PIPELINE SAFETY COALITION

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July 30, 2018

Honored Officials and Esteemed Colleagues,

On Friday, July 27, Pipeline Safety Coalition (PSC) copied you in our correspondence to Mr. Rick Smith, Vice President, Engineering, ETP/Sunoco. The letter, attached below, was focused on specific safety issues observed by PSC in Sunoco/ETP's plan to repurpose a 12" Sunoco/ETP pipeline in order to "conform to customer delivery obligations." As we know, this need was caused by multiple construction issues and violations in Mariner East 2 construction. Although Sunoco/ETP anticipates little to no construction will be needed, Sunoco/ETP does not know this definitively. Should an issue arise and excavation is needed, permits will also be required.

For PSC, there were too many uncertainties to ignore, and preventive possibilities exist. In 2014 PHMSA (The Pipeline and Hazardous Materials Safety Administration) published an Advisory Bulletin (ADB-2014-04) ***Pipeline Safety: Guidance for Pipeline Flow Reversals, Product Changes and Conversion to Service.(2014)***. The Advisory *"...alert(ed) operators of hazardous liquid and gas transmission pipelines of* ***the potential significant impact flow reversals, product changes and conversion to service may have on the integrity of a pipeline****..."* (emphasis added) and the Advisory states: ***Failures on natural gas transmission and hazardous liquid pipelines have occurred after these operational changes***. The advisory bulletin describes: "*…specific notification requirements and general operating and maintenance (O&M) and integrity management actions regarding flow reversals, product changes and conversion to service.* ***This advisory bulletin also recommends***

additional actions operators should take when these operational changes are made including the submission of a comprehensive written plan to the appropriate PHMSA regional office regarding these changes prior to implementation.[1]" (emphasis added)

We know that Sunoco/ETP did not follow PHMSA's 2014 Advisory Bulletin guidelines when repurposing Mariner East 1 and we know that three (3) known releases occurred within one year on ME1. In the case of the proposal to repurpose this 12" pipe, we know the line traverses Marsh Creek Reservoir, Marsh Creek State Park and that the 1,705 acre State Park is a migratory resting place. We know the 535 acre Marsh Creek Lake is stocked with fish and is a potable water source for the region. A breach of product in this location alone could be disastrous. A breach in the 12" line along the subsequent and fairly continuously designated High Consequence Areas (HCAs) compounded our concerns when assessing Chester County history with the Mariner projects and in review of PHMSA's 2014 Advisory Bulletin.

In brief, you will see PSC respectfully requested that Sunoco/ETP:

1) Provide PSC with answers to twenty three (23) specific questions raised in our review of the Pipeline and Hazardous Materials Safety Administration (PHMSA) 2014 Advisory Bulletin (ADB-2014-04) *"Pipeline Safety: Guidance for Pipeline Flow Reversals, Product Changes and Conversion to Service."*

a) Provide responses in writing and include supportive data.

2) Verify, with supportive data and data results, that Sunoco/ETP has adhered to all recommendations and best practices provided in PHMSA's 2014 Advisory Bulletin (ADB-2014-04). (Bulletin provided in email).

3) Provide the Risk Analysis for this repurposing.

PSC has taken this step for both short term and long term reasons. Short term, Sunoco/ETP has an abysmal safety record both on the Mariner lines, and nationally, as documented by PHMSA, the second worst safety record: 2006 - 2018 with 298 reported incidents, 175 federal inspections and 35 federal enforcements. Winston Churchill is credited with warning us, "Those who fail to learn from history are doomed to repeat it." A proactive approach to Sunoco/ETP's plan to repurpose this 12" seemed appropriate.

Long term, we know that Chester County is a nexus of import pipelines poised for reversals and repurposing for export. It is 80% cheaper to repurpose a line than install a new line. It is not a surprise then that redirecting, repurposing, changing flow direction and changing product - all terms you ***will*** be hearing - are, and will continue to be, the preferred construction methods in Chester County. Each and every proposal

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[1] https://www.federalregister.gov/documents/2014/09/18/2014-22201/pipeline-safety-guidance-for-pipeline-flow-reversals-product-changes-and-conversion-to-service

should be met with a collective community voice calling for these reviews, before a permit is reviewed, before a shovel meets the ground.

Each of you has been diligent in lending your voice to constituents, neighbors, colleagues, and to Sunoco, in efforts to protect the Chester County we know and love as home. As a collective community, we have an opportunity, before any activity begins, to heed PHMSA's data based Advisory and make every effort to vet the safe use of this 12" pipe for a temporary reversal of flow and product change so that Sunoco/ETP is able to conform to customer delivery obligations.

We write today to ask you to echo our letter to Mr. Smith with your own ~ or send a letter of support. Honestly, your voices will be heard louder than ours. We predict similar requests will be submitted by NGOs and by a group, Citizens of the Commonwealth, all of which will amplify Chester County's resolve that best practices in safety must be adhered to in our communities. In order to put safety first, prudent recommendations and guidelines determined by PHMSA through experiential analysis, can, and should be the first tools used in risk management when operational changes such as those for the 12" Sunoco/ETP line are proposed.

Thank you for your time and consideration. Please be in touch with any questions and please copy Pipeline Safety Coalition - or all on this list - with your submission to Mr. Smith at Sunoco/ETP.

With our gratitude for all you do for our communities and environment,

Lynda K. Farrell, Founder and Executive Director
Pipeline Safety Coalition

Addressed to:
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COPY:

July 27, 2018

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richard.Smith@energytransfer.com

Dear Mr. Smith,

We have corresponded briefly via email, and I thank you for this additional opportunity to work in unison to ensure the safest pipeline infrastructure possible here in Chester County, Pennsylvania. As reminder, Pipeline Safety Coalition (PSC) is a 501(c)(3) educational outreach organization which strongly supports US DOT PHMSA's credo that informed communities are safer communities. As such we have worked cooperatively with PHMSA for roughly eighteen (18) years and in nineteen (19) Technical Assistance Grants[2] focused on improving human, environmental and pipeline safety through research and education in pipeline safety and in disaster prevention.

PSC's home base is Chester County, Pennsylvania; a region in which the Mariner Project has some notoriety. Sunoco/ETPs announcement of plans to use an existing 12" pipe by reversal and repurposing immediately brought to mind the September 2014 PHMSA Advisory Bulletin (ADB-2014-04): "Pipeline Safety: Guidance for Pipeline Flow Reversals, Product Changes and Conversion to Service," (Bulletin). With an awareness of the burgeoning trend toward repurposing existing pipelines, we are familiar with the Bulletin, which was in part incentivized by the 2013 Tesoro High Plains and the Pegasus Mayflower spills. PSC applauded PHMSA's proactive action in publishing the Bulletin, especially given the time we know it takes for regulatory changes to occur. As you know, the purpose of the Bulletin is to:

"…alert operators of hazardous liquid and gas transmission pipelines of the potential significant impact flow reversals, product changes and conversion to service may have on the integrity of a pipeline…

\(and the Advisory states)

Failures on natural gas transmission and hazardous liquid pipelines have occurred after these operational changes. This advisory bulletin describes specific notification requirements and general operating and maintenance (O&M) and integrity management actions regarding flow reversals, product changes and conversion to service.This advisory bulletin also recommends additional actions operators should take when

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[2]http://www.pscoalition.org/pages/technical-assistance-grants

these operational changes are made including the submission of a comprehensive written plan to the appropriate PHMSA regional office regarding these changes prior to implementation.[3]"

It is our understanding that ME1 did not follow the recommendations of the Bulletin and the record is clear on ME1. A July 19, 2018 Sunoco Factsheet, mentions a "PHMSA guidance document," stating Sunoco/ETP is following the PHMSA document. We were encouraged by this statement and look to your release of documentation verifying conformity and in providing results of these proactive measures. Appropriate stakeholders to be notified beyond State and Federal entities, may include the Chester County Commissioners, Chester County Planning Commission Pipeline Point of Contacts, Chester County Department of Emergency Services, interested legislators, municipal officials (Chester County Association of Township Officials), Pipeline Safety Coalition and any petitioners for information related to the repurposing.

We are cognizant of the Bulletin's advisory nature. The guidance material is not legally binding; rather intended to provide documented guidance and explanations of certain safety regulations in the case of flow reversals, product changes, and conversions-to-service, as PHMSA has determined such activities have impacted pipeline integrity (emphasis added). We also understand the Bulletin is intended to help operators making these operational changes by providing integrity management practice recommendations and guidance as to how to comply with regulations, while utilizing best practice recommendations. In the spirit of pipeline, community and environmental safety, PSC anticipates Sunoco/ETP will verify by documentation that Sunoco/ETP has followed the Bulletin prior to repurposing the 12" line, regardless of its recommendation status.

Our mutual goal is safe pipelines and safe communities. We must encourage dialogues and best practices that beget trust. The intent of this prudent and proactive Bulletin is to address risks that have been *identified and demonstrated to occur in flow reversals and product changes*. While PSC anticipates Operators will use the guideline as intended by PHMSA, PSC respectfully requests Sunoco/ETP provide PSC with answers, documentation and supportive data of the following:

1) What is the construction/inservice date of the 12" line.

2) Specifically, where is the 12" line located? Which townships, municipalities, environmentally sensitive areas, HCAs, hydrologically sensitive areas?

3) Is the 12" line referred to as anything other than "12" line"?

   a) Has the 12" line ever been referred to by another name?

   b) Was there a previous owner?

4) Has the 12" pipe been repurposed in the past? If so, please provide details.

5) Has the 12" line experienced SSC or SSC failures/or leaks? Please provide history.

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[3] https://www.federalregister.gov/documents/2014/09/18/2014-22201/pipeline-safety-guidance-for-pipeline-flow-reversals-product-changes-and-conversion-to-service

6) What refined products are currently being transported?

7) What is the depth of coverage below the lake bed at Marsh Creek Reservoir?

a) Please provide details for the span of Marsh Creek.

8) Please provide documentation of compliance to existing regulations.

a) i.e. per § 192.909 operators must notify PHMSA if IMP changes will substantially affect their integrity management program, its implementation, or modify the schedule for carrying out the program elements.

9) PHMSA strongly encourages Operators to submit a comprehensive written plan to the appropriate PHMSA regional office regarding changes prior to implementation. Has that plan been submitted? If so, please provide copy, if not please explain your process.

10) Please provide documentation of how leak detection and monitoring systems may be affected by this repurposing.

11) Under §194.121, Operators must provide modified response plan within 30 days of making a change in operating conditions that substantially affects its implementation. Please provide documentation of compliance.

12) Per PHMSA, Operators should prepare and follow a written procedure to carry out the following requirements. Please provide documentation of:

a) Prior to any flow reversal or product change, the pipeline design, construction, operation, and maintenance history should be reviewed and, where sufficient historical records are not available, an operator should consider performing the appropriate tests to determine if the pipeline is in a satisfactory condition for safe operation under the changed conditions.

b) The pipeline right-of-way, all aboveground segments of the pipeline, and appropriately selected underground segments should be visually inspected for physical defects and operating conditions which reasonably could be expected to impair the integrity of the pipeline. Line markers should be updated to show the product being transported.

c) All known unsafe defects and conditions are to be corrected prior to making these changes.

d) Provide records of the investigations, tests, repairs, replacements, and alterations made to prepare for this operational change.

13) Specific to flow reversals potential impacts: Please provide documentation of investigation and data results, particularly in environmentally sensitive areas such as March Creek Reservoir:

a) Changes in pressure gradients, flow rates, and velocities through the pipeline network.

b) A shift in locations along the pipeline at risk for SCC and/or cyclic fatigue.

c) Changes in the inlet and outlet pressures at various appurtenances along the pipeline. Is modification of overpressure protection needed?

d) Will this change the ability to run ILI tools and use launching/receiving facilities?

e) ICDA evaluations.

f) Emergency flow restricting device (ERFD) analysis.

g) Facility Changes (flow meters, ILI, number and placement of vapor detectors, check valves)

h) Are there inoperable valves that need to be corrected or moved (§ 192.745)?

i) Areas at risk for internal corrosion issues may shift with changes in pressure gradient, flow rates and velocity. How will Sunoco/ETP monitor the 12" line for these changes, and perform the appropriate monitoring as required by §192.477?

13) Will the configuration of the pipeline change in any area? Provide details.

14) Please provide the evaluation of impact on internal corrosion and risk to the downstream portion (§192.476).

15) Two manual valves will be replaced by automatic valves. Will the location of the valves change?

16) Specifically, where are the above ground interconnecting piping to be located at each end of the 12" pipeline connect to the Mariner East pipeline?

a) Verify this connection is to ME2.

b) Describe the reversal process to the 12" current function including interconnecting piping and any other above ground apertures required for temporary repurposing.

17) Has Sunoco/ETP reviewed and updated their procedural manuals for operations, maintenance, and emergencies (prior to the flow reversal commencing) in accordance with the requirements of §§ 192. 605 and 192.615?

a) What training will be provided to account for the flow reversal? Provide verification that the appropriate personnel have been trained on the modified procedures, such as DES (§ 192.805).

18) Have start up and shut down procedures been updated to assure operation within the MAOP § 192.605 (b)(5) as needed?

a) Is this 12" line a grandfathered pipeline without overpressure protection devices?

b) Does the 12" line need overpressure protection modification for pipeline grandfathered under § 192.195?

19) What is the current MAOP of the 12" line?

a) What will the MAOP be after conversion?

b) Demonstrate compliance with §192.555 to ensure the design, operating and maintenance history is consistent with the new higher operating pressure.

c) Demonstrate evaluation of the IMP for increased operating pressure.

d) According to the 2015 NTSB Safety Study, Integrity Management of Gas Transmission Pipelines in High Consequence Areas (HCA)(NTSB SS-15/01)[4] there is no evidence that (natural gas) incidents have declined in HCAs despite IM requirements. The common denominator in the 12" line is increased risk by way of trajectory through HCAs. Please demonstrate assessment of HCAs for increased operating pressure and risk assessment.

20) Demonstrate pressure tests and material records have been reviewed to validate pipe specifications as reminded in advisory bulletin (ADB 12-06).

21) If increasing the MAOP above historical operating pressure, provide Sunoco/ETP's written plan similar to requirements to Subpart K – Uprating - to ensure the design, operating and maintenance history is consistent with the new, higher operating pressure.

22) Do the location of supervisory control and data acquisition (SCADA) sensors and alarm set points of monitoring devices need to be changed?

23) Provide documentation of changes made to the integrity management program due to the flow reversal (§§ 192.909 and 192.911).

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[4] https://www.ntsb.gov/safety/safety-studies/Documents/SS1501.pdf

24) Have pipeline age related issues related to risk analysis per § 192.917 been assessed (ability to perform in-line inspection, previous mechanical damage, and manufacturing defects)?

25) Flow reversals will invalidate internal corrosion direct assessment (ICDA). When will Sunoco/ETP run in-line inspection (ILI) and evaluate/remediate findings prior to reversal? If this has been done, please provide documentation.

26) Has Sunoco/ETP reviewed if worst case discharge volume has changed and if updates are needed per § 194.105? Please provide results.

27) Demonstrate that Sunoco/ETP has addressed potential system impacts due to product change (per Advisory):

a) change in the gas composition or the type of gas transported may alter the potential impact radius and the HCA calculations.

b) Gas products may have different specific gravities. Flow rates, velocity, and pressure gradient are relational to specific gravity.

c) Natural gases of different compositions may have compatibility issues with certain existing materials such as elastomers.

d) Gas product changes may have interchangeability issues with gas burning equipment. Gas equipment may need to be modified to burn correctly.

e) Liquid products may have different ignition threshold, vapor dispersion and spill characteristics. HCA calculations may change due to differences between the products. HVL will require air dispersion and overland flow analysis.

f) Liquid product changes may have compatibility issues with certain existing materials

g) Liquid products may have different densities. Density is used to determine the quantity of material passing through a meter. Density is also used to detect a pipeline interface. Valve changes may be necessary to properly route liquids. Additionally leak detection using density compares pressure and flow rates at points along a pipeline to measure relatively small leaks. Densitometers may need to be adjusted.

h) Leak detection equipment may need to be modified.

23) Public Awareness programs need to be modified for the changing product and associated risks, and additional notification may be required prior to the change § 192.616. Please describe the timeline, content, partnerships and audiences intended for these programs.

Absent of details such as current MAOP and product, the short list above may decrease or increase

with further information. Regardless, PHMSA's advice that Operators incorporate the Bulletin into PHMSA's current regulations when pipeline flow reversals, product changes and conversions occur that may impact a pipeline's integrity, is a prudent, logical encouragement.

Pipeline Safety Coalition looks forward to your response.

Lynda Farrell
Executive Director, Pipeline Safety Coalition

cc: