

**DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR QUALITY DIVISION
ACTIVITY REPORT: On-site Inspection**

F325468818

FACILITY: Selfridge Air National Guard Base		SRN / ID: F3254
LOCATION: Selfridge Air National Guard, MI 48045, MOUNT CLEMENS		DISTRICT: Warren
CITY: MOUNT CLEMENS		COUNTY: MACOMB
CONTACT: Kenneth Baker , Environmental Engineer		ACTIVITY DATE: 08/22/2023
STAFF: Kerry Kelly	COMPLIANCE STATUS: Compliance	SOURCE CLASS: SM OPT OUT
SUBJECT: Based on information gathered from this inspection, SANGB is in compliance with the applicable requirements evaluated.		
RESOLVED COMPLAINTS:		

On August 22, 2023, I (Kerry Kelly, EGLE-AQD) conducted an inspection at Selfridge Air National Guard Base (SANGB) located in Harrison Township, Michigan. The purpose of the inspection was to determine the SANGB's compliance with the Federal Clean Air Act; Article II, Part 55, Air Pollution Control of Natural Resources and Environmental Protection Act, 1994 Public Act 451; Michigan Department of Environment, Great Lakes, and Energy - Air Quality Division (EGLE-AQD) Administrative Rules; and the conditions of Permit-To-Install (PTI) Nos. 523-96A and No. 10-15.

Kenneth Baker represented SANGB during the inspection.

SANGB is a military installation whose major tenants include the Army, Air Force, Marines, Navy, Coast Guard, and Department of Homeland Security. The base is hosted by the Michigan Air National Guard's 127th Wing. The facility is located in eastern Macomb County, Michigan. Macomb County is designated as attainment/unclassified for all criteria pollutants. SANGB is bounded on the east by Anchor Bay/Lake St. Clair and on the south and west by residential properties. A river also runs along the southern boundary of the base.

Maintenance and operation of military equipment and buildings and some research and development work are the primary activities that take place at SANGB. Maintenance squadron and support equipment is assigned for each particular aircraft. Support equipment may consist of aerospace ground equipment (AGE), emergency engines, and paint & maintenance equipment. The facility also has a fluorescent bulb crusher and several natural gas-fired boilers & space heaters.

The facility previously had 2 heating plants with coal-fired boilers (PTI No. 521-82). According to the permit evaluation for PTI No. 523-96, the three remaining coal-fired boilers were decommissioned in August 1997. PTI No. 521-82 was voided on 8/6/1999. During the inspection on 9/6/2022, Ken took me to W. Perimeter Road and Coswell, the site where the west heating plant was located. The location was vacant and covered with grass. A Google Earth Pro aerial photo dated March 1999 shows a building with stacks and a large black area that appeared to be coal piles/residue next to train cars, at the location. In a Google Earth Pro aerial photo dated April 2002, there were no buildings or evidence of coal on the SE corner of W. Perimeter and Coswell. Ken didn't know where the other power plant used to be located. I did not see any buildings that looked like they contained coal-fired boilers during the inspection. This information indicates SANGB removed the heating plants with the coal-fired boilers.

AGE is aircraft support equipment on wheels (some are motorized). The engines use aviation fuel and diesel fuel. AGE consist of all motorized aircraft support equipment, such as electric power generators, compressors, hydraulic test stands, weapon loading units, towing vehicles, supplementary heating, air conditioning, and lighting. In the past, the facility requested that the AGE be considered a mobile source which would result in the emissions from the AGE not being included in the facility's potential to emit (PTE) calculations. Based on previous inspection reports for the facility, AQD Warren district determined that the AGE is not a mobile source and therefore the emissions must be included when calculating the facility's PTE. As a result, the facility's PTE for hazardous air pollutants (HAP), carbon monoxide (CO) and nitrogen oxides (NOx) was greater than major source thresholds without federally enforceable emission limits in place.

On August 6, 1999, a PTI was approved (No. 523-96) limiting SANGB's HAP and criteria pollutant emissions to below major source thresholds, making the facility a synthetic minor opt-out for HAPs and criteria pollutants. This opt-out permit was modified and PTI No. 523-96A approved March 21, 2005.

Environmental-related records were previously maintained through Air Program Information Management (APIM), a program developed by the military for use at military installations. During my inspection on 8/22/23, Ken informed me the facility is switching to a new recordkeeping database. PTI 523-96A and 10-15 require monthly and 12-month rolling emissions and/or throughput records be kept for each emission unit or flexible group. Ken submitted the 12-month rolling records to me via email for the 12-month periods ending August 2022 – June 2023. In the email with the record, Ken stated the some of the files are designating as controlled unclassified information under operational security. Data with this designation is related to fuel throughput and emergency generators at the installation and, according to Ken,

controlled unclassified information under operational security should not be disclosed to the general public even under a FOIA request. I will request all hard copies of records received for this inspection be put in the confidential file cabinet at the Warren District office.

COMPLIANCE EVALUATION

COLD CLEANERS

The cold cleaners at SANGB are included in PTI No. 523-96A in the Flexible Group FG-COLDCLEANERS. Conditions in FG-COLDCLEANERS in the permit were established pursuant to Rule 205 and Rule 707.

PTI 523-96A

Special Cond. 1.1. sets a VOC limit of 10 tons per year based on a rolling 12-month period. Ken provided VOC emissions records, required in SC 1.5, for each the 12-month periods ending August 2022 – June 2023 (Attachment 1). The highest 12-month rolling VOC emissions reported were 0.66 tons reported for the 12-month period ending November 2022.

Special Cond. 1.2. sets a material usage limit of 3,000 gallons per year based on a rolling 12-month period. Ken provided solvent usage records, required in SC 1.5, for each the 12-month periods ending August 2022 – June 2023 (Attachment 1), as required in SC 1.5. The highest 12-month rolling solvent usage reported was 225 gallons reported for the 12-month period ending November 2022..

Special Cond. 1.3 limits the VOC content of solvent to less than 6.7 pounds per gallon based on a monthly average. According to records provided by Ken, the highest average solvent VOC content was 6.39 lbs/gallon.

Special Cond. 1.4. requires SANGB operate the cold cleaners in compliance with Rule 707. Rule 707 requires:

- Cold cleaners to be equipped with lids and the lids be closed whenever parts are not being handled. The cover must be mechanically assisted if the solvent is more than 0.3 psia, agitated, or heated.
- A device be available for draining cleaned parts
- Waste solvent to be stored in closed containers
- Written procedures for the operation of such provisions, and such procedures shall be posted in an accessible, conspicuous location near the cold cleaner

Ken provided a list of all cold cleaners at the facility (Attachment 1). According to this list, there are/were 16 cold cleaners at SANGB. The largest cold cleaner on the list (APIMS ID 2118, located in Building 36) has a capacity of 355 gallons. Ken stated during the inspection that the cold cleaner with APIMS ID 2118 had been removed. I inspected the area where I had seen this cold cleaner (APIMS ID 2118) at Building 36 during previous inspections. The cold cleaner with APIMS ID 2118 was not present in the location I had previously seen it. I did not see the cold cleaner with APIMS ID 2118 at all during this inspection.

There were two other parts washers in Building 36; one Crystal Clean parts washer with an Isopar L label and the other a StingRay wash cabinet with a C&H Spraydet label on it. The Crystal Clean parts washer had an approximately 2 x 4 air/vapor interface, the lid was closed, and operating instructions were posted in a conspicuous place on the outside of the cleaner. According to Ken, the StingRay parts washer is an aqueous based parts washer. According to StingRay's website, they manufacture aqueous-based parts washers. Ken provided the SDS for the cleaner used StingRay wash cabinet (C&H Spraydet EL Spray Cabinet Cleaner). Aqueous based parts washers (a tank containing liquid with a volatile organic compound content of less than 5 %, by weight, and at a temperature below its boiling point that is used to spray, brush, flush, or immerse metallic and/or plastic objects for the purpose of cleaning or degreasing) are exempt from the requirement to have a PTI per Rule 281(2)(k).

I also inspected cold cleaners in Buildings 45, 120, and 1416. During the inspection, each cold cleaner I observed in Buildings 45, 120, and 1416 had an air/vapor interface less than 10 square feet and was equipped with a lid. The lids were closed on the cold cleaners that were not in use. I saw instructions posted in a conspicuous location near each cold cleaner. The waste solvent and solvent containing rags that I saw were stored in closed containers.

The cold cleaner in Building 120 is new according to Ken. Per Rule 281(2)(h), the requirement to obtain a permit to install does not apply to cold cleaners that have an air/vapor interface of not more than 10 square feet.

PAINT BOOTHS

The paint booths at SANGB are included in PTI No. 523-96A in the Flexible Group FG-PAINTBOOTHES. Conditions in FG-PAINTBOOTHES in the permit were established pursuant to Rule 205.

According to records provided by Ken (Attachment 2), there are paint booths located in Building Nos. 1416, 1465, 120 and

35 at SANGB.

PTI 523-96A

Special Cond. 1.1. limits the amount of paint and solvent used in each paint booth to 200 gallons per 12-month rolling time period. Ken provided records of paint usage, required in SC 2.4 for each the 12-month periods ending August 2022 – July 2023 (Attachment 2). These records indicate the highest 12-month rolling usage for all booths combined was approximately 28.97 gallons reported for the period ending August 2022. The reported annual usage for all booths combined is less than the 200 gallon per year per booth limit.

Special Cond. 2.2. sets a VOC content limit of paint of 6.25 pounds per gallon based on a monthly average. Ken provided records of the monthly average VOC content of the coatings, required in SC 2.4, for August 2022 - July 2023. These records indicate SANGB the highest monthly average coating VOC content between August 2022 - July 2023 occurred in December 2022 at 5.5 lb/gallon.

Special Cond 2.3. requires paint booth filters to be properly installed, no gaps. I inspected the three booths located in Building 1416, one paint booth in Building 35, and one paint booth in Building 120 during this inspection.

According to Ken, only one of the booths in Building 1416 is used for painting and this booth has not been used due to air compressor malfunction. In this booth I saw approximately 5 cans of spray paint and that the filters appeared to be installed properly. Paint usage records show Selfridge is tracking the amount of aerosol paint used in the booth in Bldg. 1416.

The other booths/rooms in Building 1416 are labeled “Clean Room” and “Dirty Room”. I inspected the Clean Room and Dirty Room. The Clean Room is used to fabricate composite materials, according to Ken. In the Clean Room I observed a table. I didn't see any evidence (paint guns, overspray, etc) that painting was being conducted in the Clean Room. The Dirty Room is used to sand old paint off of aircraft parts. In the Dirty Room I saw a self-contained, downdraft table. The downdraft table is equipped with a filter. The Dirty Room did not appear to have an exhaust system.

In an area nearby I saw a CRC Smart Washer aqueous based parts washer that uses Ozzy Juice and a Uniram Cascade parts washer. The lid to the Uniram parts washer was closed and there was a tag on it indicating it is not to be used.

In Building 120 I saw another self-contained downdraft table used for spray painting and a paint booth. There was one can of paint on the downdraft table. The paint booth filters appeared to be properly installed, no gaps, during the inspection. There was a log to record paint usage next to the paint booth.

The filters in the booth in Building 35 were properly installed during the inspection and appeared clean.

NATURAL GAS-FIRED HEATERS

SANGB uses natural gas fired boilers and heaters to heat buildings throughout the base. Ken provided a list of the gas fired boilers and heaters at SANGB on 8/18/2021. According to the list, there are 459 boilers and heaters; and the heat input rating of each boiler is less than 10 MMBtu/hour. Sizes noted in the records range from 0.034 MMBtu/hour to 3 MMBtu/hour. I did not inspect any boilers during this inspection. During my inspecting on 9/6/2022, I inspected the boilers located in Buildings 1424, 1429, and 120. The natural gas-fired boilers and heaters that I inspected match the description in the list provided by Ken.

Conditions in FG-NGHEATERS in the permit were established pursuant to Rule 205. PTI 523-96A does not include National Emission Standards for Hazardous Air Pollutants (NESHAP) for Industrial, Commercial, and Institutional Boilers Area Sources (40 CFR 63 Subpart JJJJJ) requirements nor New Source Performance Standards (NSPS) for Small Industrial-Commercial-Institutional Steam Generating Units (40 CFR 60 Subpart Dc) requirements. According to 40 CFR 63.11195(e) in the NESHAP for Industrial, Commercial, and Institutional Boilers Area Sources, gas fired boilers are not subject to 40 CFR 63 Subpart JJJJJ. 40 CFR 60 Subpart Dc applies to each steam generating unit for which construction, modification, or reconstruction is commenced after June 9, 1989 and that has a maximum design heat input capacity of 29 megawatts (MW) (100 million British thermal units per hour (MMBtu/h)) or less, but greater than or equal to 2.9 MW (10 MMBtu/h). According to the list of natural gas boiler and heaters provided by Ken, the heat input of each boiler at SANGB is less than 10 MMBtu/hour.

PTI 523-96A

Special Cond. 3.1. limits natural gas usage for the heaters to 520 MM cubic ft. per 12-month rolling time period. Ken provided records of the natural gas usage, required in SC 3.2, for each 12-month period ending August 2022 - July 2023 (Attachment 3). These records indicate the highest 12-month rolling natural gas usage was 126.689 MMscf reported for

the period ending December 2022.

Per Rule 282(2)(b)(i), the requirement to obtain a permit to install does not apply to natural gas-fired fuel burning equipment that has a rated heat input capacity less than 50,000,000 Btu/hour and is used for space heating.

DIESEL GENERATORS

SANGB operates 55 diesel-fired emergency/fire pump engines, including 7 portable engines. The diesel engines range in size from 4.7 HP to 1,111 HP. 48 of the diesel engines are less than 500 HP. Diesel engines at SANGB are included in PTI No. 523-96A in the Flexible Group FG-DIESELGENS. PTI 523-96A does not identify the engines included in the permit. According to records provided by Ken, at least four engines installed before PTI 523-96A was issued are "inactive" and were replaced with new engines between 2020 and 2023. Fifteen stationary diesel generators were installed between 2005 and 2023, after PTI 523-96A was issued. The table below lists the size and manufacture dates of these engines:

HP Rating	Manufacture/Install Date	Calculated heat input (btu/hour) (based on average brake-specific fuel consumption 8089 btu/hp-hr and HP rating from Selfridge records)
27.5	8/1/2005	222,448
755	11/1/2008	6,107,195
250	5/7/2010	2,022,250
470	10/1/2010	3,801,830
139	2/11/2012	1,124,371
1111	7/1/2012	8,986,879
79	9/1/2015	639,031
47	9/4/2015	380,183
325	11/10/2015	2,628,925
755	9/1/2016	6,107,195
755	4/1/2018	6,107,195
35.5	5/2020	287,160
35.5	9/2020	287,160
35.5	3/2023	287,160
35.5	5/2023	287,16

Per Rule 285(2)(g), the requirement to obtain a permit to install does not apply to internal combustion engines that have less than 10,000,000 Btu/hour maximum heat input.

I inspected the diesel generators located at Buildings 35, 3562, and 557. The information on the nameplate for the engine at Building 35 indicates it is rated at 60 kW. The engines at Buildings 3562 and 557 are both Kubota Model V2203-M-BG-ET03, diesel-fired, certified engines with power ratings of 26.5 kW (approximately 35.5 HP). The non-resettable hours meter for the engine at Building 3562 read 2.5 during the inspection. The hours on the non-resettable hours meter for the engine at Building 557 read 2.3 during the inspection.

PTI 523-96A does not include NESHAP for Stationary Reciprocating Internal Combustion Engines requirements nor NSPS for Stationary Compression Ignition Internal Combustion Engines requirements.

NESHAP for Stationary Reciprocating Internal Combustion Engines (40 CFR Part 63, Subpart ZZZZ)

The emergency engines at SANGB may be subject to the 40 CFR Part 63, Subpart ZZZZ. Compliance with 40 CFR Part 63, Subpart ZZZZ was not evaluated during this inspection because EGLE-AQD has not accepted delegation to implement and enforce the 40 CFR Part 63, Subpart ZZZZ at area sources of HAPs.

NSPS for Stationary Compression Ignition ICE (40 CFR Part 60, Subpart IIII)

Emergency stationary diesel engines at the facility that were ordered after July 11, 2005 and manufactured after April 1,

2006 for non-fire pump engines and July 1, 2006 for fire pump engines may be subject to 40 CFR Part 60, Subpart IIII. According to records provided by Ken on 8/18/2021 and 8/24/2023, 14 of the emergency diesel engines at SANGB were manufactured after April 1, 2006. These engines range in size from 47 HP to 1,111 HP.

Records provided by Ken for the August 6, 2021 inspection indicated that each stationary diesel engine at SANGB, manufactured after April 1, 2006, is certified to meet the emission limits in 40 CFR Part 60, Subpart IIII. The engines are either listed in EPA's certification database or have a certificate of conformity. The two stationary diesel engines manufactured after April 1, 2006 that I inspected on August 22, 2023, located at Building 3562 and 557, had permanent labels on the engines that state the emissions control information. The label said "This engine meets the 2022 emission regulations for U.S. EPA stationary CI engines for emergency equipment only." The engine family listed on the emissions control label on each engine I inspected (NKBXL02.2FCC) is included in EPA's list of certified CI engines.

Per 40 CFR 60.4211(f), to be considered an emergency engine, each engine may be operated for no more than 100 hours per calendar year (CY) for the purpose of necessary maintenance checks and readiness testing, provided that the tests are recommended by Federal, State, or local government, the manufacturer, the vendor, or the insurance company associated with the engine. Each engine may be operated up to 50 hours per calendar year in non-emergency situations, but those 50 hours are counted towards the 100 hours per calendar year provided for maintenance and testing. The 50 hours per calendar year for non-emergency situations cannot be used for peak shaving or to generate income. Ken provided records of each engine's operating hours for CY 2022 (Confidential - Attachment 4). The highest non-emergency hours reported for a diesel engine manufactured after April 1, 2006 for CY 2022 was 35.4. These records were marked as unclassified Information under operational security. Data with this designation is related to fuel throughput and emergency generators at the installation and, according to Ken, controlled unclassified information under operational security should not be disclosed to the general public even under a FOIA request.

PTI 523-96A

Special Cond. 4.1. limits annual power output to 450,000 kilowatt hours per 12-month rolling time period for FG-DIESELGENS. Ken provided records of the 12-month rolling annual output in kilowatt hours for the diesel generators at the facility for August 2022 - July 2023. The highest 12-month rolling power output recorded was 438,141 kW-hours recorded for the 12-month period ending August 2022.

On November 3, 2021, Ken notified me via email, that SANGB exceeded the 450,000 kW hours per 12-month time period limit starting with the 12-month period ending September 2021. The exceedance was due to a prolonged power outage at SANGB. The power outage was due to a catastrophic failure of an underground feeder line that was installed nearly 60 years ago. SANGB assumed that the degraded condition of the feeder was exasperated by the high demand associated with the use of air conditioners during the extremely hot days preceding the outage. Due to this outage, the 12-month rolling kW hours have exceeded 560,000 for the 12-month rolling periods ending September 2021 – June 2022.

A notice of violation was issued November 22, 2021 for the exceedance. In the response to the violation, SANGB stated that temporary field cross connects are in place to supply power to the affected facilities, a separate project is concurrently being planned to assess the primary and secondary distribution line capabilities to handle load demands, and SANGB has a contracted comprehensive Air Emissions Inventory (AEI) to be accomplished in calendar year 2022. Following completion of the contracted AEI, SANGB will collaborate with EGLE to update and revise our existing permit. SANGB will request the kW-h limit established under the permit to either be removed or raised appropriately based upon supporting data. During the inspection on August 22, 2023, Ken stated SANGB still plans on submitting a permit application, he anticipated the application would be in by the end of this year. The violation for exceeding the power output limit, noted in the violation letter sent November 22, 2021, will be resolved because records provided for this inspection indicate SANGB has not exceeded the kW-hour limit between August 2022 and June 2023.

FG-GASGENS

FG-GASGENS applies to all gasoline-powered generator engines at the facility. According to the records provided, SANGB no longer uses gasoline-powered generator engines. In addition, SANGB reported in the Michigan Air Emissions Reporting System (MAERS) that the gasoline powered engines have not been operated each year from 2014 through 2022. I did not see any gasoline-powered generators during the inspection.

FG-AGE

AGE consists of all motorized aircraft support equipment, such as electric power generators, compressors, hydraulic test stands, weapon loading units, towing vehicles, supplementary heating, air conditioning, and lighting. Based on records provided by Ken, the facility has 184 pieces of AGE (18 turbines and 166 reciprocating) fired by either diesel fuel or Jet A fuel. All AGE engines are 180 HP or less. 135 of the AGE are 50 HP or less. I inspected 4 pieces of AGE equipment during this inspection. Each piece of equipment I observed, including the engine and fuel tank, were affixed to a wheeled

trailer and were fueled by either diesel or Jet A. The majority of the AGE is stored at one of two locations at the base. I have not seen any AGE being used at the storage locations during my inspections at Selfridge.

NSPS for Stationary Compression Ignition ICE (40 CFR Part 60, Subpart III)

40 CFR Part 60, Subpart III applies to stationary compression ignition internal combustion engines ordered after July 11, 2005 and manufactured after April 1, 2006. A stationary engine, as defined in the rule, means any internal combustion engine, except combustion turbines, that converts heat energy into mechanical work and is not mobile. In addition, the rule states stationary ICE differs from mobile ICE in that a stationary internal combustion engine is not a nonroad engine as defined at 40 CFR 1068.30 (excluding paragraph (2)(ii) of that definition), and is not used to propel a motor vehicle, aircraft, or a vehicle used solely for competition.

A nonroad engine, as defined in 40 CFR 1068.30(1)(iii), is an internal combustion engine that by itself or in or on a piece of equipment, it is portable or transportable, meaning designed to be and capable of being carried or moved from one location to another. Indicia of transportability include, but are not limited to, wheels, skids, carrying handles, dolly, trailer, or platform. Per 40 CFR 1068.30(2)(iii), the engine included in 40 CFR 1068.30(1)(iii) that remains or will remain at a location for more than 12 consecutive months or a shorter period of time for an engine located at a seasonal source is not a non-road engine. A location is any single site at a building, structure, facility, or installation.

During the inspection I observed that the AGE was affixed to trailers with wheels making them capable of being moved from one location to another. The AGE was stored near the AGE service building (Building 45) at the time of my inspection. None of the AGE was being operated at Building 45 during my inspection. According to a worker at Building 45, Kyle, AGE is transported to different areas of the base when needed to do work on aircraft. The AGE equipment is also considered deployable assets according to Ken.

U.S. Environmental Protection Agency Applicability Determination Index (ADI), Control Number: M090038 indicates that an engine that is moved throughout a facility is classified as a non-road engine and therefore not subject to 40 CFR Part 60, Subpart III.

Based on the information above, the AGE at Selfridge would be classified as non-road engines and not stationary engines.

PTI 523-96A

Special Cond. 6.1. limits diesel fuel or Jet fuel usage for all turbine engines in FG-AGE to 150,000 gallons per 12-month rolling time period. Ken provided records of the fuel usage for the turbines in FG-AGE, required in SC 6.3, for each the 12-month periods ending August 2022 – June 2023 (Attachment 5). These records indicate the highest 12-month rolling diesel fuel and Jet fuel usage combined for the turbines was approximately 3546 gallons reported for the period ending September 2022.

Special Cond. 6.2. limits diesel fuel or Jet fuel usage for all reciprocating engines in FG-AGE to 75,000 gallons per 12-month rolling time period. Ken provided records of the fuel usage for the reciprocating engines in FG-AGE, required in SC 6.3, for each of the 12-month periods ending August 2022 – June 2023 (Attachment 5). The highest reported 12-month rolling diesel fuel and Jet fuel usage combined for the reciprocating engines was 13,257 gallons for the period ending September 2022.

FG-TESTCELLS

FG-TESTCELLS applies to 2 engine testing stands for F-16 aircraft engines. According to Ken, SANGB no longer uses the engine test cells. SANGB reported in the MAERS that the engine test cells have not been operated each year from 2014 through 2022. I did not see any engine test cells at the facility during the inspection.

FG-FUELSTORAGE

FG-FUELSTORAGE applies to tanks used to store petroleum products such as Jet fuel, diesel, and gasoline. There are 63 above ground storage tanks and one underground storage tank used to store petroleum products at SANGB according to records provided by Ken. 51 tanks are used to store diesel fuel, 7 tanks are used to store Jet A fuel, and 5 tanks are used to store gasoline. Three of these tanks have a capacity greater than 20,000 gallons (two 390,000 - gallon tanks used to store Jet A fuel and one 20,000 - gallon tank used to store gasoline).

Four Jet A tanks (two 390,000 gallon, one 3,000 gallon and one 150 gallon) and nine stationary diesel storage tanks (ranging from 70 - 3,000 gallons) were installed after PTI 523-96A was issued. Per Rule 284(2)(d), the requirement to obtain a permit to install does not apply to containers, reservoirs, or tanks used exclusively for Storage of no. 1 to no. 6 fuel oils as specified in ASTM D396, gas turbine fuel oils No. 2-GT to 4-GT as specified in ASTM D2880, aviation gas as specified in ASTM D910, jet fuels as specified in ASTM D1655, diesel fuel oils no. 2-D and 4-D as specified in ASTM D975, or biodiesel fuel oil and blends as specified in ASTM D6751 and ASTM D7467.

Two gasoline storage tanks (one 150 gallon and one 300 gallon) were installed after PTI 523-96A was issued. Per Rule 284(2)(g)(ii), the requirement to obtain a permit to install does not apply to containers, reservoirs, or tanks used exclusively for storage and handling equipment for gasoline dispensing facilities. A dispensing facility is defined in Rule 104(g) as a location where gasoline is transferred to a motor vehicle tank from a stationary vessel.

During the inspection, Ken showed me two 6,000 gallon gasoline storage tanks equipped with a vapor recovery vent. The vapor recovery vent was installed in anticipation of proposed Part 6 rules for areas of non-attainment for ozone. Macomb County was designated as nonattainment after the United States Environmental Protection Agency (USEPA) revised the primary and secondary ozone National Ambient Air Quality Standard (NAAQS) to 70 parts per billion (ppb) October 26, 2015 and published ozone nonattainment designations with an effective date of August 3, 2018. As of May 19, 2023, southeast Michigan, including Macomb County, was redesignated as attainment.

PTI 523-96A

Special Cond. 8.1 limits the jet fuel throughput for the storage tanks to 55,000,000 gallons per 12-month rolling time period. Ken provided records of the fuel usage for all tanks at the facility for each 12-month period ending August 2022 - June 2023 (Attachment 6). These records indicate the highest 12-month rolling jet fuel throughput was approximately 4,488,391 gallons reported for the period ending March 2023.

NESHAP for Gasoline-Dispensing Facilities (40 CFR Part 63, Subpart CCCCCC)

The gasoline tanks at SANGB may be subject to the 40 CFR Part 63, Subpart CCCCCC. Compliance with the 40 CFR Part 63, Subpart CCCCCC was not evaluated during this inspection because EGLE-AQD has not accepted delegation to implement and enforce the 40 CFR Part 63, Subpart CCCCCC.

NSPS for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced After July 23, 1984 (40 CFR Part 60, Subpart Kb)

Except as provided in 40 CFR 60.110b(b) and (d), 40 CFR Part 60, Subpart Kb applies to tanks greater than 75 m³ (20,000 gallons) used to store organic liquids which can emit volatile organic compounds (as defined in 40 CFR 51.100) into the atmosphere. The two 390,000-gallon tanks used to store Jet A fuel are not subject to 40 CFR Part 60, Subpart Kb per 40 CFR 60.110b(b) because they are storage vessels with a capacity greater than or equal to 151 m³ (39,890 gallons) storing a liquid with a maximum true vapor pressure less than 3.5 kilopascals (kPa). According to records submitted by Ken, the vapor pressure of Jet A fuel is 0.07 psia (0.48 kPa). The 20,000-gallon gasoline tank is located at a gasoline service station. Gasoline storage tanks located at gasoline service stations are not subject to 40 CFR Part 60, Subpart Kb per 40 CFR 60.110b(d)(6).

Michigan Administrative Rule 703

The gasoline storage tanks greater than 2,000 gallons appear to be subject to R 336.1703. R 336.1703 requires the tank be vapor tight and equipped with: a permanent submerged fill pipe, a vapor balance system or equivalent control, an interlocking system or procedure to ensure vapor tight collection line is connected before any gasoline can be loaded, and a device to ensure that the the vapor tight collection line shall close upon disconnection so as to prevent release of gasoline vapor. I did not evaluate SANGB's compliance with this rule during the inspection.

FG-FACILITY

Special Cond 9.1 limits emissions from all process equipment at the facility including equipment covered by other permits, grand-fathered equipment and exempt equipment to the following, based on a rolling 12-month time period:

Pollutant	Limit
Individual HAPs	9 tons/year
Aggregate HAPs	22.5 tons/year
NOx	83.9 tons/year
CO	80.6 tons/year
SO2	4.2 tons/year
PM10	19.5 tons/year
VOC	44.2 tons/year

Ken provided records of the facility-wide emissions for the 12-month periods ending August 2022 - July 2023 (Attachment 7). The records indicate emissions from fuel burning equipment (generators, boilers, AGE), storage tanks, painting, cold cleaners, small arms, and de-icing are included in the 12-month rolling calculations. The reported emissions for the 12-month periods ending in August 2022 - July 2023 are listed below:

Pollutant	Highest 12-month Rolling Reported Emissions	12-month Rolling Period Ending w/Highest Reported Emissions
Aggregate HAPs	0.10	Aug. 2022 - Nov. 2022
NOx	15.45 tons/year	August 2022
CO	8.11 tons/year	August 2022
SO2	0.05 tons/year	Multiple
PM10	1.11 tons/year	August 2022
VOC	5.93 tons/year	June 2023

EU-BULBCRUSHER

SANGB installed a fluorescent bulb crusher in January 2016. Permit-to-install No. 10-15 was issued for this equipment. Special Condition III.5 requires SANGB to completely replace the carbon within the activated carbon filter or replace the entire activated carbon filter, a minimum of once every two calendar years. On September 28, 2022, Ken sent an email stating "based upon costs to replace the carbon filter every two years and other factors, SANGB will no longer be utilizing the bulb crushing unit and has taken it out of service. From this point forward SANGB will collect and then ship used bulbs off site for disposal." Records submitted by Ken for this inspection indicate the bulb crusher was last used in July 2022.

PTI No. 10-15

Special Condition II.1. limits the eight-foot equivalent bulbs crushed per day to 400. Records submitted and statements by Ken indicate the bulb crusher was not operated between August 2022 - July 2023 (Attachment 8). The last reported daily throughput for the bulb crusher was 185 eight-foot equivalent bulbs on July 26, 2022.

Special Condition II.2. limits the eight-foot equivalent bulbs crushed per year, based on a 12-month rolling time period, to 5,000. Records submitted and statements by Ken indicate the bulb crusher was not operated between August 2022 - July 2023 (Attachment 8). Based on records submitted by Ken, the eight-foot equivalent bulbs crushed per year for the 12-month rolling periods ending Sept. 2022 and Oct. 2022 was 1125 and for the 12-month period ending Dec. 2022 was 901.

I did not evaluate compliance with the Process/Operational, Design/Equipment Parameters, nor the Stack/Vent conditions for the bulb crusher during this inspection because records submitted and statements by Ken indicate the bulb crusher was not operated between August 2022 - July 2023.

HUSH HOUSES

There are two "Hush Houses" at SANGB where jet planes are tested. In the "Hush House", a fully assembled jet plane is ushered into the building, tail first, and the engine exhaust goes through a binocular shaped receptacle. The emissions from the jet exit the narrow end of the receptacle and enter a tunnel outside of the building that muffles the jet engine noise. In letter from EPA Region 4 to Georgia Dept. of Natural Resources, Air Protection Branch, dated March 12, 1996, EPA indicated hush houses are not considered stationary sources since the aircraft engines are not removed from the aircraft prior to testing. I saw fully assembled aircraft in the hush houses during the inspection.

NATURAL GAS-FIRED GENERATORS

SANGB operates 7 natural gas-fired emergency engines. The natural gas-fired engines range in size from 47 HP to 684 HP. Six of the natural gas-fired engines are less than 500 HP. Internal combustion engines (ICE) that have a heat input capacity of less than 10 MMBtu/hour are exempt from the requirements to obtain a PTI per Rule 282(2)(g).

NESHAP for Stationary Reciprocating Internal Combustion Engines (40 CFR Part 63, Subpart ZZZZ). The emergency engines at SANGB may be subject to the 40 CFR Part 63, Subpart ZZZZ. Compliance with the 40 CFR Part 63, Subpart ZZZZ was not evaluated during this inspection because EGLE-AQD has not accepted delegation to implement and enforce the 40 CFR Part 63, Subpart ZZZZ at area sources of HAPs.

NSPS for Stationary Compression Ignition ICE (40 CFR Part 60, Subpart IIII)

Emergency natural gas-fired engines at the facility that were ordered after June 12, 2006 and manufactured after January 1, 2008 for lean burn engines with a maximum engine power greater than or equal to 500 HP and less than 1,350 HP or manufactured after July 1, 2008 for engines with a maximum engine power less than 500 HP are be subject to 40 CFR Part 60, Subpart JJJJ. According to records provided by Ken, six of the emergency natural gas-fired engines at SANGB meet this criteria.

40 CFR Part 60, Subpart JJJJ establishes emissions limits for emergency natural gas-fired engines. Compliance with these emission limits can be demonstrated by purchasing an engine certified by the manufacturer to meet the emission

limits and by operating the engines according to the manufacturer's emission-related written instructions or through performance testing conducted by the owner/operator. Records provided by Ken for the August 6, 2021 inspection indicated that each stationary natural gas-fired engine at SANGB subject to 40 CFR 60 Subpart JJJJ is certified. I did not inspect any of the natural gas-fired emergency engines on August 22, 2023. During my inspection on 9/6/2022, I inspected the natural gas-fired engines located at Building 1436 and 1429. The nameplates on these engine generators matched the description in the list provided by Ken. The nameplates on the natural gas-fired generator engines located at Building 1436 and 1429, each had a certification placard. The certification on the engine at Building 1436 stated the engine family is HPSIB21.9NGP. The engine family listed on the placard for the engine located at Building 1429 is HSP1B18.3NGP.

Per 40 CFR 60.4243(d), to be considered an emergency engine, each engine may be operated for no more than 100 hours per calendar year (CY) for the purpose of necessary maintenance checks and readiness testing, provided that the tests are recommended by Federal, State, or local government, the manufacturer, the vendor, or the insurance company associated with the engine. Each engine may be operated up to 50 hours per calendar year in non-emergency situations, but those 50 hours are counted towards the 100 hours per calendar year provided for maintenance and testing. The 50 hours per calendar year for non-emergency situations cannot be used for peak shaving or to generate income. Ken provided records of each engine's operating hours for CY 2022 (Confidential - Attachment 5). These records were marked as unclassified information under operational security. Data with this designation is related to fuel throughput and emergency generators at the installation and, according to Ken, controlled unclassified information under operational security should not be disclosed to the general public even under a FOIA request. The highest non-emergency hours reported for a natural gas-fired engine subject to 40 CFR 60 Subpart JJJJ for CY 2022 was 42.1.

WOOD SHOP

During the inspection I observed a dust collector outside of Building 126. I did not inspect the equipment in Building 126 on August 22, 2023. During my inspection on 9/6/2022, I inspected the equipment in Building 126 and observed a fully enclosed portable sand blast unit, a table with a hood and sign saying no painting and a welding torch next to it, two table saws, and other pieces of woodworking equipment. The equipment that I observed in Building 126 meets the PTI exemptions in Rule 285(2)(i) and (l)(vi).

FIRE SUPPRESSION TESTING

There is a fire suppression testing lab located in Building 1437. In this building, research and development on fire suppression media is performed. I did not inspect the equipment in Building 1437 on August 22, 2023. During my inspection on 9/6/2022, I saw a make-shift military vehicle with two outlet ducts in this building. According to personnel in the lab at the time, FM-200, HF-227c, and HFC-125 are delivered into the crew compartment of the make-shift vehicle. Most of the tests are "dry tests" where no fire is used, only sodium bicarbonate, to test for obscuration. Occasionally, a fireball generator is used. The fireball generator uses JP-8 fuel pressurized with nitrogen to atomize the fuel which is then ignited with an electric match. According to lab personnel, they track their material usage and give the information to Ken for emissions calculations. Pilot processes or pilot process equipment for physical or empirical research utilizing T-BACT are exempt from PTI per Rule 283(2)(a). Fire extinguisher filling, testing, spraying, and repairing are exempt from Rule 201 per Rule 285(2)(ff).

MISCELLANEOUS EQUIPMENT

In Building 120 I inspected a shredder, laser etcher, vinyl cutter, laminator, ink jet plotter, a plastic media blaster, and a large sanding booth. This equipment appears to be used on a non-production basis.

I saw that the etcher is equipped with a filter and was told by a person working in the area that it is used to make plaques/labels for identifying items/places at the base.

The plastic media blaster was equipped with a HEPA filter.

The sanding booths are used to sand metal trailers for AGE equipment. The sanding booths were equipped with filters and mechanical pre-cleaners.

The vinyl cutter was not in use during the inspection. Emissions from the cutter are released to the general in-plant environment.

Equipment for carving, cutting, routing, turning, drilling, machining, sawing, surface grinding, sanding, planing, buffing, sand blast cleaning, shot blasting, shot peening, or polishing ceramic artwork, leather, metals, graphite, plastics, concrete, rubber, paper board, wood, wood products, stone, glass, fiberglass, or fabric that is used on a non-production basis is exempt from Rule 201 per Rule 285(2)(l)(vi).

Rule 290(2) and Rule 291(2) exempt equipment/processes with emission units/processes with limited emissions and “de minimis” emissions respectively.

MICHIGAN AIR EMISSIONS REPORTING SYSTEM (MAERS) REPORTING

The 2022 criteria pollutant emissions from Selfridge were submitted to MAERS on time. Facility-wide CO emissions reported to MAERS for calendar year 2022 matched facility-wide CY 2022 CO emissions in records submitted for this inspection. Facility-wide VOC emissions reported to MAERS for CY 2022 were approximately 1.2 tons lower than facility-wide CY 2022 VOC emissions cited in records submitted for this inspection. Facility-wide NOx emissions reported to MAERS for CY 2022 were approximately 1 ton higher than facility-wide CY 2022 NOx emissions cited in records submitted for this inspection. Facility-wide SO₂, lead, PM₁₀ and PM 2.5 emissions cited in MAERS and inspection records for CY 2022 were each less than 1 ton.

CONCLUSION

Based on my observations during the field inspection and the records provided, SANGB is in compliance with the applicable requirements evaluated.

NAME K Kelly

DATE 9/11/2023

SUPERVISOR Joyce