Air Quality Permitting
Response to Public Comments

February 26, 2016

Permit to Construct No. P-2008.0168
Project No. 61615

Hilex Poly Company LLC
Jerome, Idaho

Facility ID No. 053-00011

Prepared by:
Darrin Pampaian, P.E., Permit Writer
AIR QUALITY DIVISION

Final

Table of Contents

BACKGROUND

The Idaho Department of Environmental Quality (DEQ) provided for public comment on the proposed permit to construct the Hilex Poly Company, LLC from January 25, 2016 through February 24, 2016, in accordance with IDAPA 58.01.01.209.01.c. During this period, comments were submitted in response to DEQ's proposed action. Each comment and DEQ's response is provided in the following section. All comments submitted in response to DEQ's proposed action are included in the appendix of this document.

PUBLIC COMMENTS AND RESPONSES

Public comments regarding the technical and regulatory analyses and the air quality aspects of the proposed permit are summarized below. Questions, comments, and/or suggestions received during the comment period that did not relate to the air quality aspects of the permit application, the Department's technical analysis, or the proposed permit are not addressed. For reference purposes, a copy of the Rules for the Control of Air Pollution in Idaho can be found at:

http://adm.idaho.gov/adminrules/rules/idapa58/0101.pdf.

Comment 1: **Idaho Conservation League** - Hilex Poly's application requests permission to add 12 extruders, 15 corona treaters, 6 bag machines and bring online 3 bag machines that were previously held in reserve. In regards to the bag machines, we are curious as to why the addition of essentially 9 bag machines increases the PTE for VOCs by 1 lb/hr when previously the 16 machines that were online only had a PTE of 0.64 lb/hr. Is there something different about the new machines resulting in them emitting at a higher rate? We ask that DEQ please provide insight on the reason for the difference in emission rates for the new versus old bag machines.

Response 1: There was a typographical error in the hourly VOC emissions of 1.0 lb-VOC/hr presented in Table 5 of the Statement of Basis (Note: Hourly VOC emissions for the project were correctly presented in Appendix A). The correct hourly VOC emissions are 0.36 lb/hr and the correction will be made to the Statement of Basis, Table 5. Therefore, the increase in hourly VOC emissions is consistent with the proposed equipment being installed as a result of this project.

Comment 2: **Idaho Conservation League** - The corona treaters within the Hilex Poly facility are relatively unique in that they directly emit ozone rather than emitting constituents that react in the atmosphere to produce ozone. Ozone pollution can be detrimental to nearby communities, particularly among children, people with respiratory illnesses, older adults and outdoor enthusiasts (EPA, 2015)[1]. This facility is located within the city of Jerome, which has a population of 16,675, 42% of which are children under 17 and 10% are seniors over the age of 65 (US Census, 2010). Given that more than half of the cities population consists of the groups most susceptible to ozone pollution, we ask that DEQ require Hilex Poly to install some form of emission control onto the corona treaters, such as activated charcoal filters (Fisk et al., 2009)[2] or an ozone catalyst within the exhaust stream (Klass and Hogan, 2007)[3].

Response 2: The Applicant has demonstrated that uncontrolled emissions of ozone demonstrate compliance with the National Ambient Air Quality Standards (NAAQS) (see Appendix B of the Statement of Basis for the Modeling Memorandum). In addition, Best Available Control Technology (BACT) was not triggered for this project. Therefore, no emissions controls were required by State or Federal law.

---

[1] EPA. (2015) Ground Level Ozone: Health Effects. Web. Accessed 25 Jan. 2016. [http://www3.epa.gov/ozonepollution/health.html].

[2] W.J. Fisk, M. Spears, D.P. Sullivan and M. Mendell. (2009). Ozone removal by filters containing activated carbon: a pilot study. Indoor Environmental Department – Environmental Energy Technologies Division. Lawerence Berkeley National Laboratory.

[3] D. Klass and D. Hogan. (2007). The Ozone Annihilator. [http://cmgm.stanford.edu/pbrown/protocols/Ozone_Prevention.pdf].

Comment 3: **Idaho Conservation League** - Hilex Poly is using an emission factor of 0.073 lb-O^3/hr/kW to estimate ozone emissions. As with all estimates, there is a certain degree of error associated with using this emission factor to quantify ozone emissions. We are concerned about Hilex Poly's plan to solely rely on this emission factor in lieu of monitoring because the modeling results for ozone presented in Appendix B of the SOB showed modeled ozone emissions within approximately 3% of National Ambient Air Quality Standards (NAAQS). This leaves a narrow window for compliance, and if the error associated with this emission factor is equal to or greater than this 3% threshold, we feel the reliance on an emission factor does not provide concrete validation that Hilex Poly is complying with NAAQS for ozone. We ask that DEQ please provide information on the error associated with using this emission factor. If the ozone NAAQS is within error of the projected ozone emissions calculated using the emission factor, we ask that DEQ reinstate the ozone monitoring requirements that were removed in 2009 to ensure this facility remains compliant with NAAQS limits.

Response 3: The ozone emissions factor was provided to DEQ in September 2004 by Enercon Industries Corporation, the manufacturer of the corona treaters, for the original permitting project. In order to verify ozone emissions, using this emissions factor, the facility was required to monitor on-site ozone emissions impacts beginning in May 2005. The on-site ozone monitoring performed at the facility showed no significant increase over background ozone concentrations during the monitoring period and subsequently the facility was allowed to remove the monitoring equipment in March 2009. Therefore, DEQ is confident that the ozone emission factor used by the facility significantly overestimates ozone emissions from the corona treaters.

Appendix

Public Comments Submitted for

Permit to Construct

P-2008.0168

www.idahoconservation.org
Idaho Conservation League
PO Box 844, Boise, ID 83701
208.345.6933

2/5/2016

Tanya Chin
Air Quality Division
DEQ State Office
1410 N. Hilton
Boise, ID 83706

Submitted via email: tanya.chin@deq.idaho.gov

RE: Permit to Construct No. P-2008.0168 for Hilex Poly Company LLC

Dear Ms. Chin;

Thank you for the opportunity to comment on the permit to construct (PTC) application for Hilex Poly Company LLC's (Hilex Ploy) facility in Jerome, ID. Since 1973, the Idaho Conservation League has been Idaho's leading voice for clean water, clean air and wilderness—values that are the foundation for Idaho's extraordinary quality of life. The Idaho Conservation League works to protect these values through public education, outreach, advocacy and policy development. As Idaho's largest state-based conservation organization, we represent over 25,000 supporters, many of whom have a deep personal interest in protecting Idaho's air quality.

Our comments regarding Hilex Poly's PTC application are attached below. Please do not hesitate to contact me at 208-345-6933 ext. 23 or ahopkins@idahoconservation.org if you have any questions regarding our comments or if we can provide you with any additional information on this matter.

Sincerely,
Austin Hopkins
Conservation Assistant

RE: Idaho Conservation League comments on the Permit to Construct No. P-2008.0168 for Hilex Poly Company LLC

Page 1 of 3

Post Project PTE

Hilex Poly's application requests permission to add 12 extruders, 15 corona treaters, 6 bag machines and bring online 3 bag machines that were previously held in reserve. In regards to the bag machines, we are curious as to why the addition of essentially 9 bag machines increases the PTE for VOCs by 1 lb/hr when previously the 16 machines that were online only had a PTE of 0.64 lb/hr. Is there something different about the new machines resulting in them emitting at a higher rate?

We ask that DEQ please provide insight on the reason for the difference in emission rates for the new versus old bag machines.

Emission Controls on Corona Treaters

The corona treaters within the Hilex Poly facility are relatively unique in that they directly emit ozone rather than emitting constituents that react in the atmosphere to produce ozone. Ozone pollution can be detrimental to nearby communities, particularly among children, people with respiratory illnesses, older adults and outdoor enthusiasts (EPA, 2015)[1]. This facility is located within the city of Jerome, which has a population of 16,675, 42% of which are children under 17 and 10% are seniors over the age of 65 (US Census, 2010).

Given that more than half of the cities population consists of the groups most susceptible to ozone pollution, we ask that DEQ require Hilex Poly to install some form of emission control onto the corona treaters, such as activated charcoal filters (Fisk et al., 2009)[2] or an ozone catalyst within the exhaust stream (Klass and Hogan, 2007)[3].

Ozone Monitoring

Hilex Poly is using an emission factor of 0.073 lb-O_3/hr/kW to estimate ozone emissions. As with all estimates, there is a certain degree of error associated with using this emission factor to quantify ozone emissions. We are concerned about Hilex Poly's plan to solely rely on this emission factor in lieu of monitoring because the modeling results for ozone presented in Appendix B of the SOB showed modeled ozone emissions within approximately 3% of National Ambient Air Quality Standards (NAAQS). This leaves a narrow window for compliance, and if the error associated with this emission factor is

[1] EPA. (2015) Ground Level Ozone: Health Effects. Web. Accessed 25 Jan. 2016. [http://www3.epa.gov/ozonepollution/health.html].
[2] W.J. Fisk, M. Spears, D.P. Sullivan and M. Mendell. (2009). Ozone removal by filters containing activated carbon: a pilot study. Indoor Environmental Department – Environmental Energy Technologies Division. Lawerence Berkeley National Laboratory.
[3] D. Klass and D. Hogan. (2007). The Ozone Annihilator. [http://cmgm.stanford.edu/pbrown/protocols/Ozone_Prevention.pdf]

equal to or greater than this 3% threshold, we feel the reliance on an emission factor does not provide concrete validation that Hilex Poly is complying with NAAQS for ozone.

We ask that DEQ please provide information on the error associated with using this emission factor. If the ozone NAAQS is within error of the projected ozone emissions calculated using the emission factor, we ask that DEQ reinstate the ozone monitoring requirements that were removed in 2009 to ensure this facility remains compliant with NAAQS limits.