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DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR QUALITY DIVISION
ACTIVITY REPORT: Scheduled Inspection

N654438011

FACILITY: Swissport Fuel Services		SRN / ID: N6544
LOCATION: DETROIT METROPOLITAN AIRPORT, DETROIT		DISTRICT: Detroit
CITY: DETROIT		COUNTY: WAYNE
CONTACT: Jeff Thursby , Fuel Facility Manager		ACTIVITY DATE: 12/21/2016
STAFF: Stephen Weis	COMPLIANCE STATUS: Compliance	SOURCE CLASS: SM OPT OUT
SUBJECT: Compliance inspection of the Swissport Fuel Services facility located at the Detroit Wayne County Metropolitan Airport. The Swissport facility is scheduled for inspection in FY 2017.		
RESOLVED COMPLAINTS:		

Location:

Swissport Fuel Services (SRN N6544)
Detroit Wayne County Metropolitan Airport
Building 722, West Service Road
Romulus 48174

Date of Activity:

Wednesday, December 21, 2016

Personnel Present:

Steve Weis, DEQ-AQD Detroit Office
Jeff Thursby, Fuel Facility Supervisor – Swissport Fuel Services

Purpose of Activity

A self-initiated inspection of the Swissport Fuel Services facility (hereinafter "Swissport"), located at the Detroit Wayne County Metropolitan Airport, was conducted on Wednesday, December 21, 2016. The Swissport facility is on my list of sources targeted for an inspection during FY 2017. The purpose of this inspection was to determine compliance of operations at the Swissport facility with applicable rules, regulations and standards as promulgated by Public Act 451 of 1994 (NREPA, Part 55 Air Pollution Control), applicable Federal standards, and any applicable permits and orders.

Facility Description

The Swissport facility is located in Romulus, and the property that it operates on is situated within the boundaries of the Detroit Metropolitan Wayne County Airport (or "Airport", SRN M4174). The land that is currently included as part of the Airport stationary source is bounded by Interstate 94 to the north, Middlebelt Road to the east, Eureka Road to the south, and Vining Road to the west. The Swissport facility is located in the northwest corner of the Airport property on the west side of the West Service Drive, which runs south from Goddard Road between the westernmost Airport runways/taxiways and Vining Road. The area around the Swissport facility consists primarily of Airport infrastructure, including buildings containing Airport and Wayne County operations, and parcels of open land. The nearest Airport property boundary is over ¼ mile to the north of the facility, and the nearest residential property, which is located on the north side of I-94, is over ¾ mile away.

Operations at the Airport complex are overseen by the Wayne County Airport Authority. The Airport property contains many buildings and operations serving a wide array of functions. These include buildings/operations owned and operated by the Airport Authority and/or Wayne County; buildings/operations owned and operated by the various airlines doing business at the Airport; buildings/operations that provide support services to the Airport, the various airlines, or both. Many of these buildings/operations have been in existence for many years, and were built at various stages in the Airport's existence.

DEQ-AQD considers the buildings and operations owned and operated by the various airlines, commercial and institutional entities, and support services (an example being the Swissport facility) located at the Airport as separate stationary sources from the buildings and operations operated and controlled by the Wayne County Airport Authority. The Swissport facility has its own separate permit, and its own AQD Source ID (SRN).

The Swissport facility is an airline fuel distribution operation. Airline fuel, also known as Jet A fuel, is stored on site in storage tanks, and distributed to customers around the Airport. The fuel is distributed in one of two ways – 1) Jet A fuel is distributed via a loading rack to tanker trucks, which deliver the fuel to customers on the Airport property, and 2) the fuel is distributed through a hydrant system, through which fuel is piped around the Airport and distributed via fuel hydrants to customers. According to information from Swissport's website for the Detroit airport location, the services that Swissport provides at the Airport include the maintenance and operation of fuel storage on/off airport; maintenance and operation of the fuel pipeline/hydrant systems; and into-plane fueling tanker, mobile hydrants trucks, and hydrant carts. Swissport's customer airlines at the Airport include Air Canada, Air France, Alaska Airlines, American Airline, Delta Airlines, Fed Ex, Frontier, Jet Blue Airways, Lufthansa, Royal Jordanian Airlines, Southwest Airlines, Spirit Airlines, United Airlines and United Parcel Service.

The Swissport facility consists of six Jet A fuel storage tanks and a modular office building. The loading rack is located in another part of the Airport and is supplied with Jet A fuel from the storage tanks via underground pipeline. There are also Swissport staff located in an office building that is located to the north of Delta Airlines main hangar. Delta Airlines (SRN M4164) owns the Swissport facility and the hydrant system at the Airport; Swissport is contracted to operate and maintain the fuel distribution system. Prior to Delta and Northwest Airlines merging, Northwest Airlines owned and operated the main terminal at the Airport. They also owned and operated the fuel distribution operation that is now the Swissport facility. Northwest eventually contracted with ServisAir & Shell Fuel Services to maintain and operate the fuel distribution operation, and ServisAir continued to operate at the Airport until Swissport bought them out in July of 2015.

Among the storage tanks are two tanks located in the southern half of the Swissport facility that each have a storage capacity of 60,000 barrels (2,520,000 gallons), and four tanks located in the northern half of the facility that each have a storage capacity of 20,000 barrels (840,000 gallons). Fuel arrives at the facility via pipeline from three Buckeye Terminals, LLC fuel terminals.

Facility Operations

The facility serves as a bulk fuel distribution terminal at the Airport. As there are flights at all hours of the day, the Swissport facility is a 24 hour per day, 7 days per week operation. There are currently 15 staff at the Airport who are employed by Swissport.

Inspection Narrative

I arrived at the facility at 9:10am, and I was met by Jeff Thursby, Fuel Facility Supervisor for the Swissport facility at the Airport. We went to his office, and I asked Jeff for some background regarding the facility. Jeff started by describing the ownership structure and operating arrangement at the facility. He told me that Delta Airlines owns the facility, including the fuel storage tanks and loading rack, as well as the hydrant system, and that Swissport operates and maintains the fuel distribution operations at the Airport.

We then proceeded to discuss facility operations. Jeff mentioned that the facility had just updated their Spill Prevention, Control and Countermeasure (SPCC) and Facility Response Plan (FRP), which are required as part of US EPA's oil spill prevention program. Jeff provided me with the operating schedule for the facility, and the number of Swissport staff that work at the Airport. Jeff mentioned that there are office staff located in the office building to the north of Delta Airline's main hangar. Jeff provided with the size of the storage tanks, and showed me information that the facility keeps on file for the tanks.

Jeff then described how fuel arrives at the facility. He told me that Jet A fuel is supplied by three off-Airport Buckeye fuel terminals. He described how fuel is distributed to customers at the Airport, either via the loading rack and tanker trucks, or the hydrant system which brings fuel right to the planes at each terminal gate at the Midfield and McNamara Terminals. Jeff told me that most of Swissport's customers receive fuel via the hydrant system. He said that the loading rack is typically used one to two times per day, and only two of the four loading bays are currently operational. There are seven tanker trucks on site that use the loading rack to deliver fuel around the Airport.

We then went over the conditions in Permit to Install (PTI) No. 122-99. We noted that the PTI references Northwest Airlines. I mentioned to Jeff that a change of ownership notification could be sent to DEQ-AQD's Permit Unit to request that the entity responsible for the permit be changed. We discussed whether this should be done by Swissport or by Delta Airlines, the owner of the permitted equipment.

Much of the permit addresses monitoring fuel usage/throughput, and calculating VOC emissions associated with

the fuel handling activities at the facility. Jeff described to me how fuel usage is tracked at the facility. There are no meters to measure the amount of fuel that flows from the tank farm. Instead, Swissport staff track the amount of fuel that the facility receives via receipts, and compares that information to records of the amount of fuel that is sent from the tanks to the fuel distribution system via disbursements. The storage tanks are balanced daily, which involves using the receipts/tickets for each fuel draw from the tank farm to determine the ending balance from the prior day, add in the fuel additions from that day to arrive at the fuel throughput for a given day. Jeff told me that the facility's accounting supervisor, Pam Lesko, tracks and keeps the fuel throughput records in Swissport's internal software inventory system, Varec. The facility's compliance with PTI No. 122-99 is discussed in more detail in the next section.

I left the facility at 10:20am.

Permits/Regulations/Orders/Other

Permit

As previously referenced, operations at the Swissport facility are subject to the requirements of PTI No. 122-99. The PTI was issued to Northwest Airlines on May 19, 1999. The following is a summary of the facility's compliance with the terms and conditions of the PTI.

Special Condition 1 – This permit Special Condition (SC) was included in DEQ-AQD PTIs that were issued when the former Wayne County Air Quality Management Division (WCAQMD) was in operation. WCAQMD ceased operating in October of 2001, and the requirements of the SC are no longer in effect.

Special Condition 2 – This SC puts forth a facility-side VOC limit of 11.81 tons per year based on a 12-month rolling time period as determined at the end of each calendar month. The data system that is used by Swissport to track fuel throughput is also used to track monthly VOC emissions from the facility. Jeff and I discussed the upcoming MAERS report for the facility. Swissport has been using a consultant to gather the information for the facility and to present the throughput and emissions information to supplement the MAERS submittal. The information that was prepared for the Swissport facility's 2016 MAERS submittal is attached to this report for reference. This information shows a facility-wide VOC emissions estimate for the 2016 calendar year of 4.40 tons. This emission estimate is a sum of VOC emission estimates from the six storage tanks, the loading rack, and from piping component fugitive emissions. **Compliance.**

Special Condition 3 – This SC addresses the applicability of 40 CFR Part 60, Subparts K, Ka and Kb. The SC requires that the facility keep records of the source emissions data for the previous five years, and tank dimensions and capacity analysis for the lifetime of the tanks. Jeff showed me information relating to the size of the storage tanks, and I was told that the facility keeps records of emissions calculations, including past MAERS submittals. Jeff also provided me with a copy of some of the storage tank information that the facility maintains, which is attached to this report for reference. **Compliance.**

Special Condition 4 – **Compliance.** The VOC loading rack emission rate in the SC, 1.9 mg per Liter of Jet A fuel loaded, corresponds to the emission factor from Table 5.2-5 in Chapter 5.2 (Transportation and Marketing of Petroleum Liquids) of the AP-42 publication. There is no requirement in the PTI, nor any applicable Federal standard, that requires the VOC emission rate from the loading rack to be tested. Jet A has a relative low vapor pressure (0.0085 psi at 60°F). The VOC emissions from the loading rack have been estimated by the facility using an emission factor of 1.17E-02 lb/1,000 gallons. This converts to 1.4 mg/L.

Special Condition 5 – **Compliance.** Swissport tracks the amount of fuel utilizing customer receipts, as described in the last section of this report. In 2016, the facility tracked 4,494,392 gallons of throughput via the loading rack. This is well below the permitted limit of 425,568,000 gallons. The attached records report a total facility fuel throughput in 2016 of 368,346,815 gallons.

Special Condition 6 – **Compliance.** Swissport maintains monthly records of loading rack and fuel system records.

Federal Regulations

The fuel handling operations at the Swissport facility do not appear to be subject to Federal regulations. The loading rack is not subject to 40 CFR Part 60, Subpart XX as this regulation applies to bulk gasoline terminals. Swissport only handles Jet A fuel, which has a much lower vapor pressure than gasoline. Similarly, despite the mention of 40 CFR Part 60, Subparts K, Ka and Kb in SC 3 of the facility's PTI, none of these

Subparts appear to apply to the Swissport facility. Subpart K applies to storage vessels for petroleum liquids with a storage capacity greater than 65,000 gallons that commenced construction or modification after June 11, 1973 and prior to May 19, 1978. Subpart Ka applies to each storage vessel with a storage capacity of greater than 40,000 gallons for which construction commenced after May 18, 1978, and prior to July 23, 1984. Based on information in the facility's MAERS submittal, the six storage tanks were all installed after 1984. Thus, Subparts K and Ka do not apply. Regarding Subpart Kb, 60.110b(b) states that Subpart Kb does not apply to storage vessels with a capacity greater than 151 m³ (39,900 gallons) storing a liquid with a maximum true vapor pressure less than 3.5 kPa (0.5 psia). These storage tanks store exclusively Jet A fuel, which has a vapor pressure of less than 0.5 psi.

The Swissport facility is also not subject to 40 CFR Part 63, Subpart EEEE (National Emission Standards for Hazardous Air Pollutants: Organic Liquids Distribution (Non-Gasoline)). Subpart EEEE applies to owners or operators of organic liquid distribution (OLD) operations (non-gasoline) at major sources of HAP emissions. The Swissport facility has not been classified as a HAP major source. The facility's PTI limits total VOC emissions to 11.81 tons per year. Included with the supplemental information for the 2016 MAERS submittal is an estimate of individual and total HAP emissions from storage tanks, fugitive emissions, and truck loading at the facility. The estimate of total HAP emissions for 2016 is 0.2111 tons. Some information from a document titled "Supplemental Instructions for Liquid Organic Storage Tanks", authored by the State of California's South Coast Air Quality Management District, is attached to this report. This information shows the TAC/HAP profile for select petroleum products. It is already known that Jet A fuel has a very low vapor pressure relative to gasoline, and the attached information shows that the percent by weight of individual TACs/HAPs is also low in Jet A fuel relative to gasoline.

Compliance Determination

Based upon the results of the December 21, 2016 site visit and subsequent records review, the Swissport Fuel Services facility appears to be **in compliance** with all applicable rules, regulations and permits.

Attachments to this report: a copy of the supplemental fuel throughout and VOC emissions information that was included with Swissport's 2016 MAERS submittal.; information relating to the tanks at the facility, and loading rack emissions information from the 2015 MAERS submittal, both of which were provided to me during the site visit; information from the South Coast Air Quality Management District that provides a TAC/HAP profile of Jet A.

NAME Steve Weiss

DATE 9/15/17

SUPERVISOR JK