ENBRIDGE

5400 Westheimer Court
Houston, Texas 77056

September 15, 2017

Mr. Allan C. Beshore
Director, Central Region
Pipeline and Hazardous Materials Safety Administration
901 Locust Street
Suite 462
Kansas, MO 64106-2641

RE: Vector Pipeline, L.P. Response
Notice of Probable Violation
CPF 3-2017-1008

Dear Mr. Beshore,

On October 5 – 8 and October 19 – 21, 2015, representatives of the Pipeline and Hazardous Materials Safety Administration (PHMSA), Office of Pipeline Safety pursuant to Chapter 601 of 49 United States Code, inspected the records and facilities of Vector Pipeline, L.P. (Vector) in Indiana and Michigan. As a result of the inspection, PHMSA alleges that Vector committed four (4) probable violations of the Pipeline Safety Regulations, Title 49, Code of Federal Regulations, and issued a Notice of Probable Violation (NOPV) and Proposed Compliance Order. The NOPV proposes a civil penalty of $35,800.

Enbridge has a contract with Vector Pipeline to provide various services to Vector Pipeline including the physical operations of the facilities audited. Enbridge is responding to PHMSA on behalf of Vector Pipeline and as the operator of the subject facilities.

Each probable violation is summarized below, followed by Vector's response.

PHMSA Finding

1. §192.167 Compressor Stations: Emergency Shutdown

Vector Pipeline failed to have an emergency shutdown system (ESD System) at a fenced compressor station that was operable from at least two locations, each of which was outside the gas area of the compressor station and near the station's exit gates. Athens Compressor Station in Athens, Michigan, had an ESD System that was operable at each door of the compressor building and inside the MCC/Control Building. The nearest exit gate to the compressor building was approximately 66 feet from the switch at the southwest door; however, this switch was not outside the gas area. ESD switches installed at or near the compressor building were not outside the gas area. The piping and equipment in that building were used to transport gas, which could ignite if a leak or failure occurred.

Vector Response

At the time of the inspection, there were a total of eleven (11) ESD activation points[1] at Athens Station. These ESD activation stations are located near planned emergency evacuation routes and where personnel may be working. As such, the ESD activation points were located within the compressor station to facilitate activation of the ESD system in the event of an emergency.

Of the eleven (11) ESD activation points at Athens Station, there are ESD activation points located in close proximity to fence gates at two (2) sides of the compressor station, as summarized below and shown in the attached site drawing (Attachment 1).

- North fence (vehicle accessible): An ESD activation point is located approximately 11 feet from an exit gate.
- South fence (people accessible): Two (2) ESD activation points are located approximately 66 feet and 100 feet from an exit gate. Both are located outside of the compressor station building.

Vector contends §192.167 does not specify the maximum distance between an ESD activation point and a fence exit gate, nor, to Vector's knowledge, has PHMSA issued guidance or interpretations on this matter. Thus Vector contends a finding of violation is not warranted based on the distance from the ESD activation points to the fence gates at Vector's Athens Compressor Station.

§192.167 also requires that the two (2) ESD activation points near fence exit gates be located outside the gas area. To Vector's knowledge, PHMSA has not issued guidance or interpretations on what is considered the "gas area" within a compressor station, though PHMSA has determined through a previous enforcement action[2] that an ESD activation point located outside a compressor building is not necessarily outside the gas area if it is an area "where gas could ignite." Thus, Vector does not contest this finding of violation.

Vector contends the number and locations of the ESD activation points at the time of the inspection did not negatively impact safety, since personnel at the site would be working near an ESD activation point at the time of a potential emergency, or would pass one as they evacuated the station. Furthermore, the station, the employees and the public are protected by automatic shutdown devices triggered by gas detectors and flame detectors, independently of a person's ability to activate the ESD system.

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[1] At the time of the inspection, one (1) ESD activation point was temporarily out of service due to construction activities.

[2] CPF 3-2011-1009. The distance between the ESD activation point and the fence gate in this case was 300 feet. Discerning the relevance of enforcement actions is difficult as non-parties are limited to the information stated in the orders.

Vector contends the number and location of ESD activation points and the automatic shutdown devices at the station clearly indicates Vector's intent to comply with the substance of the regulatory requirements. The safety of the station, the public and Vector employees was not negatively impacted by the location of the ESD activation points, however, Vector does not contest this finding of violation for the reason stated above.

2. §192.465(d) External corrosion control: Monitoring.

Vector failed to take prompt remedial action to correct deficiencies indicated by monitoring. During the inspection, several test point readings were missing over multiple years. Follow-up work did not take place until after the 2015 inspection. Specifically:

- CP test point data at MP 247.1858 (Enbridge FLX) could not be located in 2013, 2014, and 2015. An update was given stating that it is now electrically connected with Enbridge and can be taken off the repair list.
- CP test point data at MP 265.0394 (Michcon FLX) could not be located in 2013, 2014, and 2015. It was stated during the inspection that this test lead is now on the list for repair.
- CP test point at MP 332.9769 (Great Lakes FLX) was found to have bad test leads in 2013, 2014, and 2015. This was repaired 10/29/15.
- CP test point at MP 18.0159 (88th Ave) was found to have bad test leads in 2013 and 2014. This test point was repaired by the 9/3/2015 survey.
- CP test point at MP 21.8008 (Sunset Drive) was found to have bad test leads in 2013 and 2014. This test point was repaired by the 9/3/2015 survey.

These are violations of 192.465(d) as prompt remedial action was not taken.

Vector Response

Vector acknowledges that four (4) test points had readings that were missing over multiple years, and Vector did not take prompt remedial action to repair the bad test leads. The fifth test point at MP 265.0394 is on a third party pipeline and is not connected to Vector's pipeline. This test point is used by Vector for informational purposes only.

Vector did not consider all the test points as test points required for "electrical measurements to determine the adequacy of cathodic protection", but treated these non-required test points the same as required test points for inspection and documentation purposes, thus holding itself to a higher regulatory standard. Three (3) of the four (4) Vector test points had upstream and downstream test stations that were in close proximity to these test points and had potentials that were sufficient to demonstrate the adequacy of cathodic protection in accordance with §192.463 in the area of concern. One (1) of the four (4) Vector test points was considered as an *informational reference test point* – a test point that is only used for

reference purposes, and not intended to be utilized as test points to "determine the adequacy of cathodic protection of the pipeline." This test point is managed in the same manner as other test points, but not intended to be subjected to §192.465(d). For clarity, the one (1) third party informational reference test point, MP 265.0394, is located on a foreign pipeline (MichCon, now known as DTE Gas Pipeline) which does not cross the Vector Pipeline but parallels the Vector Pipeline. The other informational reference test point, MP 247.1858, is a test point that is electrically continuous with an Enbridge Pipeline through a cross bond which is monitored at that test point.

Following the inspection, Vector did not communicate to PHMSA that two (2) of the test points were considered *informational reference points*. Vector also did not communicate the proximity of other test points to the ones in question. The table below summarizes the distance between the upstream and downstream test points.

Test Station Mile Post	**Distance To U/S Test Point (ft)**	**Distance To D/S Test Point (ft)**	**Comments**
18.0159	6,632.21	5,344.94	- Vector acknowledges that the adjacent test points are not close enough to provide accurate CP readings for the test point at MP 18.0159.
21.8008	342.14	151.54	- Vector contends that the U/S and D/S test points are close enough to determine the adequacy of cathodic protection at this location.
247.1858	325.78	1,903.97	- Vector contends that the U/S test point is close enough to determine the adequacy of cathodic protection at this location. - This test point is monitored primarily as an informational reference test point to verify the bond between the Vector and Enbridge pipelines.
265.0394	N/A	N/A	- The test point is located on DTE Gas Pipeline which parallels the Vector Pipeline and does not cross the Vector Pipeline. Changes have been made to the CPDM database so that this is not documented as a foreign line crossing.
332.9769	11.09	42.77	- Vector contends that the U/S and D/S test points are close enough to determine the adequacy of cathodic protection at this location.

Vector has implemented corrective actions to repair the bad test leads on these test points. Below is a summary of the repairs.

- CP test point at MP 247.1858 (Enbridge FLX) – The repair was made to the test point in 2015 and a test point reading taken on 06/25/2015 indicates potentials met the requirements of §192.463.
- CP test point at MP 265.0394 (DTE Gas FLX) – There is no test lead on Vector's pipeline because the two pipelines (Vector and DTE Gas) do not cross. The test point is located on a DTE Gas pipeline. Corrections have been made to the CPDM database.
- MP 332.9769 (Great Lakes FLX) – The repair was made to the test point in 2015 and a test point reading taken on 07/25/2015 indicates potentials met the requirements of §192.463.
- CP test point at MP 18.0159 (88th Ave) – The repair was made to the test point in 2015 and a test point reading taken on 09/3/2015 indicates potentials met the requirements of §192.463.
- CP test point at MP 21.8008 (Sunset Drive) – The repair was made to the test point in 2014 and a test point reading taken on 07/9/2014 indicates potentials met the requirements of §192.463.

In summary, only three (3) of the five (5) cited in the NOPV were, in fact, test points that were subject to the requirements of §192.465(d). Of the three (3) test points subject to §192.465(d), two (2) were in close proximity to upstream and/or downstream test points which had CP potentials that were sufficient to demonstrate the adequacy of cathodic protection in accordance with §192.463 in the area of concern. The CP test point at MP 18.0159 did not have nearby test points, and thus is subject to the requirements of §192.463. Vector acknowledges this was not fully explained during the inspection, and that better documentation in CPDM was needed to classify these test points as test points not required for the purposes of §192.463, with the exception of the test point at MP 18.0159.

Vector does not contest the finding of violation for the test point at MP 18.0159. However, for the reasons noted above, Vector respectfully requests an elimination or reduction in the civil penalty. Vector requests PHMSA credit Vector on the Nature and Culpability assessment consideration in the Violation Report.

3. §192.603 General provisions.

Vector failed to document the periodic review of work done by its personnel to determine the effectiveness and adequacy of the procedures used in normal operation and maintenance and modification of its procedures. There is no formal documentation to show evidence that a periodic review of work done by operator personnel to determine the effectiveness and adequacy of procedures as per 192.605(b)(8) was performed. Vector's O&M manual,

section 1.1.3.1 states that "the work done by operating personnel will be reviewed periodically by the Review Team to determine the adequacy and effectiveness of procedures used in normal operations and maintenance and for controlling abnormal operations," but documentation of this review could not be provided during the inspection. This is a violation of 192.603(b).

Vector Response

Vector acknowledges there was no formal documentation to show evidence that a periodic review of work was done to determine the effectiveness and adequacy of procedures per 192.605(b)(8).

As discussed during the inspection, Vector had been conducting the required effectiveness reviews of work done by Vector's personnel to determine the effectiveness and adequacy of the procedures used in normal operation and maintenance and modification of its procedures, but did not have a document to show as evidence that a periodic review of work done was performed. The periodic review performed by Vector consisted of various measures such as:

- Annual reviews of the O&M plan with subject matter experts.
- Review of O&M plan at local safety meetings to communicate changes and solicit feedback.
- Discussion with employees to address issues and concerns related to job tasks.
- Table top exercises and emergency response training with employees.

Vector has since made changes to section 1.1.3.1 of the O&M manual to include a new form, Form 1.1-3, Procedure Effectiveness Form, to formally document the periodic review of work done by Vector personnel to determine the effectiveness and adequacy of procedures as per 192.605(b)(8) was performed. Form 1.1-3 is provided as Attachment 2.

Vector will not contest PHMSA's finding that Vector did not have a formal documentation to show evidence that a periodic review of work was done to determine the effectiveness and adequacy of procedures. However, based on the facts stated above, Vector maintains that reviews for effectiveness and adequacy were being performed as described above, and pipeline safety was not compromised by the lack of formal documentation for a periodic review of work. Vector respectfully requests an elimination or reduction in the civil penalty. Vector requests PHMSA credit Vector on the Nature and Culpability assessment consideration in the Violation Report.

4. §192.935 What additional preventive and mitigative measures must an operator take

During the inspection, Vector was unable to provide information of additional preventive and mitigative measures considered or taken for each pipeline segment in a high consequence

area, beyond those already required by Part 192. Vector subsequently stated that their Integrity Management Plan would be re-written by the second quarter of 2016.

Vector Response

Vector acknowledges there was no formal documentation to show evidence on additional preventive and mitigative (P&M) measures considered or taken for each pipeline segment in a high consequence area, beyond those already required by Part 192.

As discussed during the inspection, Vector has taken a system-wide approach to P&M measures and has implemented additional P&M measures to the entire pipeline system or portions of the system, as deemed necessary, both inside and outside of HCAs. We firmly believe this is a proper, diligent approach to improving safety of the entire pipeline. The additional P&M measures implement over the pipeline system are specified throughout our O&M manuals, but are not summarized in a single document. Vector does take additional measures beyond those already required by Part 192 to prevent a pipeline failure in HCAs. These preventative and mitigative measures include:

- All mainline block valves are equipped for remote operation and automatic line-break detection/valve closure
- Aerial patrols twenty-six (26) times per calendar year
- Conducting a study on the effectiveness and feasibility of additional sectionalizing remotely operated valves;
- Performing annual aerial GPS video surveys to determine potentially effected public;
- Annually survey at strategic known crossing locations to determine centerline accuracy and incorporate the results into the HCA analysis; and
- Reviewing various project proposals for preventive and mitigative benefits.

Vector recognizes that 49 CFR Part 192, Subpart O requires operations to implement additional P&M in HCA segments as needed to address the applicable threats. We believe we have done that through our systematic approach of providing additional protection to the entire pipeline system, and that the additional P&M measures implemented provided were appropriate to provide the additional level of safety for HCA segments required by 49 CFR Part 192, Subpart). However, we also recognize that our Integrity Management Plan can be enhanced to clearly define a systematic process and methodology for reviewing additional P&M measures within HCA segments, and to better document these reviews. With the merger of Enbridge and Spectra Energy, revisions are being made to the Integrity Management plan to create a single Integrity Management Plan for Enbridge Gas Transmission and Midstream as operator of the Vector Pipeline. The process for considering and documenting additional P&M measures will be included in the revised Integrity Management Plan.

For the reasons noted above, Vector is not contesting this finding.

Vector takes these issues very seriously, and has addressed some of the issues described in the NOPV. Vector is committed to addressing the remaining issues in an expeditious manner. Vector also recognizes opportunities to improve our practices and documentation to be better able to demonstrate compliance and our commitment to safety, and we are committed to making these improvements.

Please call me at (713) 627-6388 if you need additional information.

Sincerely,

R W Kivela

Rick Kivela
Manager, Operational Compliance

Attachments