U.S. Department
of Transportation

1200 New Jersey Avenue, SE
Washington, DC 20590

**Pipeline and Hazardous
Materials Safety Administration**

June 02, 2021

Ms. Kim Gerold
Manager of Pipeline Safety
Flint Hills Resources
P.O. Box 64596
Saint Paul, MN 55164

Dear Ms. Gerold:

In a letter dated October 17, 2019, to the Pipeline and Hazardous Materials Safety Administration (PHMSA), Flint Hills Resources (FHR) requested an interpretation of 49 Code of Federal Regulations (CFR) Part 195. Specifically, FHR requested an interpretation of the application of Part 195 to its pipeline that transports jet fuel from the FHR Pine Bend Refinery to the Minneapolis St. Paul Airport (Airport Pipeline), in particular the points of demarcation between the regulated Airport Pipeline and the connecting in-plant and airport facilities. The Airport Pipeline is an intrastate pipeline subject to the regulatory authority of the Minnesota Office of Pipeline Safety (MNOPS) under a § 60105 certification. You provided supplemental letters related to this matter on September 25, 2020.

You stated FHR received a PHMSA interpretation dated February 25, 2019 (Interpretation Response PI-17-0011) issued to MNOPS concerning the applicability of 49 CFR Part 195 to the Airport Pipeline. You stated both the PHMSA interpretation and underlying MNOPS request were based on inaccurate information regarding the Airport Pipeline and connecting facilities. In particular, you noted that factual information was incorrect with regard to pipeline operating pressure, pressure control and leak detection. For example, you stated the pipeline does not operate above 20% SMYS and there is no surge relief on the pipeline, as were stated in Interpretation PI-17-0011.

In light of your submission, PHMSA finds that it has conflicting information about the design and operating specifications of the Airport Pipeline that influence demarcation of the regulated portion. While PHMSA is not validating one statement of facts over another, PHMSA can affirm its longstanding interpretation of the scope of Part 195, including the end points of regulation when a pipeline leaves a refinery or delivers product to a materials transportation terminal.

Part 195 applies to all pipeline facilities and the transportation of hazardous liquids or carbon dioxide associated with those facilities, with certain exceptions. Among those exceptions, § 195.1(b)(8) and (b)(9)(ii) exclude from Part 195 certain facilities, including in-plant piping

systems associated with refining, and terminal facilities used exclusively to transfer hazardous liquid to or between a non-pipeline mode of transportation, respectively.

With respect to the in-plant piping exception in § 195.1(b)(8), Part 195 does not apply to the transportation of hazardous liquid or carbon dioxide through onshore production (including flow lines), refining, or manufacturing facilities or storage or in-plant piping systems associated with such facilities. In-plant piping system means, pursuant to § 195.2, piping that is located on the grounds of a plant and used to transfer hazardous liquid or carbon dioxide between plant facilities or between plant facilities and a pipeline or other mode of transportation, not including any device and associated piping that are necessary to control pressure in the pipeline under § 195.406(b). With respect to terminal facilities, § 195.1(b)(9)(ii) excepts facilities located on the grounds of a materials transportation terminal if the facilities are used exclusively to transfer materials between non-pipeline modes of transportation or between a non-pipeline mode and a pipeline. Like the in-plant piping exception, PHMSA has treated the demarcation point of the materials terminal facility to be the same as under § 195.1(b)(8).

PHMSA has previously explained that the point of demarcation between a regulated pipeline and unregulated in-plant piping is the inlet of the pressure control device if the pipeline is moving product away from plant grounds or the outlet of the pressure control device if the pipeline is supplying the plant. If there is no such pressure control device on plant grounds, in-plant piping would extend to the boundary of plant grounds. *See, e.g.*, Regulatory Review: Hazardous Liquid and Carbon Dioxide Pipeline Safety Standards, Notice of Proposed Rulemaking, 57 FR 56304, 56305 (Nov. 27, 1992); and PHMSA Letter of Interpretation to Buckeye Texas Processing, PI-20-0004 (Apr. 7, 2020). The regulation does not indicate any other component serves as the demarcation point, such as a meter or leak detection component, if such device is not necessary to control pressure in the pipeline under § 195.406(b). *See* Regulatory Review: Hazardous Liquid and Carbon Dioxide Pipeline Safety Standards, Final Rule, 59 FR 33388, 33389 (Jun. 28, 1994) (recognizing components, such as pipe, meters, instruments, and manifolds, located on plant grounds may fall outside Part 195, and affirming the plant boundary is a more convenient demarcation of in-plant piping than an unspecific inside-the-plant component).

PHMSA has also explained the exception for in-plant piping associated with refining applies only to piping located on the grounds of the plant. If the refinery is separated by a public thoroughfare, the exception still applies to transfer piping crossing the road, but the exception does not apply to inter-facility lines or delivery lines off plant grounds. Final Rule, 59 FR at 33389.

With respect to the terminal facilities exception in § 195.1(b)(9)(ii), Part 195 does not apply to transportation of hazardous liquid or carbon dioxide through facilities located on the grounds of a materials transportation terminal if the facilities are used exclusively to transfer hazardous liquid or carbon dioxide between non-pipeline modes of transportation or between a non-pipeline mode and a pipeline. The exception does not include any device and associated piping necessary to control pressure in the pipeline under § 195.406(b).

Like the in-plant piping exception, PHMSA has treated the demarcation point between a regulated pipeline and unregulated materials terminal facility to be the pressure control device

that is necessary to control pressure on the pipeline. PHMSA has also explained the exception does not include breakout tanks and associated piping, because such facilities are not used exclusively for transfers between non-pipeline and pipeline modes. NPRM, 57 FR at 56305. While PHMSA did not mention demarcation where there is no pressure control device on terminal grounds, it is reasonable to apply the same demarcation as the in-plant piping exception, namely, the terminal boundary. The terminal facilities exception applies only to those terminal facilities located on the grounds of the terminal. Terminal facilities located off terminal grounds do not fall within the exception and are, therefore, subject to Part 195. Final Rule, 59 FR at 33389.

In light of the longstanding application of these exceptions, PHMSA recommends that FHR and MNOPS jointly evaluate the design and operating specifications of the Airport Pipeline and determine the demarcation points consistent with this interpretation. In particular, PHMSA notes that FHR has described design limitations of its pipeline in which the pumps cannot cause the Airport Pipeline to experience pressures exceeding the maximum operating pressure (MOP) and, therefore, the pipeline is not required to have pressure control devices on the plant grounds. If MOP could be exceeded (such as by the outlet pressure capacity of the pump, change-out of a pump impeller or the closing or opening of a valve) however, the Airport Pipeline must have adequate controls and protective equipment to control the pressure within the limits established by § 195.406.

Please note this interpretation addresses the applicability of Part 195 to the Airport Pipeline operated by FHR, and does not address other facilities at or near the Minneapolis St. Paul Airport, such as tanks and pipelines operated by Swissport or other entities.

If we can be of further assistance, please contact Tewabe Asebe at 202-366-5523.

Sincerely,

JOHN A GALE

Digitally signed by JOHN A GALE
Date: 2021.06.07 08:02:52 -04'00'

John A. Gale
Director, Office of Standards
and Rulemaking

FLINT HILLS resources

October 17, 2019

By Electronic Mail

John Gale
Director, Office of Standards and Rulemaking
Pipeline and Hazardous Materials Safety Administration
U.S. Department of Transportation
1200 New Jersey Avenue SE
Washington, DC 20590-0001

Re: PHMSA Interpretation Issued to Minnesota OPS Dated February 25, 2019

Dear Mr. Gale:

Flint Hills Resources, LC (FHR) is in receipt of an interpretation dated February 25, 2019 (Interpretation Response PI-17-0011) that was issued by the Pipeline and Hazardous Materials Safety Administration (PHMSA) to the Minnesota Office of Pipeline Safety (MNOPS) regarding applicability of 49 C.F.R. Part 195 to an intrastate pipeline operated by FHR that transports jet fuel from the Flint Hills Resources Pine Bend Refinery to the Minneapolis St. Paul Airport (the Airport Pipeline). Both PHMSA's interpretation and the underlying MNOPS's request for interpretation are based on inaccurate information regarding the Airport Pipeline and connecting facilities. The purpose of this letter is to provide PHMSA with relevant clarifications regarding the applicable FHR assets and their operational characteristics as it relates to PHMSA's regulatory jurisdiction. Based on this information, FHR believes that the beginning and endpoint of Part 195 jurisdiction outlined in PHMSA's Interpretation is not accurate and FHR respectfully requests a revised interpretation pursuant to 49 C.F.R. Part 190.11(b).

Background

FHR operates the Airport Pipeline, which is a 10-inch diameter, 12.9 mile long, intrastate pipeline that transports jet fuel from storage tanks at Flint Hills Resources Pine Bend Refinery (at Gate 20) to a jet fuel storage tank facility operated by Swissport Fueling Services (Swissport) at the Minneapolis St. Paul Airport. The Airport Pipeline was constructed with an established maximum operating pressure (MOP) of 1322 psi based on a post construction pressure test. The pipeline operates at a stress level that is well *below* 20% specified minimum yield strength (SMYS).

During a 2016 MNOPS inspection of the Airport Pipeline, MNOPS raised questions regarding the beginning and endpoints of pipeline safety jurisdiction and requested a letter of interpretation from PHMSA in 2017. MNOPS informed FHR of its intention to submit an interpretation request and asked if FHR would like to review the submittal and provide information regarding the Airport Pipeline prior to the submittal, which FHR indicated it would. Then in 2017, FHR discovered that MNOPS had submitted the request for interpretation to PHMSA without FHR's information, after which FHR submitted process flow diagrams (PFD) and a detailed associated legend regarding the

Airport Pipeline to MNOPS (attached as Exhibit A). FHR does not know if the PFD's were submitted to PHMSA.

Relevant Clarifications

Several key operational characteristics regarding the Airport Pipeline and associated facilities require clarification. These characteristics are critical to determining the beginning and endpoints of PHMSA pipeline safety regulatory jurisdiction, and by extension MNOPS as a certified State for intrastate liquid pipelines in Minnesota. They include: (1) normal operating pressure and MOP of the Airport Pipeline; (2) pressure control and leak detection at the Flint Hills Resources Pine Bend refinery; and (3) pressure control and leak detection at the airport, including equipment into tanks operated by Swissport. We address below each of these characteristics in order below, with references to relevant statements contained in the PHMSA Interpretation appearing in bold font, followed by FHR's clarifications in italic font. References to FHR's process flow diagram and legend numbers (Exhibit A) are included below as well.

1. **Operating pressure:**

a. **"This 13.38 miles of 10-inch diameter pipeline (FHR 10-inch Pipeline) is owned and operated by FHR, was built in 1988, and operates above 20% specified minimum yield strength (SMYS)."** ***Interpretation, p. 1*** **(emphasis added).**

FHR Clarification:

The 10-inch diameter Airport pipeline is 12.9 miles from Item 13 to Item 16, and is operated by FHR. The MOP of the Airport Pipeline is 1322 psi. Normal operating pressure ranges from 205 to 250 psi. A pressure control device (i.e., a high-pressure shutdown switch) at Gate 20 at the refinery is set at 270 psi, which equates to a stress level of approximately 13.5% of the SMYS accounting for elevation change along the pipeline. The normal operating pressure at the receipt station is 57 psi.

b. **"The Swissport pipeline system, including the four 2.2 million gallon tanks and multiple tank outlet pumps and pipelines that supply the MSP airport hydrant system is not a low-stress pipeline because it is fed by two regulated pipelines - one with maximum operating pressure (MOP) ranging from 1322 pounds per square inch gauge (psig) to 2240 psig with pipe stress at 46.31 to 60.42 percent SMYS and the**

other with an MOP of 720 psig with pipe stress at 30 percent SMYS." ***Interpretation, p. 2*** **(emphasis added).**

FHR Clarification:

See above explanation. The MOP of the Airport Pipeline is 1322 psi and it operates well below 20% SMYS.

2. <u>Refinery Pressure Control and Leak Detection Metering</u>:

a. "Regarding regulatory jurisdiction, under 49 CFR, Part 195, for Items 1-14 and 26 in Attachment A (Origin Point is at the FHR Refinery Property), FHR must have over- pressure protection for maximum operating pressure control and surge pressure control at Item 13, see Attachment A. <u>Because the FHR over-pressure control and the leak detection system is upstream of Item 13 and is located at Item 26</u>, the piping and equipment operated by FHR from Item 26 to Item 13 are regulated under 49 CFR Part 195. The FHR 13.38-miles of 10-inch diameter pipeline (FHR 10-inch pipeline) from Item 13 to Item 16 is regulated under 49 CFR Part 195 because in accordance with Part 195.1(a), it transports "hazardous liquids or carbon dioxide associated with those facilities in or affecting interstate or foreign commerce." This regulatory requirement extends to the closest isolation valves upstream of Item 26." ***Interpretation, p. 4*** **(emphasis added).**

FHR Clarification:

As outlined in the attached PFD and legend, the asset locations and references described by PHMSA are incorrect. Most significantly, FHR's overpressure control and leak detection system is <u>not</u> located at Item 26 on PHMSA's legend. As discussed above, there is a high-pressure shutdown switch at Gate 20 of the refinery and there is no surge relief system on the pipeline. From Gate 20, the jet fuel is pumped and metered for leak detection outbound to the airport. As such, PHMSA regulatory jurisdiction begins at the inlet (suction side) to this pump as the first pressure control device associated with the downstream regulated Airport Pipeline (FHR PFD Item 5). In addition, the FHR 10-inch diameter pipeline from Item 13 to Item 16 is 12.9 miles.

3. <u>Airport Pressure Control and Leak Detection Metering</u>:

a. "The regulated FHR Airport pipeline flows <u>directly</u> into four (4) 2.2 million gallon tanks operated by Swissport with a <u>backflow pressure valve near the end of the FHR pipeline that directs product into the tanks in the event of overpressure</u>. This could

be interpreted as the Swissport tanks relieving surges in the regulated pipeline (breakout tanks)." ***Interpretation, p. 1*** **(emphasis added).**

FHR Clarification:

At the Minneapolis airport, the Airport Pipeline flows to metering equipment used for leak detection (FHR PFD Item 34), and then through piping and valves operated by FHR. A backflow pressure valve operated by FHR (FHR PFD Item 38) then holds pressure on the metering equipment to ensure accuracy. The backpressure valve is not used to direct product into tankage or to relieve surge. The jet fuel then flows into four (4) 2.2 million gallon tanks through valves operated by Swissport. As noted above, the normal operating pressure at the receipt station is 57 psi.

b. "As you stated, the regulated high-stress operating pressure FHR 10-inch pipeline appears to flow directly into four (4) 2.2 million gallon Swissport tanks with a backflow pressure valve near the end of the FHR 10-inch pipeline that directs product into the tanks in the event of overpressure […]." ***Interpretation, p. 2*** **(emphasis added).**

FHR Clarification:

See above explanations. The Airport Pipeline operates at less than 20% SMYS and the backflow pressure valve is not used for overpressure protection. The product flows to metering equipment used for leak detection and then through piping and valves operated by FHR. As such, PHMSA regulatory jurisdiction of the Airport Pipeline ends at the valves immediately downstream of the meter on the Airport Pipeline (the valves downstream of FHR PFD Item 35).

c. "[…]The four (4) storage tanks (breakout tanks) on the MSP airport property (shown on Attachment A) and the "three (3) outgoing pipeline segments" (operated by Swissport with unknown or above 20% SMYS) leaving the tanks that cross public roads and are located above public light rail tunnels within the MSP airport facility are also regulated under 49 CPR Part 195. The breakout tanks receive product and are attached to two (2) upstream regulated pipelines (the FHR 10-inch and the Magellan 8-inch Segment #8 pipelines are operated by Swissport within the MSP airport fence). Therefore, the four (4) 2.2 million-gallon storage tanks on the MSP airport property that receive product from upstream regulated pipelines and deliver product to regulated downstream pipelines are regulated as breakout tanks under§ 195.1(c). ***Interpretation, p. 5*** **(emphasis added).**

FHR Clarification:

See above explanations. The product flows to metering equipment used for leak detection and then to equipment and piping operated by FHR. As such, PHMSA regulatory

jurisdiction of the Airport Pipeline ends at the valves immediately downstream of the meter on the Airport Pipeline.

Summary

In light of the above clarifications, FHR believes that Part 195 regulatory jurisdiction begins at the inlet (or suction) side of pump 1 (FHR PFD Item 5) and ends at the valves, immediately downstream of the meter used for leak detection on the Airport Pipeline.

FHR shares PHMSA's and MNOPS's commitment to pipeline safety and integrity and we appreciate the Agency's consideration of this information. We look forward to an updated letter of interpretation based upon these facts, characteristics and clarifications, pursuant to 49 C.F.R. Part 190.11(b). In the interim, please do not hesitate to contact me with any questions or concerns.

Sincerely,

Kim Gerold

Kim Gerold
Manager – Pipeline Safety
Flint Hills Resources

Attachments

cc: Tewabe Asebe, PHMSA
Jonathan Wolfgram, Minnesota OPS

EXHIBIT A

AIRPORT STATION & PINE
BEND JET (GATE 20) PFD

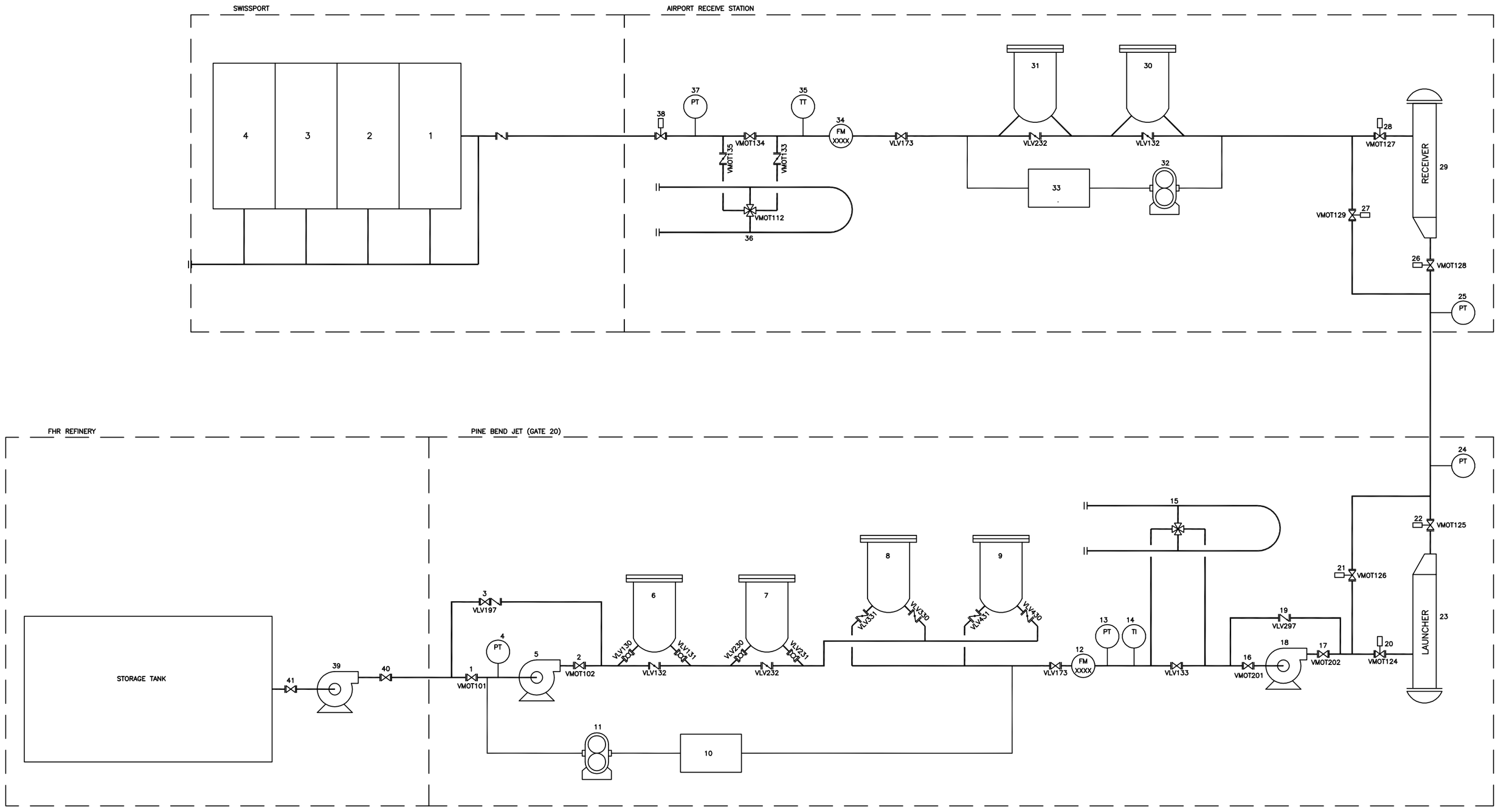

EXHIBIT A

Process Flow Diagram Legend: Airport system January 31, 2018

1. Pump 1 Suction Valve
2. Pump 1 Discharge Valve
3. Pump 1 Bypass Valve (Open when using Unit 2, Unit 1 suction and discharge would be closed)
4. Pump 1 Suction Pressure Transmitter (Line in Pressure)
5. Pump 1
6. Pre- Filter
7. Pre-Filter
8. Water Separator (Coalescer)
9. Water Separator (Coalescer)
10. Sump
11. Sump Pump
12. Flow Meter
13. Meter Pressure Transmitter
14. Meter Temperature Transmitter
15. Prover Loop
16. Pump 2 Suction Valve
17. Pump 2 Discharge Valve
18. Pump 2
19. Pump 2 Bypass Check Valve (when using unit 1, the unit 2 suction and discharge valves are closed to bypass unit 2
20. Launcher Trap Inlet Valve
21. Launcher Trap Bypass Valve (Open during normal operation)
22. Launcher Trap Outlet Valve/Station Outlet Valve
23. Launcher Trap
24. Line Out Pressure Transmitter- Jet Pump Station
25. Line in Pressure Transmitter - Jet Receive Station
26. Receiver Trap Inlet Valve
27. Receiver Trap Bypass Valve (open during normal operations)
28. Receiver Trap Outlet Valve
29. Receiver Trap
30. Pre-Filter
31. Water Separator (Coalescer)
32. Sump Pump
33. Sump
34. Flow Meter
35. Meter Temperature Transmitter
36. Prover Loop
37. Meter Pressure Transmitter
38. Meter Back Pressure Valve (mechanically set to hold back pressure to meter for meter accuracy)
39. Refinery Booster
40. Refinery Booster Discharge Valve
41. Refinery Booster Suction Valve