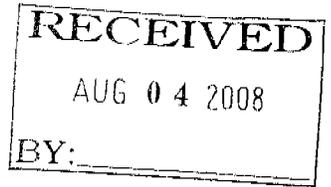# ONEOK NGL PIPELINE, L.L.C.

A SUBSIDIARY OF ONEOK PARTNERS, L.P.

CERTIFIED MAIL – RETURN RECEIPT REQUESTED

July 15, 2008

Mr. R.M. Seeley
Director, Southwest Region
Pipeline and Hazardous Materials Safety Administration
8701 South Gessner, Suite 1110
Houston, TX 77074

RE: CPF 4-2007-5046M

Dear Mr. Seeley

ONEOK NGL Pipeline, L.P. respectfully submits this letter and attachments, as notification of completion of the planned process improvements associated with the subject Notice of Amendment.

The attached document lists each item from the NOA, describes the actions taken, and provides or references the associated process language changes.

ONEOK is fully committed to the continued safe operation of our assets and compliance with applicable regulations. If there are any questions related to this response, completed actions, or IMP process improvement implementation, please have your staff contact Bill Bromley at 918-588-7615 or 918-284-6718.

Sincerely,

Wes Christensen
Sr. Vice President – NGL Operations
ONEOK NGL Pipeline, L.P.

Finding 1

195.452 Pipeline integrity management in high consequence areas.
(f) An operator must include, at minimum, each of the following elements in its
written integrity management program:
> (1) A process for identifying which pipeline segments could affect a high
> consequence area (HCA).

Finding 1A:
**ONEOK must modify the process for identifying which pipeline segments
could affect a high consequence area to require that sufficient justification is
provided for the decision to exclude ecological HCAs from the 1 psi
overpressure buffer distances in the IMP, or the 1 psi blast overpressure
buffer distances must be applied to ecological HCAs. Overpressure buffer
distances can be larger than those based on Lower Flammability Limits and
thermal radiation calculations, and all buffers must be applied to all HCA
types unless adequate justifications are included in the IMP.**

Finding 1B:
**ONEOK must modify the process to include consideration of segment-
specific information such as local topography and other possible features in
the application of the HVL overpressure effect and not solely apply it to
general "wooded" areas. This is a relevant consideration as buffer distances
for materials such as ethane are significant (on the order of 1200 meters for
lines in the 14" diameter range), and historical experience summarized in the
DNV report, referenced during the inspection, indicates non-wooded areas
have experienced scenarios similar to wooded areas.**

ONEOK Action(s) to address Finding 1
The ONEOK Integrity Management Program Manual has been updated, as follows, to
address the subject findings.

IMP Section 1.9.3 now reads:

The results of HVL air dispersion analysis are summarized in Appendix C3. These
results represent the distance from the pipeline that could be impacted by a potential
exposure resulting from released HVL product. The distance is applied as an HVL
dispersion buffer zone around HCA boundaries and intersected with the pipeline in
order to identify Could-Affect Sections and Could-Affect Facilities.

Figure 1-3 depicts a buffered area around population-type HCAs.

Potential exposure distances from Thermal Radiation, LFL, or Blast Overpressure are compared for each release point. The largest potential exposure distance, at each release point, is applied to all HCA types.

Note: In the event that ONP determines, based on sound engineering principles, a specific exposure type does not have the potential to impact a specific HCA type, the process may be adjusted. Prior to modifying the buffer distance for any exposure type or HCA type, an appropriate rationale will be referenced in this section of the IMP.

Finding 2

195.452 (f) An operator must include, at minimum, each of the following elements in its written integrity management program:
    (4) Criteria for remedial actions to address integrity issues raised by the assessment methods and information analysis (see paragraph (h) of this section);

195.452 (h) What actions must an operator take to address integrity issues?
    (1) General requirements. An operator must take prompt action to address all anomalous conditions that the operator discovers through the integrity assessment or information analysis. In addressing all conditions, an operator must evaluate all anomalous conditions and remediate those that could reduce a pipeline's integrity. An operator must be able to demonstrate that the remediation of the condition will ensure that condition is unlikely to pose a threat to the long-term integrity of the pipeline. A reduction in operating pressure cannot exceed 365 days without an operator taking further remedial action to ensure the safety of the pipeline. An operator must comply with 195.422 when making a repair.

ONEOK's repair and remediation process must be amended to clearly document the methodology used to take into account in-line inspection (ILI) tool tolerances provided by the ILI vendor in categorizing anomalies and making decisions on repair and remediation. The comprehensive process to integrate assessment data with available integrity information at the time remediation decisions are made must contain sufficient detail to ensure consistent application.

ONEOK Action(s) to address Finding 2
ONEOK TG1601.194 (Pipeline In-Line Inspection Data Evaluation and Prioritization Process) has been updated, to address the subject finding (and other areas of improvement identified during the 2007 IMP inspection).

TG1601.194 is attached. All changes made since the 2007 IMP inspection are shown in color.

Finding 3

195.452 (f) An operator must include, at minimum, each of the following elements in its written integrity management program:

(3) An analysis that integrates all available information about the integrity of the entire pipeline and the consequences of a failure (see paragraph (g) of this section);

195.452 (g) What is an information analysis? In periodically evaluating the integrity of each pipeline segment (paragraph (j) of this section), an operator must analyze all available information about the integrity of the entire pipeline and the consequences of a failure. This information includes:

(1) Information critical to determining the potential for, and preventing, damage due to excavation, including current and planned damage prevention activities, and development or planned development along the pipeline segment;

(2) Data Gathered through the integrity assessment required under this section;

(3) Data gathered in conjunction with other inspections, tests, surveillance and patrols required by this Part, including, corrosion control monitoring and cathodic protection surveys; and

(4) Information about how a failure would affect the high consequence area, such as location of the water intake.

Finding 3A:
ONEOK must modify the process to provide specific detail for the consideration of integrity threats not included in the RIM risk model (e.g.; SCC; AC-induced corrosion; equipment/construction-related failures) either in the RIM or other external processes.

Finding 3B:
ONEOK must modify the process to incorporate leak history in the risk model in a more comprehensive manner with regards to the root cause of the leak being applied to segments with the same threat and the length of time that the threat is considered. Limiting the use of leak history to specific HCA-affecting segments and limiting that consideration to a two-year period underestimates the likelihood of failure of similar segments where the threat may also be present for extended intervals.

Finding 3C:
ONEOK must modify the process for incorporation of field-based pipeline change information into risk analysis processes (e.g., RIM risk model) in sufficient specificity to ensure consistent application.

Finding 3D:
ONEOK must modify the process for the comprehensive approach to the risk based integrity management of facilities that was discussed during the

inspection in sufficient specificity to ensure consistent application. ONEOK must enhance its documentation of its definitions of facilities to support the identification of facilities that can affect an HCA; the implementation of a comprehensive facility risk analysis process; and the identification of appropriate P&M measures (that may include inspections and assessments).

ONEOK Action(s) to address Finding 3

(Finding 3A&B)
ONEOK NGL Pipeline Integrity personnel conducted an algorithm development workshop, with personnel from Dynamic Risk Assessment Systems, Inc. (DRASI) on Feb 27 – 28, 2008, to develop an algorithm that will be used in the Dynamic Risk Assessment Systems, Inc. risk assessment and data integration software (IRAS). The new software has been purchased by ONEOK, to replace the existing risk model and will provide improved risk modeling and data integration capabilities. The draft algorithm addresses both the threat of SCC and AC-induced corrosion. Additionally, the algorithm corrects the leak history limitations noted in 3B.

Until the data conversion is completed to support the DRASI IRAS, the interim data integration process will include a review of SCC potential and AC-induced corrosion susceptibility, a comparison of AC readings to ILI data, and a leak history review.

(Finding 3C)
Current IMP-related processes, defined in the IMPM and related Technical Guidelines, provide for documentation and data flow. Many of the processes for incorporation of field-based pipeline change information into the risk analysis process are managed by the use of forms software, with forms developed specifically for gathering and transferring the integrity data required by that process. Many of the forms have strictly defined input fields. As the new risk assessment and data integration process, using DRASI IRAS, is implemented, additional data management sub-processes will be developed and implemented to manage the flow of integrity data from the collection point, through review, and to the data base(s) used by the risk and data integration tools, as required.

(Finding 3D)
A process for risk based integrity management of facilities that could affect a HCA, has been added to the IMPM and is described in Section 5 and a supporting procedure. The risk analysis and data integration process provides for the consistent, periodic evaluation of threats, current P&MMs, and selection of additional P&MMs, if needed.

Finding 4

195.452 (f) An operator must include, at minimum, each of the following elements in its written integrity management program:

(6) Identification of prevention and mitigative measures to protect the high consequence area (see paragraph (i) of this section);

195.452 (i) What preventive and mitigative measures must an operator take to protect the high consequence area?

(1) General requirements. An operator must take measures to prevent and mitigate the consequence area. These measures include conducting a risk analysis of the pipeline segment to identify additional actions to enhance public safety or environmental protection. Such actions may include, but are not limited to, implementing damage prevention best practices, better monitoring of cathodic protection where corrosion is a concern, establishing shorter inspection intervals, installing EFRDs on the pipeline segment, modifying the systems that monitor pressure and detect leaks, providing additional training to personnel on response procedures, conducting drills with local emergency responders and adopting other management controls.

Oneok must modify the process for the overall integrated IMP process to identify and evaluate P&M measures that focus on minimizing the risk to HCAs (e.g. the damage prevention program should be a part of this consideration) to provide sufficient detail and specificity to ensure consistent application. Detailed processes for the respective areas of the evaluation of P&M measures (e.g.; application of risk analysis; defined decision basis) are important to ensure that consistent criteria for decisions on which measures to implement are applied across all assets.

ONEOK Action(s) to address Finding 4

Process changes have been made and are primarily discussed in the revised IMP Manual Section 5, Section 6, and supporting documents (see attachments). While the process will not be fully implemented until the new risk analysis and data integration tool is fully functional (data transition & conversion and process piloting will likely continue through December 2008), an interim data integration process has been implemented. The interim process includes the appropriate SMEs, and provides for the evaluation of threats, P&MM effectiveness, selection of additional P&MMs, if needed, selection of the appropriate assessment method(s), and assessment scheduling. Both the interim and final data integration processes lead to consistent and appropriate decision making. Criteria will be developed during the implementation of the new process, as appropriate, to ensure effective, long-term, asset integrity management.

Finding 5

195.452 (f) An operator must include, at minimum, each of the following elements in its written integrity management program:

> (5) A continual process of assessment and evaluation to maintain a pipeline's integrity (see paragraph (j) of this section);

195.452 (j) What is a continual process of evaluation and assessment to maintain a pipeline's integrity?

> (1) General. After completing the baseline integrity assessment, an operator must continue to assess the line pipe at specified intervals and periodically evaluate the integrity of each pipeline segment that could affect a high consequence area.
>
> (2) Evaluation. An operator must conduct a periodic evaluation as frequently as needed to assure pipeline integrity. An operator must base the frequency of evaluation on risk factors specific to its pipeline, including the factors specified in paragraph (e) of this section. The evaluation must consider the results of the baseline and periodic integrity assessments, information analysis (paragraph (g) of this section), and decisions about remediation, and preventive and mitigative actions (paragraphs (h) and (i) of this section).

ONEOK must modify the process for the performance of periodic evaluations to provide sufficient detail and Specificity to ensure consistent application.

ONEOK Action(s) to address Finding 5

As planned, the changes required by Finding 5 were made as part of the process changes made to meet the requirements of Finding 4. The risk analysis and data integration process requires the evaluation of appropriate data and concludes with the selection of additional P&MMs, periodic assessment methods, periodic evaluations, and a schedule for those assessments and evaluations.

Finding 6

195.452 (f) An operator must include, at minimum, each of the following elements in its written integrity management program:

    (5) A continual process of assessment and evaluation to maintain a pipeline's integrity (see paragraph (j) of this section);

195.452 (j) What is a continual process of evaluation and assessment to maintain a pipeline's integrity?

    (3) Assessment intervals. An operator must establish intervals not to exceed five (5) years for continually assessing the line pipe's integrity. An operator must base the assessment intervals on the risk the line pipe poses to the high consequence area to determine the priority for assessing the pipeline segments. An operator must establish the assessment intervals based on the factors specified in paragraph (e) of this section, the analysis of the results from the last integrity assessment, and the information analysis required by paragraph (g) of this section.

ONEOK must modify the process for the integrity assessment interval determination process to provide sufficient detail and specificity to ensure consistent application.

ONEOK Action(s) to address Finding 6

ONEOK TG1601.194 (Pipeline In-Line Inspection Data Evaluation and Prioritization Process) has been changed to include a review of growth potential. The review of growth potential is included in the data integration process, previously described, and is an important variable in the determination of the appropriate integrity assessment interval for a given asset.

An additional reference to the review of anomaly change data is listed in Section 5.5.1.2., as a review item during the risk assessment and data integration process.

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Finding 7

195.452 (f) An operator must include, at minimum, each of the following elements in its written integrity management program:

    (5) A continual process of assessment and evaluation to maintain a pipeline's integrity (see paragraph (j) of this section);

195.452 (j) What is a continual process of evaluation and assessment to maintain a pipeline's integrity?

    (1) General. After completing the baseline integrity assessment, an operator must continue to assess the line pipe at specified intervals and periodically evaluate the integrity of each pipeline segment that could affect a high consequence area.

    (5) Assessment methods. An operator must assess the integrity of the line pipe by any of the following methods. The methods an operator selects to assess low frequency electric resistance welded pipe or lap welded pipe susceptible to longitudinal seam failure must be capable of assessing seam integrity and of detecting corrosion and deformation anomalies.

ONEOK must modify the process for the determination of pipeline susceptibility to longitudinal seam failure to require periodic verification that pressure cycling remains below "aggressive" levels for applicable lines. The analysis for "susceptibility" of certain lines to seam failures is, in part, a function of observed pressure cycles. If pressure cycles reached "aggressive" levels, an integrity assessment method that ensures the integrity of the longitudinal weld seam would be required.

ONEOK Action(s) to address Finding 7
The ONEOK Integrity Management Program Manual has been updated, as follows, to address the subject finding.

IMP Section 5.4.2.1 now reads:

The Risk Analysis Coordinator performs an evaluation of the susceptibility of active Could-Affect Sections to longitudinal seam failure using the approach developed by Dr. John Keifner (see section 5.10, References). Pressure cycle data is obtained from the PI data historian or similar data tool.

Annual seam failure susceptibility re-evaluation is completed for lines that are determined to be non-susceptible based solely on non-aggressive pressure cycles. In the event that a line segment previously identified as non-susceptible is determined to be susceptible, the Risk Analysis Coordinator will schedule a PIRT (Pipeline Integrity Review Team) meeting within 60 days, to evaluate assessment schedule, assessment methodology, and other actions that may be appropriate.

Results are documented in a spreadsheet maintained by the Risk Analysis Coordinator on the Pipeline Integrity Server.

Finding 8

195.452 (f) An operator must include, at minimum, each of the following elements in its written integrity management program:

> (7) Methods to measure the program's effectiveness (see paragraph (k) of this section);

195.452 (k) What methods to measure program effectiveness must be used? An operator's program must include methods to measure whether the program is effective in assessing and evaluating the integrity of each pipeline segment and in protecting the high consequence areas. See Appendix C of this part for guidance on methods that can be used to evaluate a program's effectiveness.

> **ONEOK must modify the process for program evaluation by documenting the process in sufficient detail and specificity to ensure consistent application. This process must include suitable performance metrics to provide meaningful results as well as methods for communication of the results and findings to IM-related personnel within the organization.**

ONEOK Action(s) to address Finding 8

The ONEOK Integrity Management Program Manual has been revised to provide an improved process for program evaluation. The performance metrics chosen were compared against the integrity performance metrics compiled by the API-Pipeline Integrity Committee members.

A copy of the revised IMP Section 8 is attached.