Menzies Aviation

Trent Carbaugh
General Manager, Menzies Aviation/AFSC
6000 De Havilland Drive.
Anchorage, AK 99502Line 4]

MENZIES AVIATION

5 July 2018

Mrs. Kim West
Acting Director, Western Region
Pipeline and Hazardous Materials Safety Administration
12300 W. Dakota Ave., Suite 110
Lakewood, CO 80228

RE: Integrity Management Plan Inspection
Aircraft Service International Group
July 11-13, 2017
CPF 5-2018-6002M

Dear Mrs. West

On July 11-13, 2017, representatives of the Pipeline and Hazardous Materials Safety Administration (PHMSA) inspected Aircraft Service International Group's (ASIG) Integrity Management Plan (IMP) and portions of other procedures which are incorporated in the IMP. As a result of the inspection, PHMSA issued a Notice of Amendment (NOA) for ASIG's IMP. This letter is in response to the referenced NOA received January 4, 2018, requiring a submission of amended procedures within 180 days.

ASIG is proud of their pipeline compliance program, but understands that improvements and enhancements are integral to the success of their program. The purpose of this letter is to notify PHMSA that ASIG has made the following amendments to the IMP, as required by the NOA. Copies of each revised IMP section has been included in the Attachment to this letter.

NOA 1. §49 CFR 195.452 (f)(1) – ASIG failed to identify in their 2015 Integrity Management Plan (IMP) all pipeline segments that could affect a high consequence area (HCA). Section 1.1 of the IMP states that the IMP covers the pipeline from the pig launcher to the pig receiver, but fails to identify other pipeline facilities that could affect an HCA, specifically the breakout tank at the Airport Facility and the pump station at the Off-Airport Facility. ASIG must amend their IMP to identify all pipeline segments that could affect an HCA.

Section 1.1 of the ASIG IMP has been updated to include the pump station at the Off Airport Fueling Facility (OAFF) and Breakout Tank 1060 located at the Airport Fueling Facility (AFF). A Breakout Tank Information Summary table has also been added to the up-front section of the IMP manual.

NOA 2. §49 CFR 195.452 (f)(8) – ASIG's 2015 IMP lacks an adequate process for review of the integrity assessment results and information analysis in accordance with §49 CFR 195.452(f)(8). In-line inspection (ILI) results must be reviewed by

NOA 3. personnel qualified in accordance with ANSI/ASNT ILI-PQ, Inline Inspection Personnel Qualification and Certification, as required by §49 CFR 195.591. ASIG must amend their IMP to include a process for reviewing ILI integrity assessments by personnel qualified in accordance with ANSI/ASNT ILI-PQ.

Section 1.5.1 has been added to require evaluation of data, tool specifications, process specifications, and other internal inspection data be performed by a qualified individual. The IMP manual now states the qualification must be consistent with ANSI/ASNT-ILI PQ 2010, API 1163, and NACE SP0102-2010.

NOA 4. §49 CFR 195.452 (g)(2) and (g)(3) – ASIG's 2015 IMP lacks an adequate process for conducting information analysis. In Section 3 of the 2015 IMP, ASIG presents the information analysis in the form of a Quantitative Risk Assessment (QRA).

- **The QRA was prepared in 2015. ASIG failed to update the QRA to reflect data gathered through assessments and other inspections conducted since 2015. ASIG must amend their IMP to include a process for integrating new assessment/evaluation data into the QRA.**
- **The 2015 IMP's QRA is insufficient to support a risk-based evaluation and assessment process, as required by §49 CFR 195.452 (j)(2) and (j)(3). The QRA failed to analyze all risk factors (e.g. cracking, cyclic fatigue); failed to validate or justify each risk factor; and failed to consider both the probability and consequence of failure. ASIG must amend their information analysis process to ensure that it produces an adequate risk model to support a risk-based evaluation and assessment process.**

Sections 3.1, 3.2, and 3.3 have been added to detail the frequency and process for gathering, analyzing, and integrating data from all relevant sources to assess the current risk and integrity of the covered assets. In order to address PHMSA's concerns of an inadequate RA approach, ASIG contracted with AE Solutions (AES) to perform a comprehensive Process Hazard Analysis (PHA) of the pipeline system. Moving forward, ASIG has modified their IMP to include a detailed Risk Analysis process, including all required risk factors.

NOA 5. §49 CFR 195.452 (h)(1) – ASIG's 2015 IMP and Operations and Maintenance (O&M) manual lack an adequate process for conducting pressure reductions per §49 CFR 195.452(h)(1)(i) and (h)(1)(ii). ASIG must amend the IMP and/or O&M manual to include a process for determining the correct reduced operation pressure and adjusting appropriate set points such as mainline Pressure Safety Valves (PSVs), thermal relief PSVs and pressure alarms.

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Section 5.2.1 has been amended to include an appropriate process for making necessary pressure reductions in accordance with Section 451.7 of ANSI/ASME B31.4.

NOA 6. §49 CFR 195.452 (h)(1)(ii) - ASIG's 2015 IMP does not identify the correct PHMSA contact notifications for temporary pressure reductions and long-term pressure reductions in accordance with §49 CFR

195.452(h)(1)(i) and (ii). To ensure that PHMSA is correctly notified, ASIG must amend their IMP to include the contacts specified in §49 CFR 195.452(m)(1) and (m)(2). In addition, some conditions which require IM notifications may also be Safety Related Conditions requiring separate notification in accordance with 49 CFR 195.56. To ensure both notifications are done correctly, the IMP should clearly state when such conditions exist.

The correct email and physical mailing address of PHMSA for all required notifications has been added as Section 1.7. The specific notification requirements and timing are included throughout the IMP manual in the appropriate sections, including 5.2.1 - Immediate Repair Condition, 5.2.3 - 180 Day Repair Condition, 6.1.4.2, Engineering Basis, 6.1.4.3 - Unavailable Technology, 6.3.3., 5-Year Reassessment Interval, 6.4.1.3 - ECDA Direct Examination, and 6.6.2 - Use of Alternative Technology.

NOA 7. §49 CFR 195.452 (h)(2) – ASIG's 2015 IMP lacks an adequate process for collecting adequate information to determine "discovery of condition" following an integrity assessment. ASIG stated that ILI is their preferred integrity assessment method. ASIG must amend the IMP to include a process consistent with API Standard 1163, Inline Inspection Systems Qualification Standard, (incorporated by reference in §49 CFR 195.3) to obtain sufficient information about a condition that presents a potential threat. The process must explain, consistent with API 1163, how verification and validation will be conducted and how tool tolerances will be considered.

Section 5.1 has been added to include a process to obtain sufficient information regarding a condition, including taking tool tolerances into consideration. Section 5.3 has been added to describe the process for repairs, repair scheduling, and documentation for all conditions identified.

NOA 8. §49 CFR 195.452(h)(4)(i)(B) – ASIG's 2015 IMP lacks an adequate process to determine the remaining strength of the pipe. Section 5.1.1 of the IMP states that the pressure reduction will be taken in accordance with B31.4 and does not reference B31G or R-STRENG, which are the allowable methods to calculate the reduced operating pressure. ASIG must amend their IMP to specify the remaining strength calculation methods incorporated in §49 CFR 195.452(h)(4)(1)(B).

Section 5.2.1 has been amended to include the requirement to use a suitable metal loss strength calculation such as ASME/ANSI B31G or R-STRENG.

NOA 9. §49 CFR 195.452(h)(4)(iii)(G) – ASIG's 2015 IMP and repair procedures lack a process for conducting non-destructive testing to determine if a potential indication is a crack, and lacks a process for determining which repair procedures are appropriate for remediating a crack. ASIG must amend their procedures with a process to evaluate potential cracks and must specify which of the repair methods in their O&M manual are acceptable to remediate cracks.

Section 5.4 has been added to address the discovery of potential cracks during excavations and subsequent acceptable repair methods.

NOA 10. §49 CFR 195.452(i)(2) – ASIG's 2015 IMP lacks an adequate process for "conducting a risk analysis of the pipeline segment to identify additional actions to enhance public safety or environmental protection." The QRA in Section 3.1 of the IMP lacks sufficient details for identifying Preventative and Mitigative Measures. Specifically, the QRA failed to consider probability and consequence factors in creating a risk score; it failed to consider the breakout tank at airport facility and the pump station at off-airport facility; and failed to consider all relevant risk factors (e.g. cracking, cyclic fatigue).

As addressed previously, Section 1.1 was modified to state that the IMP covers the Jet Fuel Pipeline (JFP), as well as the breakout tank located at the Airport Fueling Facility (AFF), and the pump station at the Off Airport Fueling Facility (OAFF). As addressed previously, Section 3.1, 3.2, and 3.3 have been added to detail the process for gathering, analyzing, and integrating data from all relevant sources to assess the current risk and integrity of the covered assets. In addition, section 7.0 has been amended to include factors to consider when identifying P&MMs.

NOA 11. §49 CFR 195.452(i)(4) – ASIG's 2015 IMP lacks a risk-based process which adequately considers all the cited factors for determining the need for additional EFRDs and must be amended to include such a process.

Sections 6.5 and 6.6 were added to provide a process for conducting the necessary EFRD and Leak Detection evaluation.

NOA 12. §49 CFR 195.452(j)(2) – The 2015 IMP lacks an adequate process for conducting continuing evaluation to assure pipeline integrity. The IMP Section 6.1.3 states that evaluation of the data will be conducted "When required by this program," but lacks an adequate process to determine how that evaluation interval will be determined. ASIG must amend their IMP to include a process to ensure that evaluation is done "as frequently as needed." The 2015 IMP lacks a process for conducting continuing evaluation at pipeline facilities including the breakout tank at the Airport Facility and the pump station at the Off-Airport Facility. The IMP must be amended to include a process for conducting continuing evaluation to assure pipeline integrity.

Section 6.1.2 has been added to describe the process of determining the integrity reassessment schedule, including the factors required by §195.452(e) in Table 6-1.

NOA 13. §49 CFR 195.452(j)(3) – The 2015 IMP lacks a process to determine the appropriate assessment interval. Section 6.1.2 of the IMP states "The selection of tool type and frequency will be based on the results of the previous inspection and a review of the Best-Available Technology at the time of the reevaluation." ASIG must amend their IMP to include a process

for determining assessment intervals that is consistent with §49 CFR 195.452(j)(3).

Section 6.1.2 has been added to describe the process of determining the integrity reassessment schedule, including the factors required by §195.452(e) in Table 6-1.

NOA 14. §49 CFR 195.452(j)(4) – The IMP does not include an adequate process to notify the Office of Pipeline Safety (OPS) before variance from the 5-year inspection intervals per §49 CFR 195.4520)(4). To ensure that PHMSA is correctly notified, ASIG must include the contacts specified in §49 CFR 195.452(m)(1) and (m)(2).

The correct email and physical mailing address of PHMSA for all required notifications has been added in Section 1.7.

NOA 15. §49 CFR (195.452(j)(5)(i) – The 2015 IMP lacks an adequate process for selecting an assessment method (per §49 CFR 195.452(j)(5)) based on the integrity threats identified in the risk assessment and information analysis. The IMP indicates that in-line inspection is the preferred assessment method, but does not include a process for selecting an appropriate ILI tool type with adequate performance specifications. ASIG must amend their IMP to include a process that is consistent with NACE SP0102-2010, and API 1163 (incorporated by reference in §49 CFR 195.3) to select an appropriate ILI tool(s), determining appropriate tool specifications, and conducting the ILI assessment.

Section 6.2, including 6.2.1, 6.2.2, and 6.2.3 describe the ASIG assessment method selection process. Figures 6-1 through 6-3 present the process-driven method for selecting the appropriate integrity assessment method. Figures 6-4 through 6-5 present the process for determining the threat of Stress Corrosion Cracking and a test of Corrosion Control Adequacy. These figures have been added to serve as a guideline and record of how the assessment methods are chosen.

NOA 16. §49 CFR 195.452(j)(5)(iv) – The IMP does not include an adequate process to notify OPS before conducting assessments with other technologies. To ensure that PHMSA is correctly notified, ASIG must include the contacts specified in §49 CFR 195.452(m)(1) and (m)(2).

The correct email and physical mailing address of PHMSA for all required notifications has been added in Section 1.7.

NOA 17. §49 CFR 195.452(k) – ASIG's IMP lacks an adequate process for measuring the program's effectiveness. Section 8.1 of the IMP states that certain criteria can be used for measuring the program's effectiveness and lists three categories of performance measures, but the categories are overly broad and do not provide sufficient metrics of the program's performance. ASIG must amend their IMP to select metrics that are appropriate for their system, and specify how often these performance metrics will be evaluated and how the results will be used.

Section 8.1.1 has been added to describe the different types of performance metrics utilized by ASIG. Section 8.1.2 has been added to describe the process for annually evaluating IMP program performance, including the minimum performance metrics to be utilized during the evaluation.

NOA 18. §49 CFR 195.452(l)(ii) – ASIG's 2015 IMP lacks a process to create and retain documentation consistent with §49 CFR 195.452(1)(ii). Section 9.0 of the IMP lacks most of the elements of this code section. ASIG must amend their IMP to include a process for creating and retaining the required documents.

Section 9.0 has been amended to provide a more detailed list of what documentation will be maintained by ASIG.

NOA 19. §49 CFR 195.595(a) – ASIG's Operator Qualification (OQ) task for "JFP Pigging Procedures" (Task JFP 04) is specific to launching and receiving a cleaning pig, but does not include the additional tasks associated with the launching and receiving in-line inspection (ILI) tools that are described in their "Inspection Pig Procedures." ASIG must amend their written OQ program to include tasks associated with the ILI process.

Under the ASIG OQ program, all operations and maintenance activities that could require OQ qualifications are evaluated by performing a Task Analysis to determine all potential covered tasks by all involved parties. For example, maintenance pigging may only require task JFP-04 (JFP Pigging Procedure). More complicated activities such as smart pigging could involve additional tasks being performed by ASIG personnel and/or contractors. All required OQ tasks, and related data regarding the personnel/contractor name, qualification date, Task ID, etc., are recorded on the Qualification Record Sheet, included in the OQ Appendix.

It is always ASIG's intent to fully comply with PHMSA. As such, ASIG appreciates the feedback provided during these audits. It is our hope that we have adequately addressed the deficiencies identified. Please let us know if you require any additional information or if the information provided does not address your concerns. ASIG looks forward to further enhancing our pipeline compliance program.

Valediction,

Trent Carbaugh
General Manager

Attachments:
Revised IMP
IMP Update Listing
2018 PHA