

COMMONWEALTH OF PENNSYLVANIA

Department of Environmental Protection

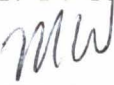
June 10, 2015


814/332-6940

Fax: 814/332-6117

SUBJECT: Review of Application for TV Renewal
Auth ID # 104673; APS # 637185; PF # 257250
Calumet Penreco
Karns City Boro, Butler County

TO: AQ/Facilities/FACOP/ TV-10-00027

FROM: Matthew Williams 
Facilities Permitting Chief
Air Quality Program - Northwest Region

THROUGH: Edward F. Orris, P.E. 
Air Quality Program Manager
Northwest Region

Background

The subject application is for the renewal of the Title V Operating Permit. The original TVOP was issued by the Department on May 4, 2000. The TV was administratively amended on March 21, 2002 to incorporate the conditions from plan approval 10-027A for the replacement of the #7 spent sulfuric acid storage tank. The original permit was also amended on July 18, 2003, to incorporate the conditions from plan approval 10-027B for the replacement of the 9L Agitator, added to source 102, Oleum Process. The permit was renewed on June 13, 2005. During the renewal, the plan approval 10-027D conditions for boiler 2 were incorporated into the permit. The requirements of GP-9 for the diesel generator were incorporated into the permit as Source 043. Additional miscellaneous activities less than 1 ton per year were added to the miscellaneous section of the permit. Three units under Source 102 (Oleum Process) were removed from the permit (8L Agitator Tank, #4 Acid Tank, and #9 Acid Tank). All other sources remained the same as the in the original permit. After the renewal, the permit was administratively amended on February 08, 2006 to incorporate the conditions from plan approval 10-027F for the replacement of acid tank #8 (Source 102). The permit was administratively amended on August 31, 2007 to include the conditions of plan approval 10-027E for the #3 boiler. The permit was also administratively amended on February 14, 2008 to incorporate the name change and permit contact change. The permit was renewed on June 29, 2010 with an expiration of May 31, 2015. The current renewal application was received on October 21, 2014 and found to be administratively complete on October 24, 2014.

Facility Description

The facility is a high quality specialty oils and lubricants manufacturer. The oils are produced by further distilling oils which have already been fractionated offsite from crude oil. The facility is major for NOx, SOX, and VOC. The facility does not meet the definition of "Petroleum Refinery" as defined by the US EPA or as defined by 25 Pa. Code §123.1.

The facility is divided into 6 major areas including: Hydrotreating; Oleum Processing; Naphtha Rerun; Filter House; Boilers; Wastewater Treatment; and, Drumming Plant.

The facility previously had a Kerosene Process which is no longer operational. In the Kerosene Process, the kerosene was pre-heated in the kerosene unit furnace (Source 037) prior to the distillation tower. The light feed from the distillation went through a condenser and reflux drum, emissions from the reflux drum were controlled by the kerosene / naphtha unit flare (Source & Control 119). Naphtha was transferred to storage. The middle fractions of the distillation tower went to storage, the filter house, or the hydrotreater unit. The lower fraction was the white oil feed. The capacity of the distillation unit was 2,000 barrels per day (BPD). The source was removed from the permit during this renewal. The flare was also renamed to reflect it no longer controls the kerosene process

The hydrotreater reformer furnace is Source 034. This unit provides the Hydrogen for the hydrotreater process. In the hydrotreater process, raw mineral oils, raw petrolatum, and hydrogen are reacted in the hydrotreater H1X reactor furnace (Source 035). The furnace is fueled with natural gas. The process removes unwanted color and odor so that the product can become FDA Grade Material. The combined material flow goes through a fixed bed reactor, a high/low pressure gas separator, the hydrotreater stripper furnace (Source 036), the sour water air stripper and then the product is sent to storage or the filter house. The emissions from the gas separators are controlled by the hydrotreater flare (Source & Control 118). The gases from the air stripper are condensed and refluxed, with the sour water going to the waste water treatment plant (WWTP)(Source 107) and the gases being controlled by the hydrotreater flare. The maximum capacity of the hydrotreater process is 36.8 mmgal or 3,000 lbs/day. The unit is typically run at 2,000 lbs/day. The process can also be occasionally used to process raw kerosene from Louisiana facilities that arrives by rail car.

In the Oleum process, white oil and sulfuric acid are mixed and are processed through centrifugal separators (2 trains at 28 gallons per minute). The material enters the treating plant along with caustic and alcohol. Four agitator tanks are located in the treating plant. The emissions from the treating plant along with emissions from the Oleum acid tank are controlled by two venturi scrubbers (C03 and C04). The treated oil is processed through a steam stripper followed by an air stripper, both of which are controlled by condensers. The white oil is sent to storage. The sulfonate layer from the treating plant is mixed with soda ash in agitator tanks followed by a thin-film evaporator tower. The gases are condensed and go to the alcohol process (Source 105) for alcohol recovery.

The naphtha rerun process takes spent naphtha from the filter house through the naphtha rerun furnace (Source 117) prior to the naphtha distillation tower. The gases from the distillation tower are condensed and refluxed, with the gases going to the naphtha flare (Source & Control 119). The sour water from the process goes to the WWTP. The naphtha goes to storage. The kerosene and light white oil is transferred to boiler #1 (Source 031) for fuel. The heavier white oil and petrolatum is recycled at the hydrotreater.

In the filter house, unfiltered products, desulfurized kerosene solvent, petrolatum and white oil, are processed through approximately 90 filter vessels. Nearly all products pass through the bauxite filters to remove odor, color, and moisture. All vessels vent to the atmosphere with negligible emissions due to

the low vapor pressures of the materials. The retort heaters (Source 101) are controlled by cyclones to remove bauxite carried out as a particulate.

The boilers are comprised of boilers #1, #2, and #3 (Sources 031, 041, and 040). Boilers #2 and #3 are natural gas fired. Boiler #1 is natural gas or oil fired. Boiler #1 is rated at 66 mmbtu/hr while boilers #2 and #3 are each rated at 99 mmbtu/hr.

Boiler #1 is subject to 40 CFR 63 Subpart JJJJJ – NESHAPs for Industrial, Commercial, and Institutional Boilers at Area Sources. Since the other boilers only burn natural gas, they are exempt from Subpart JJJJJ based on §63.11195(e) which indicates a gas-fired boiler is not subject to this Subpart. The following requirements were added to the permit during this renewal for Boiler #1 (Source 031):

- §63.11193 – Identifying who is subject to this subpart. The boiler provides steam to the facility for the processes.
- §63.11194 – The source is considered existing because it was constructed before June 4, 2010. The affected source is in the subcategory of oil because the facility does not limit the use of liquid fuel to less than 48 hours during any calendar year for periodic testing. The facility can fire 550 gallons of #2 fuel oil per hour.
- §63.11196 – Compliance date - The affected boiler must conduct a tune-up and energy assessment no later than March 21, 2014 for the initial compliance demonstration.
- §63.11201 – The facility must comply with each work practice standard, emission reduction measure, and management practice specified in Table 2 to this subpart that applies. The facility must conduct the initial tune-up and an energy assessment by March 21, 2014 and biennially thereafter.
- §63.11205(a) – The general requirements for the source to minimize emissions (operate and maintain boiler and control device in a manner consistent with safety and good air pollution control practices for minimizing emissions) are included in the permit.
- §63.11210(c) – Initial compliance requirements must be met by no later than the compliance date (referencing §63.11196).
- §63.11214(b-c) – Submit a Notification of compliance status report indicating that a tune-up and energy assessment was conducted.
- §63.11223(a-b) – Demonstrating continuous compliance with the work practice and management practice standards (identifying the specific requirements for the biennial tune-up). Tune-ups must be no more than 25 months apart.
- §63.11225(a-b) – Reporting the initial notification, notification of compliance status, and keeping records of the biennial compliance certification for the unit (and reporting the compliance certification if deviations occur).
- §63.11225(c-d) – Recordkeeping of the notifications, records of the energy assessment, records of the tune-ups, records of malfunctions and corrective actions taken. The records must be kept for at least five years. Records must be maintained onsite for two years and may be kept offsite for the remaining three years.
- §63.11225(g) – Providing notification if the facility switches fuels and affects the subcategory of the subpart.
- §63.11235 – The applicable General Provisions of §§63.1 through 63.15 are already included in Subpart JJJJJ.

- §63.11237 – The definitions that apply to this subpart are referenced in the Code of Federal Regulation and the notation of the definitions to Subpart A and JJJJJJ is included in the miscellaneous section of the permit.
- §63.9(b) – This explains the general provisions of the initial notification.
- §63.13 – Provides the EPA address for submittal of hard copies of requests, reports, etc., and the DEP mailing address.
- The initial notification required by §63.11225(a)(2) and §63.9(b)(2) was received by the Department on July 5, 2012. The Update and Compliance Status for JJJJJJ was received by the Department on September 11, 2012. The information contained the initial tune-up concentrations of CO and NOx in ppm based on an annual adjustment and inspection completed on August 9, 2011. The Department also received an Annual Compliance Report for JJJJJJ on February 14, 2013 from the facility providing documentation on the February 6, 2013 tune-up of the boiler. On December 19, 2013, the Department received the Compliance Status Certification and Notification report from the facility that contained tune-up information for Boiler #1 conducted on August 12, 2013 by Accu-temp, Inc after the annual turn-around. The report also identified the date of the energy assessment (December 2, 2013 by Accu-temp and Calumet Penreco. The next tune-up is anticipated a short time after the next turn-around for the boiler (during July 2014).

The WWTP takes collected water from storm sewers at the facility and passes the water through an oil water separator, the API Trap, aeration basis, the digestion tanks, and clarifiers. The clarified water goes to the cooling tower. The emissions from the WWTP are fugitive.

The products from the processes at the facility are loaded into clean drums and those drums are loaded into trucks. The facility also takes oils and adds additives in mixing tanks and loads the material to storage tanks prior to leaving the facility by rail cars.

The facility also has emissions from process turnarounds (Source 121), VOC pumps / compressors (Source 122), plant-wide fugitive VOC emissions covered by the Leak Detection and Repair (LDAR) requirements (Source 106), gasoline storage for on-site usage – approximately 2 gal/hr (Source 109) and an emergency diesel engine for back-up power (Source 043).

Based on the National Emission Standards for Hazardous Air Pollutants pertaining to Gasoline Dispensing Facilities, Source 109 is subject to 40 CFR 63 Subpart CCCCCC. The throughput for the tank reported in the application is 3,300 gallons per year. The applicable requirements pertaining to this source as described below were included in the permit as part of this renewal.

This subpart establishes national emission limitations and management practices for hazardous air pollutants (HAP) emitted from the loading of gasoline storage tanks at gasoline dispensing facilities (GDF). *Gasoline dispensing facility (GDF)* means any stationary facility which dispenses gasoline into the fuel tank of a motor vehicle, motor vehicle engine, nonroad vehicle, or nonroad engine, including a nonroad vehicle or nonroad engine used solely for competition. These facilities include, but are not limited to, facilities that dispense gasoline into on- and off-road, street, or highway motor vehicles, lawn equipment, boats, test engines, landscaping equipment, generators, pumps, and other gasoline-fueled

engines and equipment. This subpart also establishes requirements to demonstrate compliance with the emission limitations and management practices. The affected source to which this subpart applies is each GDF that is located at an area source. The affected source includes each gasoline cargo tank during the delivery of product to a GDF and also includes each storage tank. For a GDF which has a monthly throughput of less than 10,000 gallons of gasoline, you must comply with the requirements in §63.11116. The only requirements applicable to this source which were incorporated into the permit are the work practice requirements of §63.11116 pertaining to facilities with monthly throughput of less than 10,000 gallons of gasoline. They include minimizing gasoline spills, clean up spills as expeditiously as practicable, cover all open containers and fill pipes, and minimize gasoline sent to open waste collection systems. The facility is not required to submit notifications or reports but must have records of throughput available within 24 hours of request. The compliance date for these requirements was January 10, 2011.

The facility had seven engines that provide power for emergency generators and fire water pumps which are now subject to 40 CFR 63 Subpart ZZZZ based on the January 2013 revisions to these regulations. Subpart ZZZZ is for Stationary Reciprocating Internal Combustion Engines (RICE). The facility previously had these sources included in the miscellaneous section of the permit with no additional requirements (except for Source 043 – emergency diesel generator rated at 764 HP). The facility also has three additional diesel engines which are not stationary and will continue to remain in the miscellaneous section of the permit with no additional requirements. These three units are located in the maintenance area and are rated at 69 HP, 69 HP, and 85 HP, respectively. They are used to back up electric compressors during a non-routine repair and one is used to pump waste water from the lower plant to the waste water treatment plant system in the event of a power failure or failure of both pumps.

The seven engines are as follows:

1. Source 043 located in the boiler house fueled with diesel rated at 764 HP. The CAT Diesel is used as a main back-up power generator.
2. Source 043A located in the lower fire house fueled with diesel rated at 208 HP. The unit is used in emergencies to power a fire water pump.
3. Source 043B located in the upper fire house fueled with diesel rated at 430 HP. The unit is used in emergencies to power a fire water pump.
4. Source 043C located in the vicinity of Source 169 Scrubber fueled with diesel rated at 38 HP. The unit is used to power a back-up pump to maintain scrubbing capability during a power outage.
5. Source 043D located in the Waste Water Treatment Plant fueled with diesel rated at 150 HP. The unit is used to power a back-up pump to maintain the ability to treat waste water.
6. Source 043E located in the vicinity of the hydrotreater fueled with natural gas rated at 82 HP. The unit is used to power a back-up generator for the hydrotreater.

7. Source 043F located in the boiler house fueled with diesel rated at 66 HP. The unit is used to power a back-up generator to supply instrument power during an outage.

The following requirements were created in Group 5 of the permit and are applicable to the seven engines:

- §63.6580 - Subpart ZZZZ establishes national emission limitations and operating limitations for hazardous air pollutants (HAP) emitted from stationary reciprocating internal combustion engines (RICE) located at major and area sources of HAP emissions. This subpart also establishes requirements to demonstrate initial and continuous compliance with the emission limitations and operating limitations.
- §63.6585 – The facility operates the stationary RICE at an area source. A stationary RICE is any internal combustion engine which uses reciprocating motion to convert heat energy into mechanical work and which is not mobile.
- §63.6590 – The stationary SI RICE is an affected source because it is located at an area source of HAPs and is considered existing. A change in ownership of an existing source does not make that stationary RICE a new or reconstructed stationary RICE.
- §63.6595 – The compliance date for these engines is May 3, 2013 for the diesel engines and October 19, 2013 for the spark ignition (SI) RICE.
- §63.6603 – The engines are subject to Table 2d of Subpart ZZZZ which includes the following work practices:

- a. Change oil and filter every 500 hours of operation or annually, whichever comes first;
- b. Inspect spark plugs every 1,000 hours of operation or annually, whichever comes first [for the SI engine] and inspect the air cleaner every 1,000 hours of operation or annually, whichever comes first [for the CI engines]; and
- c. Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.

* The above Source has the option to utilize an oil analysis program as described in § 63.6625(i) or (j) in order to extend the specified oil change requirement in Table 2d of this subpart.

** If an emergency engine is operating during an emergency and it is not possible to shut down the engine in order to perform the management practice requirements on the schedule required in Table 2d of this subpart, or if performing the management practice on the required schedule would otherwise pose an unacceptable risk under federal, state, or local law, the management practice can be delayed until the emergency is over or the unacceptable risk under federal, state, or local law has abated. The management practice should be performed as soon as practicable after the emergency has ended or the unacceptable risk under federal, state, or local law has abated. Sources must report any failure to perform the management practice on the schedule required and the federal, state or local law under which the risk was deemed unacceptable.

- §63.6605 - Operate and maintain the affected source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions.

- §63.6625 - Operate and maintain the stationary RICE and after-treatment control device (if any) according to the manufacturer's emission-related written instructions or develop your own maintenance plan. Minimize the engine's time spent at idle during startup and minimize the engine's startup time to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes. The option of utilizing an oil analysis program in order to extend the specified oil change requirement by comparison of the Total Base Number [or Total Acid Number for the SI engine], viscosity, and percent water content with established parameters. The facility must also install a non-resettable hour meter on each emergency engine if one is not already installed.
- §63.6640 – Demonstrate continuous compliance in accordance with Table 6. Item 9 of Table 6 requires the facility to comply with the work or management practices by:
 - i. Operating and maintaining the stationary RICE according to the manufacturer's emission-related operation and maintenance instructions; or
 - ii. Develop and follow your own maintenance plan which must provide to the extent practicable for the maintenance and operation of the engine in a manner consistent with good air pollution control practice for minimizing emissions.

Deviations of the work practices in Table 2d must be reported by the facility. The maintenance plan was reviewed at the facility during the inspection on May 27, 2015.

The emergency engine must comply with paragraph (f)(1-4). In order for the engine to be considered an emergency stationary RICE under this subpart, any operation other than emergency operation, maintenance and testing, emergency demand response, and operation in non-emergency situations for 50 hours per year, as described in paragraphs (f)(1) through (4) of this section, is prohibited. If you do not operate the engine according to the requirements in paragraphs (f)(1) through (4) of this section, the engine will not be considered an emergency engine under this subpart and must meet all requirements for non-emergency engines.

(1) There is no time limit on the use of emergency stationary RICE in emergency situations.

(2) You may operate your emergency stationary RICE for any combination of the purposes specified in paragraphs (f)(2)(i) through (iii) of this section for a maximum of 100 hours per calendar year. Any operation for non-emergency situations as allowed by paragraphs (f)(3) and (4) of this section counts as part of the 100 hours per calendar year allowed by this paragraph (f)(2).

(i) Emergency stationary RICE may be operated for maintenance checks and readiness testing, provided that the tests are recommended by federal, state or local government, the manufacturer, the vendor, the regional transmission organization or equivalent balancing authority and transmission operator, or the insurance company associated with the engine. The owner or operator may petition the Administrator for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the owner or operator maintains records indicating that federal, state, or local standards require maintenance and testing of emergency RICE beyond 100 hours per calendar year.

(ii) Emergency stationary RICE may be operated for emergency demand response for periods in which the Reliability Coordinator under the North American Electric Reliability Corporation (NERC) Reliability Standard EOP-002-3, Capacity and Energy Emergencies (incorporated by reference, see §63.14), or other authorized entity as determined by the Reliability Coordinator, has declared an Energy Emergency Alert Level 2 as defined in the NERC Reliability Standard EOP-002-3.

(iii) Emergency stationary RICE may be operated for periods where there is a deviation of voltage or frequency of 5 percent or greater below standard voltage or frequency.

(3) [Not applicable]

(4) Emergency stationary RICE located at area sources of HAP may be operated for up to 50 hours per calendar year in non-emergency situations. The 50 hours of operation in non-emergency situations are counted as part of the 100 hours per calendar year for maintenance and testing and emergency demand response provided in paragraph (f)(2) of this section. Except as provided in paragraphs (f)(4)(i) and (ii) of this section, the 50 hours per year for non-emergency situations cannot be used for peak shaving or non-emergency demand response, or to generate income for a facility to an electric grid or otherwise supply power as part of a financial arrangement with another entity.

(i) Prior to May 3, 2014, the 50 hours per year for non-emergency situations can be used for peak shaving or non-emergency demand response to generate income for a facility, or to otherwise supply power as part of a financial arrangement with another entity if the engine is operated as part of a peak shaving (load management program) with the local distribution system operator and the power is provided only to the facility itself or to support the local distribution system.

(ii) The 50 hours per year for non-emergency situations can be used to supply power as part of a financial arrangement with another entity if all of the following conditions are met:

(A) The engine is dispatched by the local balancing authority or local transmission and distribution system operator.

(B) The dispatch is intended to mitigate local transmission and/or distribution limitations so as to avert potential voltage collapse or line overloads that could lead to the interruption of power supply in a local area or region.

(C) The dispatch follows reliability, emergency operation or similar protocols that follow specific NERC, regional, state, public utility commission or local standards or guidelines.

(D) The power is provided only to the facility itself or to support the local transmission and distribution system.

(E) The owner or operator identifies and records the entity that dispatches the engine and the specific NERC, regional, state, public utility commission or local standards or guidelines that are being followed for dispatching the engine. The local balancing authority or local transmission

and distribution system operator may keep these records on behalf of the engine owner or operator.

- §63.6645 – The engines are not subject to numerical emission standards and therefore the notifications in §63.(7)(b & c), §63.8(e), (f)(4) and (f)(6), §63.9(b) through (e), and (g) and (h) are not applicable to any of the engines at this facility.
- §63.6650 – The emergency engine may be subject to annual reporting if the engine is operated or is contractually obligated to be available for more than 15 hours per year for the purposes specified in §63.6640(f)(2)(ii) and (iii) or that operate for the purposes specified in §63.6640(f)(4)(ii) you must submit a report that contains the information in §63.6650(h)(1). The report must be submitted annually according to the requirements in §63.6650(h)(2)-(3).

(1) The report must contain the following information:

- (i) Company name and address where the engine is located.
- (ii) Date of the report and beginning and ending dates of the reporting period.
- (iii) Engine site rating and model year.
- (iv) Latitude and longitude of the engine in decimal degrees reported to the fifth decimal place.
- (v) Hours operated for the purposes specified in §63.6640(f)(2)(ii) and (iii), including the date, start time, and end time for engine operation for the purposes specified in §63.6640(f)(2)(ii) and (iii).
- (vi) Number of hours the engine is contractually obligated to be available for the purposes specified in §63.6640(f)(2)(ii) and (iii).
- (vii) Hours spent for operation for the purpose specified in §63.6640(f)(4)(ii), including the date, start time, and end time for engine operation for the purposes specified in §63.6640(f)(4)(ii). The report must also identify the entity that dispatched the engine and the situation that necessitated the dispatch of the engine.
- (viii) If there were no deviations from the fuel requirements in §63.6604 that apply to the engine (if any), a statement that there were no deviations from the fuel requirements during the reporting period.
- (ix) If there were deviations from the fuel requirements in §63.6604 that apply to the engine (if any), information on the number, duration, and cause of deviations, and the corrective action taken.

(2) The first annual report must cover the calendar year 2015 and must be submitted no later than March 31, 2016. Subsequent annual reports for each calendar year must be submitted no later than March 31 of the following calendar year.

(3) The annual report must be submitted electronically using the subpart specific reporting form in the Compliance and Emissions Data Reporting Interface (CEDRI) that is accessed through EPA's Central Data Exchange (CDX) (www.epa.gov/cdx). However, if the reporting form specific to this subpart is not available in CEDRI at the time that the report is due, the written report must be submitted to the Administrator at the appropriate address listed in §63.13.

- §63.6655 - Keep records of the maintenance conducted on the stationary RICE in order to demonstrate that you operated and maintained the stationary RICE and after-treatment control device (if any) according to your own maintenance plan. Keep records of actions taken during malfunctions. For the emergency engine (Source 103) the facility must keep records of the hours of operation of the engine that is recorded through the non-resettable hour meter. The owner or operator must document how many hours are spent for emergency operation; including what classified the operation as emergency and how many hours are spent for non-emergency operation. If the engine is used for the purposes specified in §63.6640(f)(2)(ii) or (iii) or §63.6640(f)(4)(ii), the owner or operator must keep records of the notification of the emergency situation, and the date, start time, and end time of engine operation for these purposes.
- §63.6660 – Format and duration of the records that need to be kept.
- §63.6665 –Table 8 to this subpart shows which parts of the General Provisions (§§63.1 through 63.15) are applicable.
- §63.6675 - Refer to 40 CFR 63.6675 for the definitions that applies to this subpart. The definitions are included in the permit in their entirety.

Compliance Issues

The Department conducted a Full Compliance Evaluation (FCE) inspection of the facility on May 13, 2010, September 7, 2011, August 9, 2012, June 17, 2013, April 17, 2014, and April 7, 2015. No violations were noted during these Full Compliance Evaluation (FCE) inspections.

Semi-Annual Compliance Deviation Reports were received on a timely basis of each year since the permit renewal in 2010. Title V Annual Compliance Certifications were received by June 30 of each year since the permit renewal in 2010. The facility submits Leak Detection and Repair (LDAR) reports based on the requirements established in Condition #018, the Site Level of the permit. The reports were received on a quarterly basis over each of the past 5 years. The permittee is required to submit, annually, data to the Department showing that annual alcohol losses do not exceed 10% of total annual alcohol usage. These reports were received in a timely manner over the past 5 years.

Emission Inventory

The following table lists the emissions reported to the Department on an annual basis for the years 2010 through 2014 for Calumet Penreco.

Facility-Wide Emissions

Pollutant	CO	NOx	PM-10	PM 2.5	SOx	VOC
2010	5.2	26.5	23.3	8.6	72.1	105.3
2011	5.2	27.4	22.8	9.4	73.1	57.3
2012	4.1	23.5	20.3	7.6	72.7	45.6
2013	4.4	23.0	20.7	7.9	72.7	55.2

2014	2.9	20.8	19.9	7.7	72.3	50.1
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Emissions were relatively steady from 2010 through 2014 except for VOC emissions. The majority of the VOC emissions declined from 2010 to 2012 (approximately 60 Tons) was from the Alcohol Recovery Process (Source 105). This was due to a decrease in white oil throughput and subsequently a decreased alcohol use.

RFDs

The facility submitted no Request for Determinations (RFD) since the previous renewal in 2010. In the previous five year period, the facility submitted one RFD. The RFD was received on October 28, 2005 and approved by the Department on November 16, 2005. The RFD was for the installation of a boiler economizer which consists of piping warm boiler flue gases from the stacks of the #2 and #3 boilers to heat the raw water intake into the boilers. The use of the economizer reduced the consumption of natural gas since less energy was expended to produce steam. As a result of the economizer installation emissions from the facility were slightly reduced. A plan approval was not required for the economizer, and no changes to the requirements in the TV permit will occur.

Permit Changes

Source 115 – Kerosene Storage tank was included in the permit renewal application. The source has a rated capacity of 36.8 mmgal/yr. This tank was previously installed in January 1970 and was not included in the previous permit. Kerosene storage tanks are exempt from plan approval based on 25 Pa. Code Section 127.14(a)(8) item #17 which indicates that kerosene storage tanks are exempt from plan approval as long as the stored or dispensed product has a vapor pressure less than 1.5 psia. Based on the vapor pressure (less than 1.5 psia) and the installation date preceding the New Source Performance Standards (NSPS) for Subpart K, Ka, and Kb, these requirements are not applicable. Therefore, this source will remain in the miscellaneous section of the permit.

Source 037 – This source was removed from service in the past 8 years and was removed from the permit during this renewal.

Source & Control 119 – This source/control was renamed from kerosene / naphtha unit flare to naphtha unit flare to reflect it no longer is used to control the kerosene process.

Permit Responsible Official and Permit Contact were changed to Lee Achesinski and Kevin M. Kline, respectively.

Source 043 was renamed to include the work “emergency” and the other emergency engines were added to the permit as identified previously with the RICE MACT requirements.

The Area Source Boiler MACT requirements were added to the permit as identified previously.

The NESHAPs requirements for the gasoline storage tank (Source 109) were added to the permit as identified previously.

Recommendation

The facility was inspected on May 27, 2015 by the writer and Kyle Lewarchik for purposes of the renewal permit inspection.

The draft Operating Permit was submitted to the company on April 23, 2015. The draft review memo and permit were submitted to EPA electronically on April 23, 2015 for their 45- day review with a request for comments by June 8, 2015. The notice of Intent to Re-issue the Permit was published in the Pa Bulletin on May 9, 2015. The Newspaper Notice was submitted to the facility on April 23, 2015 and was published in the Butler Eagle Newspaper on May 4, 5, and 6, 2015 editions. Proof of receipt was received by the Department on May 7, 2015. The comment period expired on June 8, 2015. No comments were received.

The Issuance of the TV Permit Renewal is recommended with the appropriate conditions in the permit.

cc: Larry Vogel – New Castle District Supervisor