" in Condition 4.

#### **X. Other Considerations**

In the application Celco indicated that steam tracking for a previous project may be halted after issuance of this permit. After further discussion regarding this statement, Celco has acknowledged that these two separate projects are unrelated and cessation of steam tracking because of this permit is inappropriate.

As discussed in Section III.B, the project is subject to PSD review as a major modification and must meet other additional requirements, mainly concerned with public participation.

-On May 8, 2012, the Federal Land Managers declined review of the project.

-As a currently operating industrial facility, the site is deemed suitable for this project.

- The Local Governing Body Certification, required under §10.1-1321.1, was signed on May 8, 2012, and received on May 9, 2012.
- Publication by the source of a notice of application and source informational session was completed on June 20, 2012. The notice was published in the *Virginian Leader*. The required informational session was held on August 2, 2012. Approximately fifteen Celco employees, four members of local government, and two DEQ employees were in attendance. No questions regarding the project's impact on air quality or the regulatory review process were raised. All discussions were in support of the project.
- The following public participation information will be published in the *Virginian Leader* on October 17, 2012.
  - The public comment period begins on October 17, 2012.
  - The public hearing will be held at the Giles County Technology Center, Meeting Room B and is scheduled to begin at 6:30 PM on November 20, 2012.
  - The comment period will end on December 5, 2012.
- Giles County, the only "locality particularly affected", was notified by letter dated October 16, 2012.
- EPA, Region III and West Virginia were notified by letter dated October 16, 2012.

Added December 6, 2012: The public hearing was conducted on November 20, 2012; however, no attendee spoke. The hearing report is Attachment B to this analysis. No comments were received during the comment period.

## **XI. Recommendations**

Approval of the draft permit is recommended.

## **Attachments**

Attachment A – Transition and Heat Input Calculations

Attachment B – Public Hearing Report