March 3rd, 2023 Letter No. MAP-2023-002

Dustin Hubbard
U.S. DOT/PHMSA/Office of Pipeline Safety
Director, Office of Pipeline Safety – Western Region
12300 West Dakota Avenue, Suite 110
Lakewood, CO 80228

RE: 2022 Mid-Alaska Pipeline II Crude UID 16395 Op 39956 – CPF 5-2023-002-NOPV

Mr. Hubbard,

This is a response to the letter received February 6th, 2023, describing the Notice of Probable Violation and Proposed Civil Penalty from the inspection of the Mid-Alaska Pipeline's (MAP's) North Pole Pipeline System performed the September 12-16, 2022, and October 11-13, 2022. To begin, we are not contesting the proposed notice of violations. We do, however, ask for a reduction in the amount of the penalty associated with Proposed Violation #1. The anomaly which resulted in the determination of an Immediate Repair Condition was in place for some time and had likely been in place since the construction of the pipeline. Its detection resulted from MAP's efforts to improve its monitoring of the pipeline using a tool with increased detection capability. The improved capabilities of the tool resulted in the discovery and repair of the anomaly.

Neither of the options to reduce pressure in the pipeline were viable for the reasons discussed in our responses, below. Each would have had impacts on the safety and operations of other systems, namely TAPS and the Petro Star Refinery. Each option would have carried higher risks than the repairs that were promptly performed, remedying an anomaly that had existed for many years and that was repaired within 72 hours of discovery.

Our responses to Proposed Violations #2 & #3 are the same as previously provided.

Proposed Violations

Proposed Violation #1

§ 195.452 Pipeline integrity management in high consequence areas.
(a) . . . .
(h) ***What actions must an operator take to address integrity issues?*** **-**
(4) ***Special requirements for scheduling remediation—***
(i) Immediate repair conditions**. An operator's evaluation and remediation schedule must provide for immediate repair conditions. To maintain safety, an operator must temporarily reduce the operating pressure or shut down the pipeline until the operator completes the repair of these conditions. An operator must calculate the temporary reduction in operating pressure using the formulas referenced in paragraph (h)(4)(i)(B) of this section. If no suitable remaining strength calculation method can be identified, an operator must implement a minimum 20 percent or greater operating pressure reduction, based on actual operating pressure for two months prior to the date of inspection, until the anomaly is repaired. An operator must treat the following conditions as immediate repair conditions:**

(C) A dent located on the top of the pipeline (above the 4 and 8 o'clock positions) that has any indication of metal loss, cracking or a stress riser.

Mid-Alaska Pipeline, LLC (Mid-Alaska) failed to reduce pipeline operating pressure or shut down the pipeline after identifying an immediate repair condition. Mid-Alaska's 14-inch crude oil pipeline system is located in a high consequence area and therefore subject to integrity management regulations including the specific requirements for scheduling remediation. Per operator records, an inline inspection of the 14-inch crude section of the Mid-Alaska Pipeline system was performed on May 19, 2022. A report of this inline inspection, dated June 22, 2022, was issued to Mid-Alaska and outlined a preliminary finding of a 1.00% depth dent with metal loss located at the 1:00 o'clock position. Records indicated that Mid-Alaska directly inspected and repaired the condition on June 25, 2022. Mid-Alaska pressure records and statements made by operator personnel during the inspection revealed that no operating pressure reduction occurred between the time of discovery of the immediate repair condition (June 22, 2022), and the time of repair (June 25, 2022).

Proposed Violation #1 – MAP Response

Upon receiving notice of the Immediate Repair Condition on June 22, 2022, shown in Exhibit A1, MAP held a meeting with the ILI Consultant (a separate, third party from the ILI vendor) and the Program Administration Specialist to discuss response options. The ILI Consultant compared the current signature of the anomaly to the 2019 ILI run anomaly signature. The ILI Consultant found the signature was present in 2019 as well but was under the 2019 tool detection threshold for a dent of 1%, and therefore was not included as an immediate condition. The 2022 signature indicated a 1% dent with metal loss. The 2022 tool threshold for dents is 1%, so the anomaly was right at the tool threshold for dent detection. The pattern in the anomaly indicated it was likely a slight scrape with metal loss, shown in Exhibit A2. The group discussed the anomaly thoroughly and agreed that it was likely construction damage, which had been present for several decades, and therefore stable.

Working under this assumption MAP contacted Alyeska to inquire about taking a pressure reduction. In order to take a pressure reduction on the MAP system, the entire Trans-Alaskan Pipeline System (TAPS) would have incurred a pressure reduction, which would have greatly affected TAPS operations. MAP also considered shutting the pipeline down, which would have shut down the PetroStar refinery. MAP also noted the pipeline segment was already operating at approximately 50%-60% of the Maximum Operating Pressure (MOP). Due to the system being unable to take a pressure reduction without significant disturbance to infrastructure systems, MAP elected to move forward with the repair as soon as possible. Within seventy-two (72) hours MAP had the anomaly exposed and located the anomaly under a tape wrap patch. The dent percentage was so minimal it could not be measured, and the deepest metal loss was 3% wall thickness assuming an original wall thickness of 0.312 inches, though background wall thickness measurements were generally reading 0.306 to 0.309 inches, shown in Exhibit A3. Review of the anomaly confirmed the anomaly was construction damage, which had been present for several decades. MAP determined that the ILI tool technology has improved over the years such that it identified this anomaly as an immediate in 2022, though it had not been identified as such during prior ILI tool runs.

MAP completed the anomaly repair within three (3) days of receiving notice of the immediate by grinding the anomaly and recoating it. Work was completed on June 25, 2022, shown in Exhibit A4. Due to the system being unable to take a pressure reduction, MAP understands a PHMSA notification should have been submitted, but failed to do so.

At no time during this period did MAP believe the pipe presented an imminent hazard or jeopardized the safety of people, the environment, or property.

MAP performed a lessons-learned evaluation of this situation to prevent a recurrence, shown in Exhibit A5. In the event of another immediate condition with similar characteristics, MAP will evaluate the anomaly and the potential threat it may pose to the integrity of the line and potential impact to people, the environment, or property. MAP will either shutdown the pipeline or provide notification to PHMSA in accordance with 195.452(h)(1)(i).

Proposed Violation #2

§ 195.579 What must I do to mitigate internal corrosion?
(a) . . . .
(c) *Removing pipe.* Whenever you remove pipe from a pipeline, you must inspect the internal surface of the pipe for evidence of corrosion. If you find internal corrosion requiring corrective action under § 195.585, you must investigate circumferentially and longitudinally beyond the removed pipe (by visual examination, indirect method, or both) to determine whether additional corrosion requiring remedial action exists in the vicinity of the removed pipe.

Mid-Alaska failed to inspect the internal surface of the exposed pipe for evidence of corrosion. The operator removed and subsequently replaced four valves at the North Pole Metering section of the pipeline in 2020. The valve removal created the opportunity to inspect the internal surface of the pipe adjacent to the valve locations for evidence of corrosion. The operator stated that the internal condition of the pipe was likely observed during the valve replacement work; however, the operator failed to record the inspection of the internal surface of the pipe for corrosion adjacent to the locations of the removed valves.

Proposed Violation #2 – MAP Response

MAP reviewed the four (4) valves removed in 2020 and did not see any internal corrosion. There was no concern for the integrity of the valves. They were removed because this project was already planned, scheduled, and funded by the prior operator when MAP took ownership of the system. When the valves were removed the internal surface of the pipeline was inspected visually and there was nothing that would indicate an imminent hazard or jeopardize the safety of people, the environment, or property.

In January 2022 MAP began injecting corrosion inhibitor into the system at PSIMS to mitigate the possibility of internal corrosion.

Proposed Violation #3

§ 195.583 What must I do to monitor atmospheric corrosion control?
(a) You must inspect each pipeline or portion of pipeline that is exposed to the atmosphere for evidence of atmospheric corrosion, as follows:

If the pipeline is located:	**Then the frequency of inspections is:**
Onshore:	**At least once every 3 calendar years, but with intervals not exceeding 39 months.**
Offshore:	**At least once each calendar year, but with intervals not exceeding 15 months.**

Mid-Alaska failed to inspect the PetroStar Metering Inc. Station (PSIMS) portion of their pipeline system for atmospheric corrosion at the required intervals. According to the operator's inspection worksheets, they inspected the PSIMS piping on September 7, 2022, but the operator was unable to find a record showing an inspection of the same section of pipe within the prior 39 months.

The operator presented a 2021 cathodic protection report that stated, "… the above-ground portions of the pipeline were visually examined for atmospheric corrosion." The report gave no additional information or results regarding the referenced atmospheric corrosion inspection at PSIMS. The report did include the results of visual inspection for atmospheric corrosion of pipe exposed to the atmosphere at other locations on the pipeline system.

Proposed Violation #3 – MAP Response

MAP operates a small amount of pipeline at the PSIMS location that is not piggable. The extent of above ground pipe at PSIMS includes two pipes about ten (10) feet long each with a valve.

MAP contracts Norton Corrosion Limited, LLC (NCL) to perform an atmospheric corrosion inspection annually during the Annual Cathodic Protection Inspection, shown in Exhibit C1. During the September 13-16, 2021, Annual Cathodic Protection Inspection, NCL identified "minor corrosion spots where the flanges, valves, or bolts were not painted, but the corrosion was light and they are not an integrity issue", shown in Exhibit C2. NCL made a clerical error and erroneously left the PSIMS out of this statement. MAP completed and attached Form 195.581 dated January 1, 2022, which specifically refers to PSIMS, H&H Lane, and NPMS Above Ground Piping, shown in Exhibit C3. MAP also requested a statement correcting this error from NCL, shown in Exhibit C4.

MAP performed recoating of some areas at PSIMS September 6-9, 2022, based on the results of the 2021 atmospheric corrosion inspection. The coating project was completed and approved by the Construction Inspector and reviewed by the PHMSA inspector at the September inspection with satisfactory results.

Respectfully,

Levi Frampton

Levi Frampton
Pipeline Director & Vice President
Mid-Alaska Pipeline, LLC