

Comment Response Document For

SUNOCO PIPELINE L.P.'s PA PIPELINE PROJECT (PPP) – MARINER EAST 2 (ME2)

Erosion and Sediment Control Permit Modifications for East Swedesford Road and North Pottstown Pike Part 1 - Commentators

On February 10, 2018 and April 21, 2018, the Pennsylvania Department of Environmental Protection (DEP) published notice in the *Pennsylvania Bulletin* of the Chapter 102, Permit Modifications for the Chapter 102, Erosion and Sediment Control General Permit for Earth Disturbance Associated with Oil and Gas Exploration, Production, Processing or Treatment Operations or Transmission Facilities (ESCGP-2), Notices of Intent (NOI) for Sunoco Pipeline, L.P.'s Pennsylvania Pipeline Project/Mariner East 2 pipeline project. The public comment period closed on May 11, 2018.

This Comment Response Document summarizes the comments submitted to DEP by the commentators during the public participation process. Each public comment is listed with the identifying commentator ID number at the beginning of the comment.

Table of Commenters

Comment Number	Date	Commenter		Comment Number	Date	Commenter		Comment Number	Date	Commenter	
1	12-Mar-18	Shelley Durbanis		22-b	10-May-18	Victor Murray #2		45	11-May-18	Kathleen Hester	X
2	12-Mar-18	Shelley Durbanis		23-a	9-Mar-18	Carrie Gross #1	X	46	11-May-18	Anna May Hutt	X
3-a	26-Feb-18	Janice Mancuso #1	X	23-b	30-Apr-18	Carrie Gross #2	X	47	7-May-18	Marie Kania	X
3-b	9-May-18	Janice Mancuso #2		24	12-Mar-18	Marsha Brofka-Berend		48	28-Apr-18	Libby Madarasz	
4	10-Mar-18	Deanie Gauntlett		25	6-Mar-18	James and Emily Scarola		49	10-May-18	Pam Magidson	
5-a	9-Mar-18	Annette Murray #1	X	26	5-May-18	Jim Scarola		50	9-May-18	Judith McClintock	X
5-b	2-May-18	Annette Murray #2		Form Letter 1-1	(no date)	Ashok and Nisha Dube		51	9-May-18	Jerry McMullen, Ph.D.	X
5-c	9-May-18	Annette Murray #3		Form Letter 1-2	(no date)	Marsha Brofka-Berends		52	11-May-18	Margaret Miller	
6	12-Mar-18	Joan Herman	X	Form Letter 1-3	12-Mar-18	Carrie Dale		53	8-May-18	Catherine Moran	X
7	12-Mar-18	Virginia Marcille-Kerslake #1	X	27	8-May-18	Sam Bernhardt, (apparently emailed by Alison Grass)	X	54	10-May-18	Lynne Murray	
8-a	12-Mar-18	Virginia Marcille-Kerslake #2		28	6-May-18	Amy Brady	X	55	10-May-18	Nicole Palman	
8-b	11-May-18	Virginia Marcille-Kerslake #3		29	11-May-18	Lynne Brady	X	56	(no date)	Linda Pohshuk	
9	12-Mar-18	Melissa Malatesta	X	30	4-May-18	Alyce Ann Callison		57	9-May-18	Don Robinson Jr.	X
10	26-Feb-18	Jim Carr		31	10-May-18	Rebecca Campbell		58	3-May-18	Melisa Devito	X
11	26-Feb-18	Jim Carr	X	32	8-May-18	Andrea Cauble	X	59	9-May-18	Dave Spigelmyer	
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15-b	11-May-18	Joanne Brady #2	X	37	9-May-18	Patricia Dickerson	X	64	11-May-18	Mike Walsh	X
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22-a	12-Mar-18	Victor Murray #1	X	44	5-May-18	Amy Henry	X				

X – Comments containing pipeline construction and safety issues forwarded to PUC

Sunoco PPP - ME2 Erosion and Sediment Control Permit Modifications for East Swedesford Road and North Pottstown Pike Comment Response Document- Part 2 Comments

Please find listed below the public comments and the Department's response. The majority of the comments are relative to the following categories: geology, alternative routing, public health and safety, waterway and wetlands, flooding and tree removal, groundwater and drinking water, permitting, archaeology, and economics and real estate values.

For the above listed categories, the Department provides the following general responses. More specific responses will be provided later in this document:

Geology: There are no prohibitions in Commonwealth statutes or regulations to preclude the siting of pipelines in areas with carbonate geology. The presence of karst terrain in the vicinity of the project was considered during the Department's review.

Alternative Routing: This subject is outside the scope of the Department's Chapter 102 permitting authority.

Public Health and Safety: The regulation and enforcement of standard safety practices for the transportation of natural gas liquids falls outside the scope of the Department's authority. The Pennsylvania Public Utility Commission (PUC), in consultation with the Pipeline Hazardous Materials Safety Administration (PHMSA), regulates and enforces standard safety practices concerning the conveyance of natural gas liquids through the Mariner East II Pipeline.

Waterway and Wetlands: No additional impacts to waterways or wetlands will occur as a result of the permit modifications.

Compaction, Flooding and Tree Removal: After the pipeline is installed, the Right of Way (ROW) and workspaces are to be restored to their preconstruction elevations and contours, and revegetated. Adverse impacts to flood management are not anticipated as a result of construction or operation of the project. The tree felling that might be associated with this project is outside the scope of the Department's Chapter 102 permitting authority.

Permitting: The applications for permits and modifications were thoroughly reviewed by staff for conformance with the pertinent DEP regulations. The applicant has satisfied the regulatory requirements for obtaining all applicable permits.

Archaeology: Archaeological issues fall outside the scope of the Department's Chapter 102 permitting authority.

Economics and real estate values: Economics and issues associated with real estate values fall outside the scope of the Department’s Chapter 102 permitting authority.

The Department provides below the following responses specifically for the public comments received.

1. COMMENT

Comments for Pottstown Pike crossing E15-862, PA-CH-0212.0000-RD: The drilling that Sunoco has already done in this geologically sensitive area has already caused multiple sinkholes to form along the pipeline route. This means that the existing ME1 pipeline that is already in operation could easily bend, compromising pipeline welds, and leading to leakage of NGLs. Allowing them to continue drilling in this sensitive area with karst geology will only increase that risk. The DEP must insist that Sunoco do more geological surveying to understand what is required to avoid these problems. In addition, why have they not considered alternative routes? There is open land to the northeast of Exton that would make a better route, with far less damage to the environment and far less risk to the people who live and work here.

Response

- a) The proposed North Pottstown Pike permit modification would not involve continuation of “drilling”. The proposed modification for the North Pottstown Pike involves converting the previously proposed single long horizontal directional drill (HDD) construction method to a combination of open trenching and four short conventional auger bores. This change was proposed after Sunoco completed an extensive study of geology and hydrogeology (November 2017), including geotechnical investigations and Multichannel Analysis of Surface Waves (MASQ) seismic testing. The results of these evaluations led Sunoco to determine that potential construction impacts would be best reduced by changing the crossing methods, as proposed in the request for permit modification. In particular, the results of these investigations confirmed subsurface geology characterized by interconnected fracturing, bedding planes, and solution openings in the Ledger formation. The currently proposed conventional bores and trenched crossings will occur at shallower depths, avoiding the Ledger/bedrock formation, and will require shorter bore lengths, compared to the previously proposed HDD. The shallower depth, change to a construction technique that does not involve the use of drilling fluids under pressure (no drilling mud would be used for conventional bores or trenched areas), and shorter lengths of trenchless (bored) construction techniques overall, are anticipated to both avoid impacts to groundwater supplies and minimize the risk of sinkhole occurrence. Sunoco and its contractors and inspectors will continue to monitor for sinkholes throughout its ROW and work spaces in this area. Sunoco has developed and is implementing a project-specific Void Mitigation Plan for Karst Terrain and Underground Mining, which includes pre-construction review and consideration of construction methods in karst areas and construction-phase best management practices intended to reduce the occurrence of karst-related hazards. The plan also includes response measures for addressing and correcting sinkholes in general, and specifically, addressing any impacts of sinkholes on existing buried infrastructure (including Sunoco’s existing 8-inch pipeline) and aboveground structures.

- b) With respect to alternatives, Sunoco addressed alternatives extensively in its final Chapter 105 application to the Department, and also addressed re-route alternatives in its HDD re-evaluation report for this area (November 2017), and its December 17, 2017, response to the Department's comments on the re-evaluation report. Although there may be less densely developed lands to the north, a re-route to this area would not avoid areas with mapped karst geology (as karst geology is pervasive and extends throughout this region of Pennsylvania and therefore is not able to be avoided). Furthermore, the proposed route along Sunoco's existing ROW is collocating within existing utility ROWs to the maximum extent practicable to minimize impacts.

2. COMMENT

Comments for Swedesford Rd Crossing PA-CH-0219.0000: The drilling that Sunoco has already done in this geologically sensitive area has already caused multiple sinkholes to form along the pipeline route. This means that the existing ME1 pipeline that is already in operation could easily bend, compromising pipeline welds, and lead to leakage of NGLs. Allowing them to continue drilling in this sensitive area with karst geology will only increase that risk. The DEP must insist that Sunoco do more geological surveying to understand what is required to avoid these problems. In addition, why have they not considered alternative routes? There is open land to the northeast of Exton that would make a better route, with far less damage to the environment and far less risk to the people who live and work here.

Response

- a) The proposed East Swedesford Road Crossing permit modification involves converting the previously proposed single long horizontal directional drill ("HDD") construction method to a combination of open trench installation, five conventional auger bore installations, and one FlexBor installation. This change was proposed after Sunoco completed an extensive study of geology and hydrogeology (summarized in October 2017 HDD Hydrogeologic Reevaluation Report – S3-0381). The results of these evaluations led Sunoco to determine that potential construction impacts could be reduced by changing the crossing methods, as proposed in this request for permit modification. In general, the results of these investigations confirmed subsurface and terrain characterized by geologic formations locally known for karst development. The currently proposed trenched crossings, conventional bores, and FlexBor crossing will occur at shallower depths (from 7 to 17 feet deep) than the formerly proposed HDD, and would be completed entirely within the overburden materials (measured in geotechnical borings to be 18 to 52 feet thick or more), avoiding the karst bedrock Ledger and Conestoga formations. The shallower depth of the proposed pipeline in this area, change to trench and bore construction techniques that do not involve the use of drilling fluids under pressure (no pressurized drilling mud would be used for conventional bores or trenched crossings), and shorter lengths of trenchless (bored) construction techniques overall, are anticipated to both avoid inadvertent returns and impacts to groundwater supplies, and reduce the risk of sinkhole occurrence. The FlexBor technique uses high pressure air injection with a low volume of water and the hole is cased and isolated during the entire process,

reducing the chances of a discharge along the length of the hole. Sunoco and its contractors and inspectors will continue to monitor for sinkholes throughout its ROW and work spaces in this area. Sunoco has developed and is implementing a project-specific Void Mitigation Plan for Karst Terrain and Underground Mining, which includes pre-construction review and consideration of construction methods in karst areas and construction-phase best management practices intended to reduce the occurrence of karst-related hazards. The plan also includes response measures for addressing and correcting sinkholes in general, and specifically, addressing any impacts of sinkholes on existing buried infrastructure (including Sunoco's existing 8-inch pipeline) and aboveground structures.

- b) With respect to alternatives, Sunoco addressed alternatives extensively in its final Chapter 105 application to the Department, and also addressed re-route alternatives in its HDD re-evaluation report for this area (November 2017), and its January 18, 2018, response to the Department's comments on the re-evaluation report. Although there may be less densely developed lands to the north, a re-route to this area would not avoid areas with mapped karst geology (as karst geology is pervasive and extends throughout this region of Pennsylvania and is not easily avoided by small- or moderate-scale re-routes). Furthermore, the proposed route along Sunoco's existing ROW is in conformance with the recommendations of the U.S. Fish and Wildlife Service for co-location of new pipeline infrastructure within existing utility ROWs, to minimize impacts.

3-a COMMENT

Please do not allow this dangerous pipeline, Mariner 2 East, to pass through densely populated areas in Chester and Delaware Counties in close proximity to schools, libraries, and senior living facilities. The lives of the citizens of the Commonwealth of Pennsylvania are being put in danger for the financial gain of Sun and its partner companies.

Response

The regulation and enforcement of standard safety practices for the transportation of natural gas liquids falls outside the scope of the Department's authority. This comment has been shared with the Pennsylvania Public Utility Commission (PUC). For more information, see general response regarding Public Health and Safety on page 1.

3-b COMMENT

I oppose the proposed trenching through the Chester County Library, the heart of Exton businesses and many neighborhoods. I oppose Sunoco's request to switch from HDD to open trenching, auger boring and FlexBor in West Whiteland Township.

Response

Selection of construction methodology is determined by the project proponent, not the Department. As long as the project proponent demonstrates that it can complete the work in compliance with the pertinent regulations, a project proponent can use any type of

installation methodology. The Department has determined that the proposed work conforms with the pertinent regulations. .

4. COMMENT

Comments regarding PADEP SECTION 105 PERMIT NO.: E15-862: I am a resident of Uwchlan Township, and live at 417 Berkley Rd, in Exton, PA. I am writing to you my concerns regarding the above permit with regards to Sunoco's construction of the Mariner East pipelines. I am very concerned about the current pipeline route in general, but also especially applies to the route going through West Whiteland township and near the Chester County Library. My understanding is that there is an alternative route available that would cause less destruction of the wetlands in the area, plus minimize the impact of the pipeline on a crowded area, full of where people live, work, and play. I am constantly in that area, and am at the library often. With the appearance of sinkholes in other areas of construction, coupled with Sunoco's already questionable actions in obeying permits, I would like to you to not give them this permit. The area is too potentially geological and environmentally sensitive, coupled with too many people in the area to make this a safe idea. The pipeline has too many risks associated.

Response

- a) Near the Chester County Library, Sunoco has changed the formerly proposed long HDD to a combination of trenched construction, five conventional bored crossings, and one FlexBor crossing -- including both trenched and bored methods in the immediate vicinity of the library. No destruction of wetlands is proposed; the proposed permit modification does not result in any additional wetland impacts. Beginning adjacent to the library, a conventional bore would extend southward under Valley Creek/stream S-B81 and a forested wetland/wetland B71. Neither the forested wetland nor Valley Creek in this segment of pipeline will be disturbed by open trench construction methods. The pipeline will be installed under these areas using trenchless bore techniques.
- b) With respect to alternatives, Sunoco addressed alternatives in its final Chapter 105 Application, its HDD Reanalysis for the East Swedesford Road HDD (S3-0381) dated November 2017, and a January 18, 2018 response to the Department's comments on the HDD Reanalysis for the East Swedesford Road HDD. Sunoco's analyses demonstrated that practicable routing alternatives that avoid mapped karst geology areas, wetlands/streams, and currently developed areas are not reasonably available.
- c) With respect to sinkholes, based on Sunoco's geotechnical/hydrogeological evaluation and boring samples taken for the previously proposed HDD in this area, the overburden thickness, measured in five geotechnical borings, ranged from 18 to 52 feet thick or greater. The trenched construction, conventional bores, and flex bore would all be located within 7 to 17 feet (depth) from surface, so the newly proposed shallower construction methods reduce the risk of encountering or interacting with karst bedrock features.

5-a. COMMENT

Erosion and Sediment Control Permit Major Modification 1—East Swedesford Road—HDD S3-381

Please do what you can to insist that Sunoco Logistics perform the geo-physical tests in the Swedesford Road Crossing corridor PRE-construction that are now being required POST-sinkhole in the Lisa Drive area.

1. FLOODING

This area behind the library is very sensitive in so many ways to water management. The township and state's efforts to reduce the severe flooding we experienced many years ago with Hurricane Floyd have certainly helped. Please don't let Sunoco's construction undo what has been done to control the flooding. The trees and riparian buffers are CRUCIAL to this flood management.

2. AQUA WELL

I am also greatly concerned about the Aqua well that serves Meadowbrook Manor residents. I have no confidence that the switch from HDD to trench and FlexBor construction is going to safeguard that well. Especially since the FlexBor is a new, untested method. Without the geophysical tests Sunoco really has no idea what will happen to that well. How will this well be monitored during construction? What contingencies plans are in place should this well become unusable during or after construction?

3. GREEN SPOT

The waterway and pond near the library creates a little oasis in the heart of Exton. It attracts a host of wildlife (aside from the polluting geese). Please do what you can to ensure that Sunoco does not contaminate/DESTROY this green gem. Please insist on unnecessary tree removal and limited ground disturbance.

4. SINKHOLES

A portion of the Swedesford Road Crossing Plan calls for HDD drilling? What preemptive geological testing is being done to ensure that this KARST geology does not produce sinkholes that can endanger homes, businesses and Mariner East 1?

5. ALTERNATIVE ROUTE

The best solution—but one that is being disregarded by Sunoco. INSIST that they research alternatives, not dismiss them.

Response

1. With respect to flooding: The area behind the library includes Valley Creek (stream S-B81), a forested wetland (B71), and a large floodway/floodplain area which extends throughout much of the developed and undeveloped areas of this part of Exton. The proposed conventional bore crossing and its workspace would avoid clearing and disturbance in the forested wetland and Valley Creek, and would require very limited clearing of trees in the floodplain. No new pavement or aboveground structures would be sited in this area, and after the pipeline is installed, the ROW and workspaces would be restored to their preconstruction elevations and contours, and revegetated. Adverse impacts to flood management related to Valley Creek behind the library are not anticipated as a result of construction or operation of the project.
2. With respect to Aqua well: Sunoco's January 18, 2018 letter response to the Department's comments on the HDD Reanalysis for the East Swedesford Road HDD

(S3-0381) addresses and explains in detail the basis for conclusion that the change from HDD to a FlexBor crossing method reduces the risk to groundwater well production zones. First, the depth of the FlexBor will be limited to 17 feet deep (which is sufficiently above the public/private water well production zone or water bearing zone of the wells in the vicinity). Second, it will eliminate the use of pressurized, re-circulated drilling mud. Third, it involves a cased installation, which will isolate the operation from surface or groundwater intrusion. (See January 18 letter, responses 3, 4, 5, 7, and 8).

3. With respect to “green spot”: See response 4(a): The pond itself will not be affected (it is outside the project workspaces), and the crossing of the associated Valley Creek/stream S-B81 and a forested wetland/wetland B71 would be accomplished using a conventional auger bore, avoiding all surface disturbance to these resources. Tree removal in this area will be limited to only that which is necessary to support the bore, and all areas will be restored following construction.
4. With respect to sinkholes: Sunoco’s January 18, 2018 letter response to the Department’s comments on the HDD Reanalysis for the East Swedesford Road HDD (S3-0381) summarized (in responses 6 and 7) that two geophysical studies were completed within the geologic formations to be encountered by the proposed FlexBor (Ledger and Conestoga formations). These include a borehole sampled near the eastern end of the proposed FlexBor, which provided data to 30 feet in depth (beyond the maximum 17-foot depth of the FlexBor). The data showed no mappable subsidence or sinkhole features in the current pipeline alignment, either to the northwest or southeast of the bore path. Neither of the studies or geotechnical data has indicated any near surface data that would indicate a high probability of developing sinkholes as a result of FlexBor activities.
5. With respect to alternatives: See response 4(b).

5-b. COMMENT

Swedesford Road Crossing West Whiteland Twp Pond B-11 has an existing propensity to Flood Sunoco logistics' request to open trench, auger bore, and Flex bore through the Swedesford Road Crossing segment of Mariner East Pipeline must be denied on the propensity for Pond B-1 (adjacent to their work area) to flood. This construction work and the resulting soil erosion and sedimentation can only exacerbate an existing and troubling water flow issue.

This link (<https://drive.google.com/open?id=1AjbGWeKiAT-pUSQhaYlaeykOPrDIDd47>) takes you to two folders of images-the highest resolution photographs available-showing you the status of Pond B-1 ten days apart.

link to a downloadable lower resolution pdf.

(<https://drive.google.com/open?id=1WZCyhd1Q4opDjGZtrwFsS0dYvbgaHRs>)

April 16, 2018 (flooding after one night's rain)

April 26, 2018 (normal flow).

In these photos you can see Sunoco Logistic's Limit of Disturbance stake with pink ribbon partially submerged in the flood waters. That one photo is worth a thousand words.

Response

Pond B-11 (being in the floodplain of perennial Valley Creek) may have a propensity to flood, but the pond and flood storage capacity will not be affected by installation of the pipeline. The pond is 100 feet away from the proposed workspace and will not be trenched or otherwise disturbed. After the pipes are installed in the ROW, all pre-existing contours will be restored and no fill, new aboveground structures, or new impervious areas will be created in the floodplain.

5-c. COMMENT

Swedesford Road Crossing SPLP HDD No. S3-0381 North Pottstown Pike Crossing SPLP HDD No. S3-0370

1. **SLOPPY PERMIT MODIFICATION REQUEST** I don't know how the DEP can properly evaluate Sunoco Logistic's Chapter 102 Permit Modification request, nor how the public can read their revised plans and comment in a thoughtful manner. Their modification request and replies to DEP's request for more information is cobbled together and haphazardly prepared. Is the way in which this request and sloppy replies to DEP are provided an indication of how they intend to implement their physical work through the heart of this sensitive flood zone and wetland? Yes it is. Based on their past behavior. DENY the PERMIT due to improperly prepared paperwork.
2. **AQUIFER CONTAMINATION** Is there a short HDD section in the new plan, or not? Is FlexBor just really HDD that doesn't go as deep? Is FlexBor an appropriate methodology near the Aqua wells and wetlands? It still uses drilling fluid in the drilling phase. Why do we have any reason to believe that any type of drilling or boring isn't an issue in the Karst geology? How will all the construction in the Karst geology affect our aquifer that feeds ALL THE HOUSEHOLDS in Meadowbrook Manor AND BEYOND. A DEP fine is not going to fix a contamination of our aquifer. I ask that you stand by your mission statement and protect us from this egregious corporation. Do not permit Sunoco Logistics to use Meadowbrook as its guinea pig. Deny these permits based on the high probability of Aqua public well contamination.
3. **STREAM CROSSING** Sunoco's plans as to how they will cross the streams are vague and contradictory. You cannot approve the permit without more detailed information about how Sunoco intends to cross the affected streams per Chapter 102.
4. **EROSION AND SEDIMENT CONTROL** The wetland being affected by Sunoco's construction is located at the lowest spot in this area. Any erosion or sediment will end up here: polluting the streams and pond receiving any runoff; impacting the variety of wildlife; Interrupting the ecosystem.

5. FLOOD ZONE Portions of Meadowbrook Manor and the Sunoco construction zone are a designated FEMA flood zone. POND B-1 breached in an overnight storm during April 2018. This sensitive area cannot tolerate the removal of any trees or riparian buffer. Their removal can only increase the runoff during storms and extend the flooding to an increased area. The impact of soil by the heavy construction equipment will also increase the runoff. This affects on this Flood Zone is enough reason to DENY THE PERMIT.

Response

- a) The Department accepted the Chapter 102 permit modification request, and with some additional information, determined that it complies with all applicable requirements.
- b) See response to 2(a). FlexBor would use air and water, but not bentonite or other drilling fluids. Based on the nature of the construction methods, no impacts to the aquifer are expected.
- c) The Chapter 105 (stream and wetland crossings) application clearly lists each stream crossing and identifies the crossing methods for the requested modification. The Site Plans clearly depict and label each stream and the crossing method, and provides other stream-specific information as required. Certain streams will be crossed using a trenched dry (e.g., dam-and-pump) method, certain streams will be crossing using conventional bore, and one stream will be crossed using FlexBor.
- d) The wetland will not be trenched or disturbed by construction. The pipeline will be installed under these areas using trenchless bore techniques. Temporary and permanent erosion and sedimentation controls are planned and should prevent sedimentation of the streams, wetland, and the pond.
- e) With respect to flooding and riparian vegetation clearing, see response (a) to comment 5-a.

6. COMMENT

I would like for you to take into consideration what SuNOco is planning for the Exton area. To open trench that area near the library and baseballs fields is not safe. As a matter of fact, doing anything there is touching precious ground. The library is home to so many, young and old. The mall is there. If anything would go wrong, (and it will) lives are in danger. I take my granddaughter to play there at the mall. Children play ball at the fields. Please, with the recent sinkholes here in Chester County, you must rethink SuNOco and the project. They are ruining people's lives. I have witnessed what they are doing to homeowners in West Whiteland. Wonder how you would feel living there and this going on. This destruction to our land and polluting our wells and the risk of this in a close residential area is not right. The ground there also is made up of partial limestone, and this is a dangerous combination with what they want to do. Thank you for taking the time to reconsider this situation. It should be safety over profit.

Response

- a) With respect to the library area, see response 4(a).

- b) The regulation and enforcement of standard safety practices for the transportation of natural gas liquids falls outside the scope of the Department's authority. This comment has been shared with the Pennsylvania Public Utility Commission (PUC). For more information, see general response regarding Public Health and Safety on page 1.
- c) With regard to sinkholes, see responses 4(c) and 5-a(d).

7. COMMENT

Final comments East Swedesford Road HDD (West Whiteland Township) Drill S3-0381: Sunoco's response to the DEP on this segment is essentially, "We are changing nothing from our previous response". That should be unacceptable.

The biggest concern for putting Mariner East 2 through the heart of Exton remains the huge safety risk this presents to thousands who live, work, shop, play, visit and travel through the area on a daily basis. A leak of these highly volatile gases in this built up area of homes, shopping centers and mall, offices, playing field and heavily travelled roads would most likely lead to an explosion and the loss of hundreds of lives. Open trenching as opposed to HDD makes Mariner East even more vulnerable, putting the pipes closer to the surface where they could be mistakenly dug into or otherwise punctured.

The now proposed trenching and boring were originally not chosen for good reason: Trees, wetlands and streams separating homes and commercial areas would be irreversibly damaged. In order to build a temporary workspace on the Chester County Library's property, large mature trees would be destroyed that now help mitigate a flood zone that extends into the neighborhood behind the library, as well as provide a much enjoyed public green space.

While open trenching and boring in this area of karst geology presents less risks than HDD, they still carry a host of consequences, including sinkholes, IRs, damage to water supplies, and increased flooding in this already flood-prone SFHA. By Sunoco's own admission it is impossible to access the extent of this damage because they claim they can't do local geological studies. Further testing is needed to ascertain the potential for impact.

Sunoco decided in this new plan that homeowners within 450 feet of the route do not need to be notified prior to construction. But since there still is no certainty that that water supplies will be impacted and Sunoco isn't certain which homes have private wells, all homeowners need to be contacted prior to construction.

Clearly, this area is unsuitable for HDD drilling and the alternative, open trenching, comes with unacceptable risks that Sunoco itself used to support its ordinal plan to use HDD.

The only safe alternative is relocation. But once again Sunoco has ignored the DEP's request to seriously consider this in the open areas on either side of Exton.

I join all of the others in asking that you deny these permits and demand that Sunoco legitimately and transparently vet alternate routes in accordance with the August 9th agreement. And while risk to human lives may be outside the DEP's jurisdiction I plead that you join the call from legislators and Pennsylvanians for a full safety risk assessment before this project is continued.

Response

- a) Sunoco submitted a Re-evaluation Report for the Swedeford Road HDD to the Department on November 3, 2017. The Department reviewed the Report and prepared a December 4, 2017 deficiency letter. Sunoco's January 18, 2018 response to the

deficiency letter reiterates the approach in its proposed permit modification to pursue a different construction methodology than HDD for the entire Swedeford Road installation. See response 2(a) which describes the proposed construction methodology change from a single long HDD to a combination of open trenching, five conventional auger bores, and one flex bore.

- b) Regarding safety risk, see response 3-a. The pipeline will be installed with a minimum of 48 inches (4 feet) of cover in uplands (minimum 5 feet of cover beneath streambeds), and will have pipeline markers at every road crossing to signal their presence. The pipelines will be registered with PA One Call (“Call Before You Dig”) program, as required for buried utilities in Pennsylvania.
- c) With respect to tree clearing and damage to the flood zone behind the library, see response 5-a(a). Wetlands and streams separating homes will not be irreversibly damaged; no additional impacts to streams or wetlands will occur as a result of the change in crossing methods.
- d) Concerns about karst geology, sinkholes, inadvertent returns, damage to water supplies, and why additional geological testing was not conducted has been addressed in Sunoco’s January 18, 2018 letter response to the Departments comments on the HDD Reanalysis for the East Swedesford Road HDD, as described in various responses in this document.
- e) With respect to notification of landowners within 450 feet, Sunoco had already notified homeowners within 450 feet of the East Swedesford Road HDD on September 6, 2017 (for the 20-inch pipeline) and November 1-3, 2017 (for the 16-inch pipeline). However, after that notification, the proposed crossing method was changed to a bore (conventional bore by industry standards, using FlexBor equipment). Though Sunoco fulfilled their obligation for notification, there was additional outreach by the Sunoco Project ROW agent team to identify all landowners on public water. A letter from Sunoco offering temporary water was sent to those landowners with private wells on February 27, 2018. Both the 10-day notice and the water offer letters contained an offer to test the homeowners’ wells. Based on the responses, a single private well was identified within 450 feet of the FlexBor location.
- f) With respect to relocation, see response 4(b) regarding alternative routes.

8-a. COMMENT

Final comments North Pottstown Pike Crossing Permit No E15-862 HDD S3-0370: Sunoco’s final submission to the DEP for the requested re-evaluation of HDD drilling along the Pottstown Pike crossing segment in West Whiteland is essentially a non-response.

In the report, the geologists note that more testing is required to better understand the karst geology in this segment. Given the impact that subsidence can have on our buildings, roads, landscape, water resources and pipelines, it is essential to have a clear understanding of the geology before starting construction. On the west side of the Pottstown Pike Crossing there are several existing pipelines that present a safety and environmental risk if impacted during or after

construction. We see the danger of not having a complete understanding of the geology simply by looking at what happened two sections south at Lisa Drive and Lynetree. In the Void Mitigation Plan for Karst Terrain and Underground Mining that Sunoco submitted to the DEP for this project (Nov 18, 2016, revised Aug 8, 2017), Sunoco categorizes this segment as low risk. Note what happen in neighboring S3-0360 which was labelled very low risk (15 homes lost their private water wells due to construction) and S3-0400 (three sinkholes and multiple depressions on Lisa Dr. and Lynetree as result of construction which lead to an emergency order by the DEP to shut down ME1 and halt construction on ME2 and 2X). Sunoco seems to grossly underestimate the probability of impact from its construction activity. And when it came to giving serious consideration to rerouting Mariner East, Sunoco simply refused to. Having to obtain new easements in order to reroute to the southwest where there is open space is not anywhere near a good enough reason to put this dangerous pipeline through the heart of Exton, putting the thousands that live, work, go to school, shop, play and drive through in the blast zone. Please require Sunoco to have further testing here done to be certain of the geology in order to reduce the likelihood of impacts and to give serious consideration, as the DEP required, of rerouting Mariner East.

Response

- a) The HDD Hydrogeologic Reevaluation Report for the North Pottstown Pike Crossing (November 2017) noted that there is elevated risk for drilling mud loss and inadvertent returns if a horizontal directional drill crossing method is used, and recommended additional geophysical studies and geotechnical borings to further inform HDD design and reduce the risk of inadvertent returns during HDD installation. However, as explained in more detail in the response to comment 1, the currently proposed combination of trenched construction and conventional bores will largely avoid (not require intrusion into) the geologic formation of concern, rendering additional detailed investigations of the deeper geologic formation unnecessary.
- b) The mere presence of carbonate rocks is not predictive of the presence of actual karst features. Of all the bore samples collected for Sunoco's initial geotechnical boring program (i.e., in all the bore samples taken along proposed HDD alignments of the project at the time of developing the Void Mitigation Plan), borings from only one HDD alignment produced evidence of subsurface void space. In that single case, the design/routing was modified to avoid the area of the void. Sunoco's Void Mitigation Plan for Karst Terrain and Underground Mining explained that the U.S. Geological Survey Karst Map for Pennsylvania, used in the desktop analysis, is based on geologic mapping. This mapping identified areas of carbonate/soluble rocks that are near or at land surface as representative of karst potential, but not necessarily indicative of actual karst features. Karst features are formed through a complex interaction of many factors, including bedrock structure, tectonics, climate, sedimentary cover, vegetation, and hydrologic conditions. In the model used, the presence of mapped carbonate rocks, in the absence of geotechnical survey evidence of void space, did not in and of itself translate into high risk for general site-specific locations.
- c) Regarding re-routing, see response 1(b) and response 4(b).

8-b. COMMENT

I am hereby submitting my comments on the proposed changes to Mariner East permits in West Whiteland Township, specifically the North Pottstown Pike and Swedesford Road Crossings. These comments include concerns related to the geology and archaeological resources of the area.

The Great Valley in which Exton sits is underlain by the Ledger Formation, a dolomitic limestone characterized by karst. Karst is a landscape characterized by sinkholes, depressions, caves, pinnacles, voids and fissures due to the dissolution of the limestone.

These two sections of Mariner East cross an area riddled with depressions and some sinkholes due to this karst. In addition to being naturally formed, sinkholes can be triggered by the construction of pipelines, not only by HDD drilling as happened here on Lisa Dr., and a well-documented case in Florida, but also by any major ground disturbance like open trenching which results in changes in grading and drainage. They can also be related to faults lines such as the Martic Fault in the vicinity of the Lisa Dr. sinkholes. Several additional faults run east west through Exton crossing the path of Mariner East.

Once in the ground, pipelines carrying highly volatile liquids through karst present an ongoing risk. Karst is a dynamic landscape, with surface and subsurface changes occurring within human lifetimes. Sinkholes can form in minutes or more gradually, leaving a pipeline exposed and unsupported. PHMSA found that the Follansbee West Virginia Explosion in 2015 was caused by subsidence. Mariner East 1 was shut down because of the catastrophic potential the sinkholes on Lisa Dr. presented.

Subsurface pinnacles-can exist in karst, and do in the Ledger Formation. If a pipeline spans a void or is placed on a pinnacle and the surrounding soil washes away, stress on the pipeline can lead to corrosion and failure. The question isn't whether karst would be affected by pipeline construction, but rather to what extent. Furthermore, karst presents an ongoing risk to pipeline integrity. Careful planning and extensive geophysical testing and analysis is required in order to fully understand the subsurface along the proposed route through karst. To date, Sunoco has not done this and the DEP issued permits despite known deficiencies. And we have already seen the consequences of that failure.

In November 2016 Sunoco submitted a report to the DEP entitled Void Mitigation Plan for Karst Terrain. In it, two sections in West Whiteland were classified as very low risk and yet construction there resulted in the destruction of private water wells in Marchwood and the three large sinkholes on Lisa Dr. The two sections under review tonight were classified as low risk but that too was wrong as the plan posed a threat to the public water supply.

Sunoco cannot be permitted to proceed yet again in a reckless manner, uncertain of every aspect of the subsurface where they plan to put these pipelines which would carry several hundred thousand barrels of highly volatile liquids every day through our community.

In addition to the environmental and safety concerns related to karst, the proposed changes threaten known archaeological sites. In the report linked below from January 2017 Sunoco identifies three archaeological sites on the map for the area of concern by Chester County Library on page 19. The three archaeological sites on that map can also be found in the table on Page 6. They are site number 36CH0964, 36CH0965 and 36CH0966. In the table the township is incorrectly labelled as Upper Uwchlan rather than West Whiteland. In the table Sunoco states that the sites will not be disturbed because HDD drilling will be used. However, that is no longer the case. I have been able to find no evidence of any further archaeological investigations of the area by Sunoco. This matter has been brought to the attention of PHMC and USACE. Prior to issuing permits, a detailed archaeological investigation needs to be conducted and taken into account to protect these historical resources.

[http://files.dep.state.pa.us/ProgramIntegration/P A%20 Pipeline%20Portal/Mariner EastII /Chapter%20102/SCRO%20Response/PPP%20Cultural%20PII%20Sites%2oand%20Avoidance %20Plans%2002031z.pdf](http://files.dep.state.pa.us/ProgramIntegration/Pipeline%20Portal/Mariner%20EastII/Chapter%20102/SCRO%20Response/PPP%20Cultural%20PII%20Sites%20and%20Avoidance%20Plans%202031z.pdf)

Response

- a) Sunoco completed HDD Hydrogeologic Reevaluation Reports for the North Pottstown Pike Crossing and the East Swedesford Road Crossing. These studies reviewed and characterized the geology in these areas. The reason for the proposed changes to construction techniques is to reduce the risk of geologic hazards and potential water well quality impact from pipeline construction in karst geology, by eliminating the use of HDD methods. Aqua PA has directly requested Sunoco to avoid the use of HDD near its Hillside Drive wells in Exton, PA.
- b) Risk of construction in karst areas is not limited to pipeline construction; constructing any kind of structure or infrastructure that involves short or long-term localized ground disturbance in karst geology poses risk; risks are not specific to pipelines. Most potential impacts of construction in karst areas are valid for any construction projects, including roads, schools, houses, shopping/business areas, and stormwater management systems. Sunoco has selected construction methods with the intent of not creating impact issues with karst.
- c) With respect to pipeline safety, see the response 3-a.
- d) Sunoco has indicated that it does not use herbicides or pesticides along its ROW, and will not use them in these areas.
- e) With respect to the comment on Sunoco's Void Mitigation Plan for Karst Terrain, see response (b) to comment 8-a.
- f) With respect to the three archaeology sites that were identified during cultural resources surveys for the Project, the proposed changes to construction methods will still continue to avoid impacts to and protect these sites. The northernmost site is adjacent to proposed workspace and will not be disturbed; it is off-ROW and will be protected. The other two sites will be avoided by use of the proposed conventional bore and FlexBor in these locations, where the pipeline will be installed beneath the sites and no surface disturbance

will occur. All three sites are part of Sunoco's cultural resources avoidance plans, which includes exclusion from construction disturbances, construction-phase monitoring by a qualified professional archaeologist, and documentation of the monitoring and avoidance.

9. COMMENT

I strongly urge you to reconsider the Mariner East II pipeline. I live in Exton, PA where work on the pipeline has just been stopped related to the most recent (of many) catastrophe, multiple new sinkholes. This is the Earth's way of saying STOP! The ground is not compatible here for what Sunoco wants to do! Had the proper studies been required and the earth checked this would have been known. Instead Sunoco causes these massive sinkholes, does not report them, and then proceeds to fill them with concrete!

Another major concern of mine is the pond and streams located in Meadowbrook Manor. My house is located along the pond. It is such a beautiful site to see with many different birds, cranes, fish, turtles, ducks, geese, and beautiful trees. This beautiful site will soon be destroyed by Sunoco and their complete disregard for people, the earth, environment, and wildlife. The trees also help to provide a buffer to the Exton Mall parking garage and public bus stop. My children, along with many neighborhood children use this area to fish, play and explore. They are devastated at the thought of not having this area anymore! Their childhood past-time will be ripped away from them!

It has been said in other communities where the work has already started that you can't even walk outside without smelling the horrendous fumes from idling Sunoco vehicles and work vehicles. This is a huge community health issue! My child has asthma, this is surely going to affect his already compromised airway. Who is going to help us years from now when people develop side effects such as COPD or lung cancer from breathing in all of these toxic fumes! Has anyone even thought about community health in the future related to Sunoco's pipeline work? Now let's talk about the fact that our water source is most likely going to be impacted, especially given the track record of Sunoco contaminating water sources! How can anyone turn a blind eye to this company and all of the destruction they have caused, do cause, and will continue to cause! I urge you to put a stop to this pipeline. It is evident how careless Sunoco is with their work and how they have a complete disregard for human life and the environment. It is evident that all they care about are the dollar bills going into their pockets. Please, please put a stop to this company and the environmental disasters they are causing. Let me remind you of the DEP's mission statement "The Department of Environmental Protection's mission is to protect Pennsylvania's air, land and water from pollution and to provide for the health and safety of its citizens through a cleaner environment. We will work as partners with individuals, organizations, governments and businesses to prevent pollution and restore our natural resources". Clearly Sunoco is and has violated this. Why else would you fine them over \$12 million?

Response

- a) With regard to sinkholes, Sunoco has developed and has been implementing a project-specific Void Mitigation Plan for Karst Terrain and Underground Mining, which includes pre-construction review and consideration of construction methods in karst areas, and also includes response measures for addressing and correcting sinkholes in general, and specifically, addressing any impacts of sinkholes on existing buried infrastructure (including Sunoco's existing 8-inch pipeline) and aboveground structures. In

addressing/correcting any sinkholes, Sunoco has followed the provisions of its plan by implementing the accepted measures.

- b) With respect to the pond and streams at Meadowbrook Manor, see responses 4(a), 5-a(a), 5-a(c), and 7(c). The pond is outside of the project workspace areas and will not be disturbed by construction. Following completion of construction, the area used for construction will be restored and reseeded, and children will be able to resume play.
- c) With respect to vehicle idling and human health, pipeline construction activities will be short term and temporary in all locations, and should not endanger human health from breathing either outdoor or indoor air in its vicinity. In addition, Act 124 of 2008 (effective February 6, 2009) prohibits owners and drivers of any diesel-powered vehicle with a gross weight of 10,001 pounds or more engaged in commerce from idling the engine for more than 5 minutes in any continuous 60-minute period, except as provided in the Act.
- d) With respect to impacts to water sources, see response (b) to comment 5-a.

10. COMMENT

Major Modification 1 East Swedesford Road-HHD-S3-381: This Pipeline runs to MEADOWBROOK MANOR PARK (Exton Park), through Meadowbrook Manor Civic Association & Neighbors, through Two or more Streams in our Neighborhood which are low-lying wetlands as it is already. Our Neighborhood has lost Two houses already and One more Home is going to be Removed due to Flooding. The Loss of more Trees and Open Digging will Enhance Clean Air & this Problem! A child in the Exton Station Area where open Digging is, is in the University of Penn. in Philadelphia, Pa. Sunoco is Threats to the Community and to the Public Library & other Local Businesses. The disregarding of Permits by Sunoco and Regulation & recent Notices of Violations are clear dangers of Public Safety. Our Roads & Streets Flood now. We Are Wetlands! What Don't the DEP understand?

Come See Our Problem!

Help Us!

We, the residents of Meadowbrook Manor in Exton, PA (West Whiteland Township), have grave concerns about the proposed changes to the Mariner 2 pipelines through our neighborhood. Many of our homes are directly affected by the project, and all of our homes lie within the 1200-foot area of increased danger called the "Blast Zone." The biased information presented on short notice by the oil company does not satisfy our right to know that our safety and quality of life will be respected. The recent proposed changes would increase the negative impact to our community, including the following ways:

- Damming and trenching through the floodway in a SFHA presents risks to wetlands, streams, and related ecosystems (e.g. trout runs), and may radically alter the drainage patterns of our neighborhood and the larger township water management plan.
- Tree coverage in the wetlands by the Exton Mall would be removed as stated in the trenching plan. Trees are maintained as a buffer between our neighborhood and the Exton Mall commercial area, and restoration (if even possible) would take many years, leaving our neighborhood exposed to light and noise pollution.

- Vibration, noise, and waste related to trenching would adversely affect neighbors and businesses. As an example, foundations and interior surfaces show damage in adjacent communities where trenching has occurred.

Given HDD is no longer an option, finding an alternate path would avoid the abovementioned environmental issues and reduce the risk profile in case of leak or possible damage to the pipelines in this highly populated area. Please add my name to the list of concerned parties that want to ensure our local agencies respond to events in their jurisdictions that affect the lives of our residents. Construction in our area must be halted and the comment period must be extended to allow for further study and consideration.

I have a few pictures from our flooding (attached: 6 images of local flooding).

Response

- a) With respect to concerns about flooding in the vicinity of Meadowbrook Manor neighborhood, construction through the floodplain/Special Flood Hazard Area (SFHA) and altering drainage patterns, see response 5-a(a). Some short-term trenching would occur in the floodplain, but the pipeline would be installed across the majority of the floodway and floodplain (including Valley Creek/S-B81 and the forested wetland B71) using a conventional bore/trenchless construction method, avoiding all disturbance to the wetland (avoiding all trees), stream, and any associated trout runs. Neither the stream nor floodway/floodplain are proposed to be dammed as part of construction.
- b) With respect to “blast zone” and pipeline safety, see the response 3-a and 7(b).
- c) The he potential effects of vibration, noise, and waste from trenching and construction activities falls outside the Chapter 102 and Chapter 105 application review process. Nevertheless, Sunoco must abide by any applicable laws, regulations and local ordinances regarding these matters. Any effects should be short-term and temporary. In the event damage should occur to personal property as a result of construction, Sunoco has indicated that it intends to work directly with the landowner to remedy the situation.
- d) With respect to alternative routes, see response to 4(b).
- e) With respect to construction techniques and risks, the proposed construction methods are the same methods that have been widely and successfully used in this area (working in close proximity to homes, public facilities, and businesses) for installing the existing water, sewer, and natural gas pipes. As noted in response 6b, there are various buried utility pipelines (water, sewer, natural gas, natural gas liquids) throughout Exton and neighboring towns in Chester County, serving various developments including homes, businesses, the Chester County Library and the Exton Square Mall. These existing infrastructure features demonstrate that installation of buried utilities without undue impact on the land (including buildings/structures and recreational areas), water supplies, existing infrastructure, and public safety) is feasible.

11. COMMENT

Major Modification 2 North Pottstown Pike- HDD-S3-370: Meadowbrook Manor Civic Association & Neighbors, through Two or more Streams in our Neighborhood witch are Low

Lying Wet Lands as it is already. Our Neighborhood has lost Two houses already and One more Home is going to be Removed due to Flooding. The Loss of more Trees and Open Digging will Enhance Clean Air & this Problem! A child in the Exton Station Area where open Digging is, is in the University of Penn. in Philadelphia, Pa. Sunoco is Threats to the Community and to the Public Library & other Local Businesses. The disregarding of Permits by Sunoco and Regulation & recent Notices of Violations are clear dangers of Public Safety. Our Roads & Streets Flood now. We Are Wetlands! What Don't the DEP understand?

Come See Our Problem!

Help Us!

We, the residents of Meadowbrook Manor in Exton, PA (West Whiteland Township), have grave concerns about the proposed changes to the Mariner 2 pipelines through our neighborhood. Many of our homes are directly affected by the project, and all of our homes lie within the 1200 foot area of increased danger called the "Blast Zone." The biased information presented on short notice by the oil company does not satisfy our right to know that our safety and quality of life will be respected. The recent proposed changes would increase the negative impact to our community, including the following ways:

- Damming and trenching through the floodway in a SFHA presents risks to wetlands, streams, and related ecosystems (e.g. trout runs), and may radically alter the drainage patterns of our neighborhood and the larger township water management plan.
- Tree coverage in the wetlands by the Exton Mall would be removed as stated in the trenching plan. Trees are maintained as a buffer between our neighborhood and the Exton Mall commercial area, and restoration (if even possible) would take many years, leaving our neighborhood exposed to light and noise pollution.
- Vibration, noise, and waste related to trenching would adversely affect neighbors and businesses. As an example, foundations and interior surfaces show damage in adjacent communities where trenching has occurred.

Given HDD is no longer an option, finding an alternate path would avoid the abovementioned environmental issues and reduce the risk profile in case of leak or possible damage to the pipelines in this highly populated area. Please add my name to the list of concerned parties that want to ensure our local agencies respond to events in their jurisdictions that affect the lives of our residents. Construction in our area must be halted and the comment period must be extended to allow for further study and consideration.

I have a few pictures from our flooding (attached: 6 images of local flooding)

Response

This letter is the same letter as written by Mr. Jim Carr regarding the East Swedesford Road HDD (S3-381). It appears that many of the site-specific comments, such as those related to tree coverage in the wetlands by the Exton Mall and Meadowbrook Manor area, are specifically relevant to the East Swedesford Road modification, not the North Pottstown Pike modification as the letter is titled. Those site-specific issues applicable to East Swedesford Road are addressed in the comment letter 10 response.

- a) With respect to concerns about flooding in the vicinity of the ROW in the floodplain/ Special Flood Hazard Area (SFHA) (which is on the west side of the North Pottstown Pike), all three stream crossings within the floodplain would be constructed using a conventional bore method, as opposed to a dam and trench method. Some short-term

trenching would occur in the floodplain/floodway, but this will be short-term and temporary, and upon completion the areas will be restored to preconstruction elevation and contour, reseeded and revegetated. No new pavement or aboveground structures would be sited in this area, and after the pipeline is installed, the ROW and workspaces would be restored to their preconstruction elevations and contours, and revegetated. Adverse impacts to flood management related to the floodplains west of North Pottstown Pike are not anticipated as a result of construction or operation of the project.

- b) With respect to “blast zone” and pipeline safety, see response 3-a and 7(b).
- c) The potential effects of vibration, noise, and waste from trenching and construction activities falls outside the Chapter 102 and Chapter 105 review process. Nevertheless, Sunoco must abide by any applicable laws, regulations and local ordinances regarding these matters, and any effects should be short-term and temporary. In the event damage should occur to personal property as a result of construction, Sunoco has indicated that it intends to work directly with the landowner to remedy the situation
- d) With respect to alternative routes for the North Pottstown Pike area, see response 1(b).

12. COMMENT

Comments Regarding SWEDESFORD ROAD CROSSING, PADEP SECTION 105 PERMIT NO.: E15-862 PA-CH-0219.0000-RD and PA-CH-0219.0000-RD-16 (SPLP HDD No. S3-0381): Mariner Pipeline should not be installed in the Swedesford, Chester County Library area. This area is a flood plain. Any drilling and movement of dirt will worsen the flooding in this area. Drilling and movement of topsoil will weaken topography and Water will seep into the Library and surrounding homes thereby weakening or crumbling foundations.

The Karst geology that is present in this area will cause ground water to be displaced and will result in sink holes and lower water table for wells. More geological testing needs to be done to assure the homeowners and the library that they will not have sinkholes on their property.

Trees and shrubs will be removed that were planted to absorb water. Flooding will occur in the holding pond and will overflow into nearby homes and surrounding land eroding topsoil and saturating the Flood Plain further. Sunoco has not submitted a plan to show how the flooding of this pond and neighborhood will be avoided. Sunoco must also submit a plan on how they will avoid a flooding situation in the Valley Creek that runs into the pond, they previously said they would dam it? Where will that water go?

Sunoco had until August 9 to come up with an alternative route. Where is the evidence that this was studied?

What evidence has Sunoco submitted that they contacted homeowners or Aqua within 450 ft to be sure that there aren't any wells or aquifers that will be impacted?

Response

- a) With respect to tree clearing and construction in the floodplain: Near the Chester County Library includes Valley Creek (stream S-B81), a forested wetland (B71), and a large floodway/floodplain area which extends throughout much of the developed and undeveloped areas of this part of Exton. The proposed conventional bored crossing and its workspace would avoid clearing and disturbance in the forested wetland and Valley

Creek, and would require very limited clearing of trees in the floodplain. No new pavement or aboveground structures would be sited in this area, and after the pipeline is installed, the ROW and workspaces would be restored to their preconstruction elevations and contours, and revegetated. Adverse impacts to flood management related to Valley Creek behind the library are not anticipated as a result of construction or operation of the project.

- b) With respect to karst geology and sink holes, see responses 2(a), 4(c), and 5-a(d).
- c) With respect to alternatives, see response 4(b).

13. COMMENT

I am writing to express my concern over the Mariner East pipeline and of the segment that passes through Exton around Rt 100 and the Chester County Library. I honestly am concerned about the entire route that traverses across Chester County but will focus on the Exton area for now. First, this area is very populated with residences, businesses, shops, parks, etc. Regardless of whether Sunoco would do HDD or open trench, the risks to this heavily populated area are too high because any leak would be catastrophic.

Second, the area consists of mature trees and wetlands and trenching through this area will destroy the land and cause flooding and erosion amongst the residences and businesses. The area already tends to flood with heavy rains.

Third, since this area is of a karst geology, the likelihood of sinkholes is high as we have already witnessed in West Whiteland Township. In addition, the danger of pipes bending is also increased which just makes the risks of an accident even more enhanced.

I could never understand why Sunoco was allowed to lay this pipe through such densely populated areas, and I feel that it was the easy way out for them since they already had an easement for other pipes. The Mariner East 1 pipeline should have never been repurposed with an HVL as it is over 80 years old and was never intended for this type of gas. This also needs to be halted because the risks are way too high.

Thank you for your consideration.

Response

Comments have been addressed in previous responses, as relevant to the permit modifications under review. Specifically, construction in heavily populated areas and construction methods are addressed in responses 3-a, 10(e), and 7(a); impact on wetlands, mature trees, and flooding is addressed in responses 4(a), 5-a(a), 5-a(c), 10(a), and 11(a); and karst area issues and sinkholes are addressed in responses 1(a), 2(a), 4(c), and 5-a(c).

14. COMMENT

I have lived in West Whiteland township for 23 years, and currently own a home in the Exton Station development on Durant Court.

The construction of the ME2 pipeline has negatively impacted my daily life and destroyed the former beauty of my neighborhood. Mature trees have been cut down, construction work begins early and ends late at night, water disturbed by drilling streams down the road even when there is no precipitation, and dangerous sinkholes have opened spontaneously behind houses on my street. Geological studies indicate that the karst formation in this county is unsuitable for HDD

drilling, yet Sunoco Logistics is permitted to continue their work. It is frightening to realize that the ground under and around my home is unstable, and even more chilling to realize that the concerns and lives of the people who live here don't seem to matter. The local environment has been and continues to be damaged, property values are plummeting, and people's lives are at risk if work on ME2 is allowed to continue and the pipeline becomes operational. Please do whatever you can to stop work on Mariner East 2.

Response

Comments have been addressed in previous responses, as relevant to the permit modifications under review. Specifically, the proposed crossing methods have been adjusted to account for issues resulting from karst geology, as explained in response 2(a). Further, regarding karst and construction of underground utilities, see response to 10(e). Daily construction is timed in accordance with local regulatory restrictions and the construction duration is temporary.

15-a. COMMENT

The Mariner East 2 Pipeline presents unnecessary and harmful risks to the environment and the population where I live in the north side of West Chester, Pennsylvania, right near Exton. Specifically, it presents unnecessary and harmful risks to the Route 100/N. Pottstown Pike area, where more construction is planned.

It has become evident that these risks have not been properly evaluated by Sunoco and the PA DEP. That the Mariner East 2 Pipeline is going through a heavily populated area and has caused sinkholes and well water contamination is evidence of this irresponsible action.

Construction of the pipeline must not continue as currently proposed, as it is the responsibility of our state government to keep its citizens and lands safe.

Response

Comments are noted and have been addressed in previous responses, as relevant to the permit modifications under review. Specifically, see the responses to comment 3-a, 10, and response 5-a(b).

15-b. COMMENT

To the Pennsylvania Dept of Environmental Protection:

Below are my comments to the DEP on Sunoco's two requests for permit modifications on the Mariner East 2 pipeline.

I am writing to request that the DEP deny Sunoco permit modifications on the Mariner East 2 pipeline. Trench drilling will destroy private properties and public lands, wetlands, ponds, streams, and wildlife in the pipeline's path. Sunoco has already caused tremendous damage to land and property by drilling in the geologically unstable area in and around West Whiteland Township. The method of drilling they now propose will further endanger the environment and the citizens of Pennsylvania living near the pipeline. Allowing volatile and combustible chemicals to flow only 4' underground in a densely populated area is unconscionable.

I ask the Pennsylvania Department of Environmental Protection to live up to its name and protect the environment in the Commonwealth of Pennsylvania by denying these permits.

Response

Comments have been addressed in previous responses, as relevant to the permit modifications under review. Specifically, see responses 1(a), 2(a) related to the proposed plans for construction techniques, response 3-a and 10(e) related to public lands and construction of underground utilities in this area/geology; and responses 4(a) and 5-a(a) related to wetlands and streams.

16. COMMENT

As a resident of Chester County and a longtime advocate of wise environmental planning I am concerned about locating the pipeline in an unstable karst geological area posing a risk to the aquifer and water of nearby residents and institutions. The Exton area is too densely populated an area to be installing pipe that could be compromised by the limestone and threaten local water ways. Trench drilling is not an option either because it will require the clearing of trees next to the library and wetlands, especially when there is no benefit to local or state residents from the pipeline. This “Public Utility” does not really serve the public in any way.

Response

Comments have been addressed in previous responses, as relevant to the permit modifications under review. Specifically, see responses 1(a), 2(a), and 10(e) related to the specifics of the proposed plan and construction of underground utilities in this area/geology; and responses 4(a) and 5-a(c) related to wetlands and tree clearing next to the library.

17. COMMENT

Mariner East Swedesford Road Crossing (West Whiteland Township)

PADEP Permit# E15-862

Mariner East North Pottstown Pike Crossing (West Whiteland Township)

HDD S3-0370/ DEP Permit E 15-862

Sunoco Logistics’ intended installation of Mariner East 2 (ME2) and Mariner East 2x (ME2x) adjacent to Mariner East 1 (ME1) within Swedesford Road Crossing and North Pottstown Pike Crossing is inappropriate and potentially catastrophic for four reasons: people, property, soil, and water. In their HDD reevaluation report pertaining these crossings dated November 6, 2017, Sunoco states that, “...no practicable re-route option lies to the north or south of the proposed route that would not ultimately cross these streams (meaning West Valley Creek and its tributaries). In addition, due to the developed congestion of the area including residences, businesses, roads, and other utilities, there are no practical reroutes for the pipeline in this area.” Sunoco’s arguments against re-routing are exactly why they shouldn’t be placing pipelines within these permit areas that are among the most densely developed in West Whiteland Township. ME1 dates from the 1930’s when Chester County was rural and sparsely developed. Locating ME2 and ME2x next to ME1 is illogical and serves only as a convenience to Sunoco. People: If approved, Swedesford Road Crossing and North Pottstown Pike crossing are areas where pipelines will transport volatile natural gas liquids (NGLs) in extremely close proximity to: densely populated residential neighborhoods; commercial centers; medical facilities, including a satellite branch of Main Line Health located in Exton Square Mall and an assisted living facility; Meadowbrook Manor Park, a township-leased 5-acre park with 2 little league fields, 2 tennis courts, and playground equipment; and the Chester County Library. People live here, shop here, dine here, get medical care here, play here, and spend time seven days per week in our very popular library.

Property: Home ownership has been called “the Great American Dream.” This dream for many has become a nightmare because Sunoco used eminent domain to force residents to sign easements allowing ME2 and ME2x to follow the path of ME1. Homes have been compromised by inadvertent returns and sinkholes, trees and plantings that, in many cases, serve as buffers to commercial areas have been removed, and wells have been tainted. Not only homes, but commercial, retail, medical, and recreational properties located within Swedesford and North Pottstown Pike Crossings are at risk.

Soil: Chester County’s karst geology is a well-documented fact thanks to the Pennsylvania Department of Conservation and Natural Resources and the Bureau of Topographic and Geologic Survey (See Kochanov, W.E. 2015, Sinkholes in Pennsylvania (2nd ed.) Kochanov states, “Information about sinkholes in Pennsylvania is pertinent to planning for future land development and for the protection of private and public property.” Our immediate area was known to be and has proven to be prone to sinkholes that risk lives and private and public property. In 2002, Chester County Library built an addition that is located within feet of the intended path of ME2 and ME2x. This is salient because during construction it was necessary to fortify its foundation with “grout” that was pumped through hoses by subcontractor Eastern Gunitite. I am acutely aware of this because the hose broke and spewed the cement composite on my home’s newly completed addition and roof. What happens to the integrity of the library and neighboring homes if sinkholes develop during trenching, boring, and HDD drilling in the fragile karst geology in the immediate area of Swedesford Road Crossing?

Water: Drinking water, first and foremost, is critically important to why ME2 and ME2x should be prohibited through the Swedesford Road Crossing. AquaPA, the company that supplies water to a wide radius in the Exton area, has wells located near the intersection of Swedesford Road and Hillside Drive. These wells are adjacent to Meadowbrook Manor Park. Sunoco was required to replace Horizontal Directional Drilling (HDD) through the park and farther south on its path because of the proximity to this vital public water supply. The question remains, “What impact will open trench digging, boring with a 6-inch impact drill, and removal of trees have on Aqua’s wells and the aquifer that supplies them?” Hundreds of homes, businesses, and retailers could be deprived of potable water!

The second water consideration is West Valley Creek, a stream that flows through the Meadowbrook Manor neighborhood that comprises much of the Swedesford Road Crossing. There are 42 homes in Meadowbrook Manor that sit in a floodplain. FEMA lists an additional 21 homes with a 1% chance of flooding. In total, 63 homes are at risk. Two homes were razed in recent years, and another currently is in the process of removal because of repeated flooding. West Valley Creek also passes by the Chester County Library’s front parking lot (which also lies in the floodplain) and Exton Square Mall. Another small strip mall and various shops are located immediately on the other side of the creek. To install Mariner pipelines, Sunoco proposes constructing temporary dams to divert the creek, presenting a clear and present flooding danger to our neighborhood, the library, the mall, and other businesses. West Whiteland Township Zoning Ordinance #438 prohibits Sunoco's proposed activity in an identified floodplain area. I implore you to deny permits for Swedesford Road Crossing and North Pottstown Pike Crossing in West Whiteland Township. Please protect the people, property, soil, and water within these areas.

Response

Comments have been addressed in previous responses, as relevant to the permit modifications under review.

- a) With respect to pipeline safety, see response 3-a.
- b) With respect to alternatives, see response 1(b) (North Pottstown Pike) and 4(b) (East Swedesford Road).
- c) With respect to karst geology and sinkholes, see response 1(a), 2(a), 4(c), and 5-a(d).
- d) With respect to tree removal, see response 5-a(c) (East Swedesford Road).
- e) With respect to Aqua wells, see response 5-a(b), and also, see response 10(e) regarding how the proposed construction methods are the same as the typical methods water lines and other buried utilities have been successfully installed in this region.
- f) With respect to floodplain/flooding, see responses 5-a(a) (East Swedesford Road) and 11(a) (North Pottstown Pike). Some short-term trenching would occur in the floodplain, but the pipeline would be installed across the majority of the floodway and floodplain (including Valley Creek/S-B81 and the forested wetland B71) using a conventional bore/trenchless construction method, avoiding all disturbance to the wetland (in which no trees will be cleared), stream, and any associated trout runs. Neither the stream nor floodway/floodplain are proposed to be dammed as part of construction.
- f) With respect to the West Whiteland Township floodplain regulations, the pipeline traverses both the floodways and the floodplains of Valley Creek and Lionville Run in West Whiteland. Sunoco received a confirmation from the West Whiteland Township Zoning Officer on February 9, 2016, that the proposed activity/Pennsylvania Pipeline Project is consistent with the township's floodplain ordinance in its zoning code, and with Federal Emergency Management Agency (FEMA) floodplain management program effective in the West Whiteland Township.

18. COMMENT

I beg you to please put a stop to the Mariner pipelines, both Mariner 1 & 2. These pipelines are extremely dangerous to our LIFE, our environment, & our world. They carry highly volatile gases, as never before, through our backyards, past schools, nursing homes, mall, & library. My family is in the blast zone! We are expected to escape upwind, 1/2 mile on foot, at any given time. Several young grandchildren stay with us.

This gas travels low to the ground, asphyxiating in three minutes, or igniting, for the purpose of making more plastics in EUROPE. Would you want this monster in your backyard?

Sunoco has had many violations, spills, violating private wells, & most recently, dangerous sinkholes in our community. Our soil contains limestone, not suitable for this pipeline.

We will be ousting politicians who will not help us stop this project, through our voting, from Gov. Wolf on down. We are angry! Please be responsible for LIFE and vote no to the pipeline. We are counting on YOU!

Response

Comments have been addressed in previous responses, as relevant to the permit modifications under review. Specifically, see responses 3-a, 7(a), 4(c), 5-a(d), 10(e), 1(a), and 2(a).

19. COMMENT

Permit E15-862 Swedesford Road crossing. PA-CH-0219.0000:

- 1) Sunoco has not provided the DEP with any response to looking into an alternative route. There is open land Northeast of Exton. It makes no sense to put the pipeline through a shopping center, nursing home, library when open land is available.
- 2) Sunoco has not notified the homeowners within 450 feet of the pipeline. They changed it to 150 feet against the original agreement.
- 3) Meadowbrook Manor is a wetlands. Sunoco has not explained whether the damming and diversion of valley creek will aggravate the extreme flooding which has effected Meadowbrook in the past will offer a credible plan.
- 4) Flex Bore is a new technology and there is no evidence that it will minimize risk of contamination of the water supply and Aquafer where we get our water.
- 5) Many residents enjoy the library and the trees around it to relax. Sunoco does not have the right to take the trees down to make a construction site.
- 6) The DEP must make sure if this pipeline is constructed in a manner which minimizes risk to the people of this community.

Response

- a) With respect to alternatives to the East Swedesford Road crossing location, see response 4(b).
- b) With respect to notifications to landowners within 450 feet, see response 7(e).
- c) With respect to Meadowbrook Manor flooding, see response 5-a(a). Some short-term trenching would occur in the floodplain, but the pipeline would be installed across the majority of the floodway and floodplain (including Valley Creek/S-B81 and the forested wetland B71) using a conventional bore/trenchless construction method, avoiding all disturbance to the wetland (in which no trees will be cleared) and stream. Neither the stream nor floodway/floodplain are proposed to be dammed as part of construction.
- d) With respect to FlexBor and minimizing the risk of impacts to water supply, see response 5-a(b).
- e) With respect to tree removal around the Chester County Library, see response 4(a), 5-a(a), 5-a(c), and 7(c).
- f) With respect to pipeline safety, see response 3-a.

20. COMMENT

I am writing to provide reasons why Sunoco should not install Mariner East pipelines carrying hazardous, highly volatile materials through the residential/ commercial/ recreational heart of West Whiteland Township. My opposition is based on several factors. First, is the human and commercial ecology of West Whiteland Township. Second, is the geological and ecological

terrain that both science and common sense suggest is not appropriate for installation of hazardous pipelines. Third, is Sunoco's precedent of granting "alternatives" that reroute Mariner East for reasons less conspicuous and imperative than those evident throughout Chester County. Fourth, is evidence that Chester County deserves special attention and careful deliberation because the magnitude of its risk exceeds that of any other portion of this 320-mile pipeline project.

1. West Whiteland Township. In their "Horizontal Directional Drill Analysis Swedesford Road Crossing" (SPLP HDD S3-0381), Sunoco Pipeline L.P. acknowledges that West Whiteland Township "is a very developed area, having both residential areas (cul-de-sac and developments) and industrial/commercial areas (shopping malls and assorted businesses)." In fact, the short distance between Pottstown Pike and Lincoln Highway includes Little League fields, a playground, tennis courts, residential neighborhoods, Chester County Library, Exton Mall, two additional shopping centers, a business center, and a senior living facility. This is, without a doubt, the worst location for pipelines transporting what the federal government classifies as "hazardous, highly volatile liquids." The general public's health, welfare, and safety is placed at the highest level of risk by using this route.

2. Geology and ecology in the area of the Swedesford Road Crossing. West Whiteland Township sits on karst geological formations. Disruptions of these formations, with their pockets and fissures, create sinkholes and contaminate water supplies. In fact, Mariner East has already caused multiple sinkholes and contaminated water supplies in West Whiteland Township. Aqua America's Hillside Drive production well is within yards of the proposed pipeline route. Sunoco already changed its installation methodology because of the danger posed to our aquifer. Additionally, this proposed route traverses a wetland, West Valley Creek, and an identified FEMA floodplain. Sunoco's revised installation plan (open cut, flex-bore, and HDD) requires damming West Valley Creek in an area categorized as a 100-year floodway. Sunoco's plan states "an open cut workspace with a width of 75 feet will be required to accommodate pipeline and provide sufficient space for trench excavation, spoil storage, and allowing the pipeline to be installed with sufficient separation from the existing 8" pipeline for integrity management." In the process of crossing this area, Sunoco would destroy mature trees, vegetation, and the stream's riparian buffer that serves as a sanctuary for wildlife.

If Sunoco's current proposal is approved, these pipelines, with the capacity of transporting tens of millions of gallons of hazardous, highly volatile liquids on a daily basis, will "require a minimum of 48-inches of cover over the installed pipeline beneath the bottom of the watercourse." This is dangerous and unacceptable for such a densely developed, well-used hub.

3. Alternative routes. Sunoco's plan follows the path of Mariner East 1, an 8" steel pipe originally laid during 1932 to transport petroleum products – not highly hazardous liquefied gases – from the Marcus Hook refinery for use in Western Pennsylvania. They claim they want to follow the course of this old but "repurposed" line so they will not create a new "green field." This appears to be another attempt to make things simple for themselves while ignoring the welfare and wishes of the public.

There is ample precedent for the establishment of alternative routes. Sunoco Pipeline L.P.'s Pennsylvania Pipeline Project Alternatives Analysis (revised March 2016) presents many examples of minor and major route alternatives that were implemented. For instance, the Cresson-Altoona Southern Bypass (approximately 20 miles) was adopted to avoid "the heavily developed City of Altoona and the Allegheny Portage Railroad National Historic Site." The Blairsville Northern Bypass (approximately 5.5 miles long) was adopted to "avoid a highly

developed area including residential, commercial, and recreational uses (i.e. Chestnut Ridge Golf Course, etc.).” If Cresson-Altoona and Blairsville were granted bypasses, Exton would certainly seem worthy of consideration.

Alternatives are available in the area that would be less disruptive, damaging, and dangerous. For instance, the western section of Exton Park is an open space that would pose a reduced risk to the environment and the citizens of West Whiteland Township. It would also provide a direct link to the already positioned line along Ship Road.

4. Why Chester County deserves special attention and careful deliberation. Chester County is disproportionately at risk of harm from Mariner East. To highlight the extent of the danger, it is helpful to examine the maximum capacities of these pipelines and the number of people residing within their blast zone.

MARINER EAST PIPELINE CAPACITIES

The volume of an oil barrel is 42 gallons. Table 1 shows the quantity of natural gas liquids moving across Pennsylvania with Sunoco’s three pipelines operating at full capacity. Most of these materials (ethane, propane, and butane) are scheduled for export to European petrochemical manufacturers.

Table 1

Daily Capacity of Mariner East Pipelines

Pipeline	Diameter	Barrels	Gallons
Mariner 1	8-inch	70,000	2,940,000
Mariner 2	20-inch	450,000	18,900,000
Mariner 2X	16-inch	<u>250,000</u>	<u>10,500,000</u>
TOTAL		770,000	32,340,000

WHO IS AT RISK?

According to written testimony presented by the Middletown Coalition for Community Safety (November 2016), a pipe containing natural gas liquids (NGLs) that leaks and explodes creates a blast zone of approximately 1100-1500 feet, with thermal impacts (such as severe burns or property damage) up 2200-3000 feet.

FracTracker (December 2017) estimates that 105,419 Pennsylvanians live within Mariner East’s blast zone; almost one-third of these residents live in Chester County. Table 2 rank orders the five Pennsylvania counties whose populations are most at risk.

Table 2

Residents within the Blast Zone of Mariner East Pipelines

Rank	County	Number of residents
1	Chester	31,632
2	Delaware	17,791
3	Westmoreland	11,183
4	Cumberland	10,498
5	Berks	7,644

Further highlighting the county’s vulnerability, FracTracker found that thirteen (32.5%) of the 40 Pennsylvania public and private schools lying within Mariner East’s thermal impact zone are located in Chester County.

Response

Comments have been addressed in previous responses, as relevant to the permit modifications under review.

- a) With respect to alternative locations, see response 4(b).
- b) With respect to karst geology and sinkholes, see responses 2(a), 4(c), and 5-a(d).
- c) With respect to Aqua water wells, see response 5-a(b).
- d) With respect to the floodplain/floodway and wetland at Valley Creek, see responses 4(a), 5-a(a), 5-a(c), 7(c), and 10(a).
- e) With respect to “blast zone” and pipeline safety, see response 3-a and 7(b).

21. COMMENT

You stated twice that you have sent our comments on to the Southeast DEP Office for review. I have heard nothing. Could you please give me the name and telephone number of someone I can speak to regarding the proposed HDD on our property? (See email chain “Re Mariner East 2 - Pennsylvania Pipeline Project”)

In addition to the certified first class letter we sent you on February 1, 2018, we would also like to email you our questions and comments, as requested, in response to the January 24, 2018 correspondence received from Sunoco Pipeline L.P., regarding the proposed horizontal directional drilling (HDD) required to advance their Mariner East 2 Pipeline Project. As you may be aware, Sunoco has filed revised construction plans for two stretches of the Dragonpipe (Mariner East 2) and there is a public comment period ending on February 6, 2018. One of the two stretches with revised construction plans is in Chester County and the other is in Delaware County, along Valley Road (Media Twp.), south of Sleighton Park, which is where we live (No. 226).

Please note that we are submitting these comments as laypeople, unfamiliar with the technical terms, details and scientific/engineering knowledge required for a project of this scale and complexity – as used in the report – and as homeowners whose private well is located within 150-200 feet (not the 490 feet as specified in the report) of the proposed drilling area based upon the engineering plans provided. On the Well Location Map our well is marked as WL-08102017-604-01 and from the scale of the map can be seen to be approximately 150 feet from the proposed HDD. We measured this ourselves to confirm the mistake by Sunoco.

Additionally, our son has T1D (Type 1 diabetes) which, unlike type 2 diabetes (a metabolic disorder), is an incurable, life-threatening auto-immune disease. This results in him having a weakened immune system, making the supply of fresh, clean, potable water necessary to his continued health and wellbeing.

There are several things that we find troubling about these plans, but we are most perturbed by the cavalier attitude that Sunoco are taking toward local wells and aquifers.

As mentioned previously, our private well is located approximately 150 feet from the proposed pipeline not 490 feet as incorrectly stated on the Well Location Map in the report. This alone highlights Sunoco’s failure to accurately record private well details and is, in itself, an indication

of the lack of attention that has gone into these plans. For the public record please note that our well is 150 feet deep with the pump set at 100 feet, according to our well company, Powell Pump and Well Drilling of Aston, Pa. Based upon our interpretation of the proposed engineering drawings, our well and pump is within the drilling zone. This clearly causes us some concern when reviewing the discussion regarding inadvertent returns (or IR's as identified by Sunoco) regarding groundwater management. My review of the geological information provided concludes that our groundwater is likely originating from within the "fractures and joints that provide secondary porosity in bedrock". The report mentions that the potential exists that "turbid water ... or dilute drilling fluids" may be "discharged to the waters of the Commonwealth" and that Sunoco DOES anticipate that "HDD activities could affect individual well use during active drilling for wells located within 150 linear feet" of the HDD, which would include OUR private well.

Additionally, the information provided by Sunoco indicated that "drilling fluids under pressure migrated into open fractures at depth within bedrock and traveled to the surface" ... and "these discharges, if large enough, can affect the local water table and possibly affect domestic water supply yields".

These issues above can produce two kinds of problems. First, our wells can be completely drained, just as they were at the Shoen Road site in Chester County and the Tunbridge site in Delaware County. Secondly, as the water from the aquifer drains out from the drill hole, it could pour into the Rocky Run wetlands, carrying contaminants with it.

Sunoco does not properly address either of these issues. Our concerns are further confirmed by the development of a "contingency plan" to address these potential technical issues. Given this technical information we must conclude that this drilling WILL affect the quality and potentially quantity of water within our private well. This begs the question regarding what safeguards will be employed to protect the quality of our private well and resulting groundwater? Additionally, what recourse does my family have WHEN, not IF the quality of my water is impacted by this drilling program, based upon our interpretation of the information provided? That is not specified or clearly stated within this Sunoco Report.

The document further mentions establishing "a communication and response plan to respond to complaints from well owners during HDD activities upon confirmation of any impact from drilling operations and provide alternative water supplies where needed (page 10, point 2). Isn't this like the proverbial closing of the stable door after the horse has bolted? As mentioned previously, our son has a weakened immune system and cannot tolerate any potential contamination or reduction of quality to our water. Additionally, it is not clear what constitutes "alternative water supply" and how this would impact our quality of life, let alone our property value. Please define the State's approach to this process, understanding that our interpretation of the proposed plan is that any water quality impacts will be mitigated or addressed after they have been identified. We are formally noting on the record that a plastic tank or bottled water is NOT acceptable to us given our concern for the health and wellbeing of our son.

Although not germane to this technical discussion, it is not clear what legal recourse we have should this drilling activity impact our well. We understand that our well is likely constructed within some type of fractured rock. The Sunoco document mentions the use of drilling fluids and grout which, it appears to us as laymen, are designed to be injected into the rock to impede any lost water, which, in our minds, could dry within the fractures providing water to our well, potentially affecting the quantity and quality of water that is provided by our well.

It is also not clear what health risk is associated with this drilling process, let alone the material that may be transported within and through the pipelines. We have seen news reports from other areas where there have been fires, explosions and other issues associated with this drilling methodology and gas/oil transport. We would like to understand what safety measures are being employed to protect the health and safety of our family and neighbors, as that is not clearly stated or discussed.

Last but not least, Sunoco was required by its August 9 settlement agreement to consider alternative routes for this pipeline. This is a legal commitment. In every report so far, including these two for the Chester County and Delaware County stretches, Sunoco dismisses the possibility of other routes by stating they are “not practicable” without supplying evidence of any serious alternative consideration.

We respectfully request serious consideration of our concerns and await your response to our comments.

Response

This letter appears to be a comment on the HDD Reevaluation Report documents for the Valley Road HDD in Delaware County. The letter focuses on a stretch of pipeline in Delaware County encompassed by the Valley Road HDD – and issues related to the homeowner’s well location along that HDD is not the subject of this public comment period (for the requests for permit modification for the North Pottstown Pike and East Swedesford Road areas in Chester County). This letter does not specifically address the two locations involving the requested permit modifications in question.

22-a. COMMENT

Where is the professional, objective risk assessment? How do you know what the dangers are? How do we, the citizens, know what the dangers are?

I insist as a longtime resident of West Whiteland Township that all work is halted on the construction of the Mariner 2 -2x pipeline and the shutting off of Mariner 1 until there is a professional, objective risk assessment.

Do not wait until there is loss of life. Do not wait until there is more water damage. Do not allow more negative environmental issues.

These pipelines must be stopped and removed from high impact areas, and in particular West Whiteland Township unless there is proof of an “acceptable” level of “danger”.

No risk assessment, no pipeline. Very simple.

Response

Comments have been addressed in previous responses, as relevant to the permit modifications under review. Risk assessments related to construction techniques for these areas have been completed by professional geologists and drilling specialists. Risk assessment has been completed to the extent required by the permit review process and as further requested by PADEP in data requests. Also see response to Comment 3-a.

22-b. COMMENT

Swedesford Road Crossing SPLP HDD No. S3-0381

North Pottstown Pike Crossing SPLP HDD No. S3-0370

1. SLOPPY PERMIT MODIFICATION REQUEST

I don't know how the DEP can properly evaluate Sunoco Logistic's Chapter 102 Permit Modification request, nor how the public can read their revised plans and comment in a thoughtful manner. Their modification request and replies to DEP's request for more information is cobbled together and haphazardly prepared. Is the way in which this request and sloppy replies to DEP are provided an indication of how they intend to implement their physical work through the heart of this sensitive flood zone and wetland? Yes it is. Based on their past behavior. DENY the PERMIT due to improperly prepared paperwork.

2. AQUIFER CONTAMINATION

Is there a short HDD section in the new plan, or not? Is FlexBor just really HDD that doesn't go as deep? Is FlexBor an appropriate methodology near the Aqua wells and wetlands? It still uses drilling fluid in the drilling phase. Why do we have any reason to believe that any type of drilling or boring isn't an issue in the Karst geology? How will all the construction in the Karst geology affect our aquifer that feeds ALL THE HOUSEHOLDS in Meadowbrook Manor AND BEYOND.

A DEP fine is not going to fix a contamination of our aquifer. I ask that you stand by your mission statement and protect us from this egregious corporation.

Do not permit Sunoco Logistics to use Meadowbrook as its guinea pig. Deny these permits based on the high probability of Aqua public well contamination.

3. STREAM CROSSING

Sunoco's plans as to how they will cross the streams are vague and contradictory. You cannot approve the permit without more detailed information about how Sunoco intends to cross the affected streams per Chapter 102.

4. EROSION AND SEDIMENT CONTROL

The wetland being affected by Sunoco's construction is located at the lowest spot in this area. Any erosion or sediment will end up here: polluting the streams and pond receiving any runoff; impacting the variety of wildlife; Interrupting the ecosystem.

5. FLOOD ZONE

Portions of Meadowbrook Manor and the Sunoco construction zone are a designated FEMA flood zone. POND B-1

breached in an overnight storm during April 2018. This sensitive area cannot tolerate the removal of any trees or riparian buffer. Their removal can only increase the runoff during storms and extend the flooding to an increased area.

The impaction of soil by the heavy construction equipment will also increase the runoff. This affects on this Flood Zone is enough reason to DENY THE PERMIT.

Response

See response 5-c.

23-a. COMMENT

Please do not approve the open trench of Mariner East through West Whiteland.

Alternative routes: Sunoco was required (by the August 9 agreement) to consider alternative routes to the one initially proposed, but they never have. In every report they file, they claim that there is “no practicable alternative” but they give no indication of actually considering any alternatives. There is open land to the northeast of Exton that would make a better route, with far less damage to the natural environment and far less risk to people. Sunoco needs to prove why its proposed route is preferable.

Notification of landowners and danger to wells: The August 9 agreement also required Sunoco to provide notice of their plans to property owners within 450 of the pipeline alignment. Sunoco arbitrarily decided it didn’t need to do this because, in its opinion, its new approach eliminated the risk to wells. But there is no evidence that the new approach won’t hurt wells, and Sunoco has no way of even knowing where some of the wells are if it doesn’t contact the local landowners. The requirement to contact all owners of land within 450 feet of the alignment needs to be enforced.

Geotechnical analysis: Sunoco claims that existing geophysical studies and its few test borings in the area are sufficient to be confident that sinkholes and other karst-related problems are unlikely. But Sunoco’s own geologists, in the report attached to the plans, felt that more testing was needed to better understand the karst geology. Subsidence (sinking of the land) is a very real possibility in this karst landscape, and bending of the pipeline from subsidence could lead to disaster. Sunoco’s construction has already resulted in sinkholes.

The karst landscape also means that water supplies in this area tend to be interconnected, and that increases the risk of contamination and other disruption.

The DEP must insist that Sunoco do more geotechnical surveying to understand what is required to avoid these problems.

Risk of human injury or death: While the DEP’s primary mission is the preservation of the environment, it must also take seriously the risk that this pipeline poses to nearby residents if it becomes operational. A clean environment is essential to human health, and that is certainly critical; but its importance is secondary when human life itself is at stake. The DEP needs to make sure that this pipeline, if it is built, is constructed in a manner and in a location that minimizes its risk to people.

Response

Comments have been addressed in previous responses, as relevant to the permit modifications under review.

- a) With respect to alternatives, see response 4(b).
- b) With respect to notifications to property owners within 450 feet, see response 7(e).
- c) With respect to geotechnical analyses and karst geology, see response 2(a), 4(c), and 5-a(d).
- d) With respect to geophysical surveys, see response 8(a).
- e) With respect to “blast zone” and pipeline safety, see response 3-a and 7(b).

23-b COMMENT

I'd like to start by reading the mission statement of the Pennsylvania Department of Environmental Protection. It is: "To protect Pennsylvania's air, land and water from pollution and to provide for the health and safety of its citizens through a cleaner environment."

I cannot think of any greater contradiction to this mission statement than the Mariner East project. Approving permits to open trench, flex bore and horizontally drill through the heart of Exton would be devastating to all three things the DEP states that it protects: our air, our land and our water. In addition, this project does NOT provide for our health and safety through a cleaner environment. In fact, it does the exact opposite.

I personally live in Uwchlan Township, directly across from Mariner East, maybe a 100 feet away. But I'm here tonight because I work in West Whiteland Township directly along one of the permit sites in question.

I've worked at 671 Exton Commons, a small business Dental office for the past 16 years. We are adjacent to the

Meadowbrook Manor ball fields off Swedesford Rd. My office window looks out directly onto the path of Mariner East and the easement stakes are about 20 feet away. Construction in this location would directly impact us negatively. We wouldn't be able to open our windows and breathe the clean air the DEP promises us due to the amount of dust being stirred up. The noise and vibrations we would experience all day long will be stress inducing, headache inducing, and could harm the foundation of the building. None of those things seem to be protecting our health and safety through a cleaner environment.

Sunoco has proven time and time again over the past year that they cannot be trusted and they do not self regulate. I will not feel safe with them working 20 feet from me with no third party on site to make sure they are following permits. They've had over 50 Notices of Violation including being caught drilling in areas they aren't even permitted. Why should they be trusted to continue? A mistake, this close to my work, my source of income, my ability to feed my 3 small children, could be devastating to my family. I'm terrified that construction could cause sinkholes to open up along this path forcing the business complex I work in to be evacuated, similar to Lisa Drive. Or if the flow of Mariner East 1 is permitted to resume during construction, my life is at risk if there is an incident that impacts the 80+ year old pipeline. Considering many of the methods of installation are still considered experimental, this potential disaster does not seem far fetched. Per the settlement agreement in August, Sunoco agreed to investigate alternative routes for Mariner East. I have yet see evidence that they have done so. Although, according to the mission statement of the DEP, it doesn't seem like this dangerous project should be approved anywhere. The Mariner East project is already a disaster, please revoke the permits and don't let it become worse. Pennsylvania Citizens and our right to clean air, land and water depend on the DEP to make the right decision.

Response

- a) With respect to concerns about temporary air quality and dust impacts during construction, these impacts would be short-term and temporary, limited to the duration of active soil disturbance. The Department requires that all disturbed areas that will be inactive for over four days must undergo temporary stabilization to prevent erosion by water and wind. Sprayed water is a frequently used method to keep dust from pipeline construction under control in areas close to residences and businesses.
- b) With respect to pipeline safety, see response 3-a.

c) With respect to alternatives, see responses 2(b) and 4(b).

24. COMMENT

*Partial excerpt of Form Letter 1:

North Pottstown Pike Crossing (West Whiteland Township)

HDD S3-0370 / DEP Permit E 15-862

Re: Major modifications to permits

Trenching and boring these pipelines in the heart of Exton is simply not acceptable. These construction methods were off the table (originally in favor of HDD) for good reasons. And, despite being purportedly lower-risk than HDD, they still carry a host of unacceptable consequences.

* This area's karst geology already makes it prone to sinkholes. Recent nearby incidents have already contaminated private wells. This project has the potential to damage our Aqua wells, which would affect hundreds of residents on the public system. Additionally, subsidence and problems resulting from bending of the pipe are very real possibilities. Even Sunoco's own comments, reports, and geologists acknowledge their need to do more studies to sufficiently understand the geological risks specific to this segment.

* When the pipeline construction is concluded, leaks in this High Consequence Area result would result in catastrophic loss of life and property for thousands of people who live, work, shop, and travel in and through the area.

Despite these consequences, Sunoco hasn't demonstrated that it's truly evaluated alternative paths. Instead, Sunoco has been vague, presumptive, and avoidant in its responses to the DEP's concerns about rerouting:

* Rather than provide transparent, verifiable details about specific paths it has considered, Sunoco has merely made vague references to general regions, directions, and "considerable efforts." Without specificity and supporting maps and illustrations, the DEP and local residents are asked to blindly trust Sunoco's conclusions that no other possibilities exist. (For example, there's open space on either side of Exton (especially to the northeast) that needs to be openly vetted.)

* Despite the DEP's requests that Sunoco "explain alternatives that have been considered, aside from the PITF recommendation of co-locating the route", Sunoco's responses have still largely rested on the justification that the pipelines should be co-located. Essentially, Sunoco continues to stonewall.

Further, the March 2016 "Alternatives Analysis" completed by Tetra Tech for Sunoco shows that there is ample precedent for reroutes of Mariner East. Examples include a 5.5-mile diversion to avoid a "highly developed area including residential, commercial, and recreational uses (i.e., Chestnut Ridge Golf Course)" near Blairsville, and a 20-mile bypass around Altoona. It also includes a 1.11-mile route variation in Chester County intended to reduce potential impacts to the bog and to redbelly turtle habitat.

Sunoco's plans are unacceptable considering the consequences to our environment and safety. Please do not grant these permits, and demand that the company pursue an alternate route.

Response

Comments have been addressed in previous responses, as relevant to the permit modifications under review.

- a) With respect to geotechnical analyses and karst geology, see response 2(a), 4(c), and 5-a(d).
- b) With respect to alternatives, see response 4(b).

25. COMMENT

*Partial excerpt of Form Letter 1:

North Pottstown Pike Crossing (West Whiteland Township) HDD S3-0370 / DEP Permit E 15-862

Re: Major modifications to permits

Trenching and boring these pipelines in the heart of Exton is simply not acceptable. These construction methods were off the table (originally in favor of HDD) for good reasons. And, despite being purportedly lower-risk than HDD, they still carry a host of unacceptable consequences.

* Given our karst geology, you're aware that this area already has a consistent track record of sinkholes and IRs. And, while recent incidents have contaminated private wells, damage to our nearby Aqua wells would affect hundreds of residents on the public system. Not to mention that subsidence and resulting disaster from bending of the pipe is a very real possibility. Even Sunoco's own comments, reports, and geologists acknowledge they'd need to do more studies to sufficiently understand the geological risks specific to this segment.

* Post-construction, leaks in this High Consequence Area result would result in catastrophic loss of life and property for us and thousands of people who live, work, shop, travel in/through the area.

Despite these consequences, Sunoco hasn't demonstrated that they've truly evaluated alternative paths. Instead, they've been vague, presumptive, and avoidant in their responses to the DEP concerning rerouting.

* Rather than providing transparent, verifiable details about specific paths they've considered (and their respective considerations), Sunoco has merely referenced general regions, directions, and "considerable efforts". Without specificity and supporting maps/illustrations, the DEP and residents are asked to blindly trust Sunoco's conclusions that no other possibilities exist. For example, there's open space on either side of Exton (especially to the northeast) that needs to be openly vetted.

* Despite the DEP's requests that Sunoco "explain alternatives that have been considered, aside from the PITF recommendation of co-locating the route", Sunoco's responses have still largely rested on the justification that the pipelines should be co-located — stonewalling, essentially. Further, the March 2016 "Alternatives Analysis" completed by Tetra Tech for Sunoco shows that there is ample precedent for reroutes of Mariner East.

* Examples include a 5.5 mile diversion to avoid a "highly developed area including residential, commercial, and recreational uses (i.e., Chestnut Ridge Golf Course)" near Blairsville, and a 20-mile bypass around Altoona. It also includes a 1.11-mile route variation in Chester County intended to reduce potential impacts to the bog/redbelly turtle habitat.

* Those of us within this area of the pipelines' blast zone should be given the same respect as the redbelly turtle and the Chestnut Ridge golfers.

Sunoco's plans are unacceptable considering the consequences to our environment and safety. Please do not grant these permits, and demand that the company pursue an alternate route.

Response

Comments have been addressed in previous responses, as relevant to the permit modifications under review.

a) With respect to karst geology, see responses 1(a), 4(c), and 5-a(d).

b) With respect to alternatives, see response 1(b).

26. COMMENT

Please see comments below that were provided as verbal testimony during the April 30th public hearing:

Good evening,

My name is Jim Scarola. My wife and I live in Meadowbrook Manor with our two young children. We're just a couple houses away from the pipeline easement. There are many serious concerns, but tonight I'd like to focus on one of the most immediate and dangerous threats to our environment and public health -the risk to our water supply.

In many ways, we're here tonight because of this issue. According to Aqua, if Sunoco had used HDD as originally planned, we would have experienced "permanent loss" to both of our public wells on Hillside Drive. And now, Sunoco would like for us to believe that altering their construction methods will ensure that our water stays safe. Unfortunately, that claim boils down to wishful thinking and faulty logic.

FlexBor is a cornerstone of Sunoco's revised proposal. They tout it as being lower risk since it drills closer to the surface and further away from well production zones. But the risks are still there. The Clean Air Council and other environmental groups insist that "even if the water table is not directly intercepted by drilling, that does not ensure that wells won't be affected, especially given the karst geology of the site." And even Sunoco acknowledges the risk of contamination from higher up leaching into water supplies deeper below.

Keep in mind, too, that Flexbor is an uncertain new technology, introduced less than two years ago. There are major concerns with its use in Exton given its short track record. First, Sunoco hasn't given any evidence that FlexBor has been safely used in comparable, sensitive areas. Ours is uniquely fragile and permeable, which jeopardizes groundwater. Secondly, contractors have limited experience with FlexBor given its lack of time in the field. This compromises their ability to prevent and remedy the types of complications that will surely arise in this complex geology.

Aside from FlexBor, it's possible that a shorter HDD will be still be used in the Swedesford segment. It has been difficult for the public to comment on this issue because of conflicting information from Sunoco and the DEP. If HDD is still being used, then our aquifer is still in jeopardy from this repeated source of contamination. The voids and channels in karst geology are interconnected with groundwater areas, so contamination of one could readily spread to others.

So what if something goes wrong? There are nearly 200 homes in our neighborhood supplied by Aqua's wells, and potentially other homes and businesses. Plus, residents on Exton lane who

share a private well. Sunoco's contingency plans are grossly inadequate - "water buffalos" and bottled water are not acceptable fallbacks given the number of people who would be impacted. The risk to our water supply is just far too great. I strongly urge you to deny these permits. Thank you.

Response

- a) With respect to clarifying the plans for construction and description of FlexBor method, see response 1(a) and 2(a). A short HDD is no longer planned or proposed.
- b) With respect to Aqua's water supply wells, Aqua PA has directly requested Sunoco to avoid the use of HDD near its Hillside Drive wells in Exton, PA. With respect to FlexBor technology, see response 5-a(b). The combination of trenched construction and FlexBor is proposed as an alternative to the HDD to avoid and minimize impacts to streams, groundwater, and water supply wells.

Form Letter 1-1. COMMENT

Form Letter 1 (addresses both mods):

Please find comments for the segment of ME2 continues to be of great concern to our family and community because it would pass immediately through our neighborhood. My home is less than 3 to 4 feet away from my home. I urge not to pass this permit.

Page 1: East Swedesford Road (West Whiteland Township), Drill S3-0381 / DEP Permit E15-862:

Re: Major modifications to permits

This segment of ME2 continues to be of great concern to my family because it would pass immediately through my community.

Trenching and boring these pipelines in the heart of Exton is simply not acceptable. These construction methods were originally off the table for good reasons, and even though they are purportedly lower-risk than HDD, they still carry a host of unacceptable consequences.

* They will destroy wetlands and mature treelines that separate residential and commercial areas.

* Sunoco has plans to use land from the Chester County Library and Meadowbrook Manor Park as expanded workspace, without providing sound justification. This would result in even more egregious environmental impacts.

* This area is a Special Flood Hazard Area that is prone to extreme flooding. Destroying riparian buffers threatens this further, and Sunoco has not provided any credible plans to avoid aggravating the issue with damming and diversion. (See a video of existing flooding at <http://goo.gl/S72pyB>.)

* This area's karst geology already makes it prone to sinkholes. Recent nearby incidents have already contaminated private wells. This project has the potential to damage our Aqua wells, which would affect hundreds of residents on the public system. Additionally, subsidence and problems resulting from bending of the pipe are very real possibilities. Even Sunoco's own comments, reports, and geologists acknowledge their need to do more studies to sufficiently understand the geological risks specific to this segment.

* When the pipeline construction is concluded, leaks in this High Consequence Area result would result in catastrophic loss of life and property for thousands of people who live, work,

shop, and travel in and through the area. This includes neighborhoods, the Chester County Library, and the Exton Mall.

Despite these consequences, Sunoco hasn't demonstrated that it's truly evaluated alternative paths. Instead, Sunoco has been vague, presumptive, and avoidant in its responses to the DEP's concerns about rerouting:

* Rather than provide transparent, verifiable details about specific paths it has considered, Sunoco has merely made vague references to general regions, directions, and "considerable efforts." Without specificity and supporting maps and illustrations, the DEP and local residents are asked to blindly trust Sunoco's conclusions that no other possibilities exist. (For example, there's open space on either side of Exton (especially to the northeast) that needs to be openly vetted.)

* Despite the DEP's requests that Sunoco "explain alternatives that have been considered, aside from the PITF recommendation of co-locating the route", Sunoco's responses have still largely rested on the justification that the pipelines should be co-located. Essentially, Sunoco continues to stonewall.

Further, the March 2016 "Alternatives Analysis" completed by Tetra Tech for Sunoco shows that there is ample precedent for reroutes of Mariner East. Examples include a 5.5-mile diversion to avoid a "highly developed area including residential, commercial, and recreational uses (i.e., Chestnut Ridge Golf Course)" near Blairsville, and a 20-mile bypass around Altoona. It also includes a 1.11-mile route variation in Chester County intended to reduce potential impacts to the bog and to redbelly turtle habitat.

(Shouldn't the communities within this area of the pipelines' blast zone be given the same respect as the redbelly turtle and golfers?)

Sunoco's plans are unacceptable considering the consequences to our environment and safety. Please do not grant these permits, and demand that the company pursue an alternate route.

Page 2: North Pottstown Pike (West Whiteland Township), Drill S3-0381 / DEP Permit E15-862:

Trenching and boring these pipelines in the heart of Exton is simply not acceptable. These construction methods were off the table (originally in favor of HDD) for good reasons. And, despite being purportedly lower-risk than HDD, they still carry a host of unacceptable consequences.

* Given our karst geology, you're aware that this area already has a consistent track record of sinkholes and IRs. And, while recent nearby incidents have contaminated private wells, damage to our nearby Aqua wells would affect hundreds of residents on the public system. Not to mention that subsidence and resulting disaster from bending of the pipe is a very real possibility. Even Sunoco's own comments, reports, and geologists acknowledge they'd need to do more studies to sufficiently understand the geological risks specific to this segment.

* Post-construction, leaks in this High Consequence Area result would result in catastrophic loss of life and property for us and thousands of people who live, work, shop, travel in/through the area.

Despite these consequences, Sunoco hasn't demonstrated that they've truly evaluated alternative paths. Instead, they've been vague, presumptive, and avoidant in their responses to the DEP concerning rerouting.

* Rather than providing transparent, verifiable details about specific paths they've considered (and their respective considerations), Sunoco has merely referenced general regions, directions, and "considerable efforts". Without specificity and supporting maps/illustrations, the DEP and residents are asked to blindly trust Sunoco's conclusions that no other possibilities exist. For example, there's open space on either side of Exton (especially to the northeast) that needs to be openly vetted.

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Further, the March 2016 "Alternatives Analysis" completed by Tetra Tech for Sunoco shows that there is ample precedent for reroutes of Mariner East.

* Examples include a 5.5 mile diversion to avoid a "highly developed area including residential, commercial, and recreational uses (i.e., Chestnut Ridge Golf Course)" near Blairsville, and a 20-mile bypass around Altoona. It also includes a 1.11-mile route variation in Chester County intended to reduce potential impacts to the bog/redbelly turtle habitat.

* Those if us within this area of the pipelines' blast zone should be given the same respect as the redbelly turtle and the Chestnut Ridge golfers.

Sunoco's plans are unacceptable considering the consequences to our environment and safety. Please do not grant these permits, and demand that the company pursue an alternate route.

Response

Comments on East Swedesford Road have been addressed in previous responses, as relevant to the permit modifications under review.

- a) With respect to tree clearing between residential and commercial areas, see response 5-a(c).
- b) With respect to construction in Special Flood Hazard Area, see response 5-a(a). Some short-term trenching would occur in the floodplain, but the pipeline would be installed across the majority of the floodway and floodplain (including Valley Creek/S-B81 and the forested wetland B71) using a conventional bore/trenchless construction method, avoiding all disturbance to the wetland (in which no trees will be cleared), stream, and any associated trout runs. Neither the stream nor floodway/floodplain are proposed to be dammed as part of construction.
- c) With respect to karst geology and sinkholes, see responses 2(a), 4(c), and 5-a(d).
- d) With respect to water wells, see response 5-a(b).
- e) With respect to alternatives, see response 4(b).

Comments on North Pottstown Pike have been addressed in previous responses, as relevant to the permit modifications under review.

- a) With respect to karst geology and sinkholes, see responses 1(a), 4(c), and 5-a(d).

b) With respect to alternatives, see response 1(b).

Form Letter 1-2. COMMENT

Form Letter 1 (addresses only East Swedesford Road mod):

East Swedesford Road (West Whiteland Township), Drill S3-0381 / DEP Permit E15-862:

Re: Major modifications to permits

This segment of ME2 continues to be of great concern to my family because it would pass immediately through my community.

Trenching and boring these pipelines in the heart of Exton is simply not acceptable. These construction methods were originally off the table for good reasons, and even though they are purportedly lower-risk than HDD, they still carry a host of unacceptable consequences.

* They will destroy wetlands and mature treelines that separate residential and commercial areas.

* Sunoco has plans to use land from the Chester County Library and Meadowbrook Manor Park as expanded workspace, without providing sound justification. This would result in even more egregious environmental impacts.

* This area is a Special Flood Hazard Area that is prone to extreme flooding. Destroying riparian buffers threatens this further, and Sunoco has not provided any credible plans to avoid aggravating the issue with damming and diversion. (See a video of existing flooding at <http://goo.gl/S72pyB>.)

* This area's karst geology already makes it prone to sinkholes. Recent nearby incidents have already contaminated private wells. This project has the potential to damage our Aqua wells, which would affect hundreds of residents on the public system. Additionally, subsidence and problems resulting from bending of the pipe are very real possibilities. Even Sunoco's own comments, reports, and geologists acknowledge their need to do more studies to sufficiently understand the geological risks specific to this segment.

* When the pipeline construction is concluded, leaks in this High Consequence Area result would result in catastrophic loss of life and property for thousands of people who live, work, shop, and travel in and through the area. This includes neighborhoods, the Chester County Library, and the Exton Mall.

Despite these consequences, Sunoco hasn't demonstrated that it's truly evaluated alternative paths. Instead, Sunoco has been vague, presumptive, and avoidant in its responses to the DEP's concerns about rerouting:

* Rather than provide transparent, verifiable details about specific paths it has considered, Sunoco has merely made vague references to general regions, directions, and "considerable efforts." Without specificity and supporting maps and illustrations, the DEP and local residents are asked to blindly trust Sunoco's conclusions that no other possibilities exist. (For example, there's open space on either side of Exton (especially to the northeast) that needs to be openly vetted.)

* Despite the DEP's requests that Sunoco "explain alternatives that have been considered, aside from the PITF recommendation of co-locating the route", Sunoco's responses have still largely rested on the justification that the pipelines should be co-located. Essentially, Sunoco continues to stonewall.

Further, the March 2016 "Alternatives Analysis" completed by Tetra Tech for Sunoco shows that there is ample precedent for reroutes of Mariner East. Examples include a 5.5-mile diversion to avoid a "highly developed area including residential, commercial, and recreational uses (i.e., Chestnut Ridge Golf Course)" near Blairsville, and a 20-mile bypass around Altoona. It also includes a 1.11-mile route variation in Chester County intended to reduce potential impacts to the bog and to redbelly turtle habitat.

(Shouldn't the communities within this area of the pipelines' blast zone be given the same respect as the redbelly turtle and golfers?)

Sunoco's plans are unacceptable considering the consequences to our environment and safety. Please do not grant these permits, and demand that the company pursue an alternate route.

Response

Comments have been addressed in previous responses, as relevant to the permit modifications under review.

- a) With respect to tree clearing between residential and commercial areas, see response 5-a(c).
- b) With respect to construction in Special Flood Hazard Area, see response 5-a(a). Some short-term trenching would occur in the floodplain, but the pipeline would be installed across the majority of the floodway and floodplain (including Valley Creek/S-B81 and the forested wetland B71) using a conventional bore/trenchless construction method, avoiding all disturbance to the wetland (in which no trees will be cleared), stream, and any associated trout runs. Neither the stream nor floodway/floodplain are proposed to be dammed as part of construction.
- c) With respect to karst geology, see responses 2(a), 4(c), and 5-a(d).
- d) With respect to water wells, see response 5(b).
- e) With respect to alternatives, see response 1(b).

Form Letter 1-3. COMMENT

Form Letter 1 variation (addresses only East Swedesford Road mod):

East Swedesford Road (West Whiteland Township) Drill S3-0381 / DEP Permit E15-862:

I am writing to implore you not to let the Mariner East 2 pipeline go through this area. Trenching and boring these pipelines in the heart of Exton is simply not acceptable. These construction methods were off the table (originally in favor of HDD) for good reasons. And, despite being purportedly lower-risk than HDD, they still carry a host of unacceptable consequences.

* They will destroy wetlands and mature treelines separating residential and commercial areas. Additionally, Sunoco has plans to use land from the Chester County Library and Meadowbrook Manor Park as expanded workspace, without providing sound justification. This would result in even more egregious environmental impacts.

* This area is a SFHA that is prone to extreme flooding. Destroying riparian buffers threatens this further, and Sunoco has not provided any credible plans to avoid aggravating the issue with damming and diversion. See a video of existing flooding: <http://goo.gl/S72pyB>

* Given our karst geology, you're aware that this area already has a consistent track record of sinkholes and IRs. And, while recent nearby incidents have contaminated private wells, damage to our Aqua wells would affect hundreds of residents on the public system. Not to mention that subsidence and resulting disaster from bending of the pipe is a very real possibility. Even Sunoco's own comments, reports, and geologists acknowledge they'd need to do more studies to sufficiently understand the geological risks specific to this segment.

* Post-construction, leaks in this High Consequence Area result would result in catastrophic loss of life and property for thousands of people who live, work, shop, travel in/through the area. This includes our home, the Chester County Library, and the Exton Mall. Despite these consequences, Sunoco hasn't demonstrated that they've truly evaluated alternative paths. Instead, they've been vague, presumptive, and avoidant in their responses to the DEP concerning rerouting.

* Rather than providing transparent, verifiable details about specific paths they've considered (and their respective considerations), Sunoco has merely referenced general regions, directions, and "considerable efforts". Without specificity and supporting maps/illustrations, the DEP and residents are asked to blindly trust Sunoco's conclusions that no other possibilities exist. For example, there's open space on either side of Exton (especially to the northeast) that needs to be openly vetted.

* Despite the DEP's requests that Sunoco "explain alternatives that have been considered, aside from the PITF recommendation of co-locating the route", Sunoco's responses have still largely rested on the justification that the pipelines should be co-located — stonewalling, essentially. Further, the March 2016 "Alternatives Analysis" completed by Tetra Tech for Sunoco shows that there is ample precedent for reroutes of Mariner East.

* Examples include a 5.5 mile diversion to avoid a "highly developed area including residential, commercial, and recreational uses (i.e., Chestnut Ridge Golf Course)" near Blairsville, and a 20-mile bypass around Altoona. It also includes a 1.11-mile route variation in Chester County intended to reduce potential impacts to the bog/redbelly turtle habitat.

* People within this area of the pipelines' blast zone should be given the same respect as the redbelly turtle and the Chestnut Ridge golfers.

Sunoco's plans are unacceptable considering the consequences to our environment and safety. Please do not grant these permits, and demand that the company pursue an alternate route.

Response

Comments on East Swedesford Road have been addressed in previous responses, as relevant to the permit modifications under review.

- a) With respect to tree clearing between residential and commercial areas, see response 5-a(c).
- b) With respect to construction in Special Flood Hazard Area, see response 5-a(a). Some short-term trenching would occur in the floodplain, but the pipeline would be installed across the majority of the floodway and floodplain (including Valley Creek/S-B81 and the forested wetland B71) using a conventional bore/trenchless construction method,

avoiding all disturbance to the wetland (in which no trees will be cleared), stream, and any associated trout runs. Neither the stream nor floodway/floodplain are proposed to be dammed as part of construction.

- c) With respect to karst geology and sinkholes, see responses 2(a), 4(c), and 5-a(d).
- d) With respect to water wells, see response 5-a(b).
- e) With respect to alternatives, see response 4(b).

27. COMMENT

On behalf of Food & Water Watch, a national non-profit advocacy organization with an office and 86,488 supporters in Pennsylvania, we urge the Pennsylvania Department of Environmental Protection (DEP) to reject Sunoco Logistics Partners' request to make two modifications to its permitted construction techniques for the Mariner East 2 pipeline. 1 Rather than modifying its permit, the DEP should terminate the project all together.

This 350-mile project is designed to carry natural gas liquids (NGLs) from the Ohio and Pennsylvanian shale fields to the Sunoco's Marcus Hook facility, where it would be shipped across the Atlantic Ocean to European petrochemical plants to produce finished petrochemicals, like plastic. Exporting NGLs provides a market to sop up the cheap, surplus gas supplies, and benefiting oil and gas companies by proliferating fracking - but it wreaks havoc on communities that are surrounded by gas production and/or pipeline infrastructure.

Pipelines are inherently risky and Pennsylvania's current experience with the Mariner East 2 ethane pipeline has been disastrous, with a cascade of spills, leaks and construction accidents that have continued unabated despite the company's repeated promises to state regulators that it would improve its safety record.

Compounded Risks: Pipelines are Inherently Hazardous and Sunoco Has a Terrible Safety Record

The Mariner East 2 pipeline will benefit Sunoco Logistics Partners ("Sunoco") and its affiliated companies, including Energy Transfer Partners ("ETP"), but it threatens the communities and people living along the proposed path. Changing Mariner East 2's drilling construction methods from horizontal directional drilling (HDD) to conventional boring at one drill site and a combination of conventional boring and open trenching for the rest will not change the fact that Sunoco and its associates have a poor track record and cannot be trusted since they have a financial stake in the project

In general, pipeline construction is disruptive and dangerous. It threatens human health, wildlife habitats and the environment by compromising soil quality, impacting vegetation, contaminating surface waters and aquifers, and releasing air pollutants.¹ And the excavation for pipeline construction can create dangerous sinkholes, especially in Karst geologies which are common in Pennsylvania.

Karst's volatile subterranean conditions can mean that seemingly stable pipeline placements can change over time; a pipeline could end up spanning emerging caverns or be balanced on pinnacles, which could stress and corrode the pipeline leading to leaks.⁵ This has already happened in Pennsylvania. In March, the Pennsylvania Public Utility Commission had to temporarily shut down the Mariner East 1 pipeline because sinkholes were forming along the path due to nearby construction - related drilling for the larger Mariner East 2 and Mariner East 2X⁶.

But Sunoco had a questionable safety record even before the Mariner East 2 construction began. According to Reuters' analysis, Sunoco has had a higher rate of oil spills compared to its competitors, with more than 200 leaks since 2010.⁷ The company released 1.2 million gallons of hazardous liquids into the environment, causing over \$5.3 million in property damages from 2006 to 2016, according to an analysis of Pipeline and Hazardous Materials Safety Administration (PHMSA) data.

The combination of the firms behind Mariner East 2 (Sunoco, ETP and their affiliates) reported almost 530 hazardous liquids pipeline incidents to PHMSA between 2002 and 2017, averaging about one incident every eleven days. These spills released 3.6 million gallons of hazardous liquids into the environment and caused about \$115 million in property damage. Of these releases, 67 incidents resulted in water contamination - and 18 of the 67 spills tainted groundwater. During this time PHMSA issued 106 Notices of Probable Violations, issuing nearly \$5.7 million in penalties.⁹

So, it should not have come as a surprise that the construction of Mariner East 2 has been plagued with ongoing accidents and problems. In 2017, Pennsylvania granted approval for Sunoco to begin construction on Mariner East 2.¹⁰ Since then it has been chaos: between May 2, 2017 and March 23, 2018, the Mariner East 2 has experienced 108 inadvertent discharges into waterbodies - about a spill every-three-days over the past 10 months.¹¹

In the beginning of 2018, the DEP issued dozens of violations for numerous accidents, drilling spills and cases of tainted drinking water supplies that eventually forced the state government to shut down the construction of the pipeline, which the DEP deemed an "egregious and willful violation" of environmental laws.¹² Despite issuing a \$12.6 million civil penalty against Sunoco for permit violations related to construction of the project, the DEP allowed the company to resume construction in early February after the company pledged to improve safety.¹³ The recent cave-ins occurred after Sunoco was allowed to resume construction.

Threats to the environment, public health and quality of life will remain when Mariner East 2 is completed. Once a pipeline is built, unlucky landowners along its path will have to accept living with the constant risk of accidents and explosions. Between 1994 and 2015, there were more than 12,000 pipeline incidents in the United States - including leaks, ruptures or explosions.¹⁴ These incidents caused over 400 fatalities, 1,560 injuries and have cost \$7.1 billion in property damage.¹⁵

Pipelines built since 2010 are five times more likely to have problems than those built from 1980 to 2009, possibly because the rush to complete pipelines during the fracking boom encouraged

corner-cutting during construction.¹⁶ For example, the National Transportation Safety Board determined that construction errors in a 2011 pipeline caused a gas explosion that destroyed two buildings in New York City in 2014, injuring 50 people and resulting in eight deaths.¹⁷

Every day, the Mariner East 2 would (initially) transport an estimated 275,000 barrels (11.6 million gallons) of the highly volatile NGLs -ethane, but also propane and butane. It would eventually increase capacity to 450,000 barrels (11.9 million gallons).¹⁸ A possible third phase could increase the total capacity to over 700,000 barrels per day (29.4 million gallons).¹⁹

These NGLs only remain liquid under very high pressure or very frigid temperatures. When exposed to typical atmospheric conditions (those outside of a pipeline), the liquids vaporize into extremely flammable/explosive, colorless and odorless gasses. Unlike methane, which tends to migrate upward into the atmosphere when leaked, heavier NGLs stay close to the ground and disperse horizontally in a downwind fashion. While the migration of NGL gasses are partly dependent on leak's idiosyncrasies, including atmospheric conditions and geography, a leak could create a large, widespread vapor cloud. The unignited vapor cloud can then travel for a couple miles until it finds an ignition source (which could be something as seemingly innocuous a cell phone or light switch), causing an explosion that can cover the entire area the vapor cloud, back to the original leak source.²⁰

An estimated 105,419 people live within 1,300 feet of the Mariner East 2's route, including four census tracts that Pennsylvania considers environmental justice areas (census tract (C1) 4064.02 in Delaware County, CT 125 in Cambria County and CTs 8026 and 8028 in Westmoreland County), according to a geospatial analysis by FracTracker. Also, within this buffer are 23 public schools and 17 private schools. One school is only 7 feet away from the proposed path.²¹

The highly flammable nature of transported fuels by the proposed pipeline means that nearby people, schools, businesses and environmental resources will be threatened by potential explosions, fireballs, and general uncertainty regarding their safety and peace of mind.

In 2013, an ethane pipeline in Illinois exploded, shooting fire 300 feet into the air and requiring 80 nearby families to evacuate their homes.²² Likewise, in Washington County, West Virginia, an ethane pipeline explosion rattled nearby houses, illuminated the night sky orange and forced residents from their homes on Christmas Eve 2014. "We didn't want to be here. I was just afraid the whole place was going to blow. That's what you think about all the time living here. It wasn't like that when we bought it or we wouldn't have bought it," according to an impacted resident²³ In 2015 the Appalachia to Texas Express pipeline that carries ethane to crackers in the Gulf Coast exploded in Brooke County, West Virginia, scorching 5 acres of woods and burning about 24,000 barrels (equivalent to 1,008,000 gallons) of ethane. Faulty pipeline welding was the suspected cause.²⁴

National Gas Infrastructure Encourages More Drilling, Increased Air Pollution and Poses Extreme Climate Risks

The shale gas infrastructure boom - from fracking wells to power plants to natural gas liquids storage hubs to pipelines to compressor stations to petrochemical processing plants - has

amplified the emissions of the powerful greenhouse gas methane that is the primary ingredient in natural gas. The construction of this fracked gas infrastructure locks-in a fossil fuel future for decades to come and each new pipeline and processing plant creates reverberating new incentives for more fracking and then more gas infrastructure. Natural gas is leaking from every stage of this sprawling natural gas infrastructure network that is increasingly covering Pennsylvania.

The fugitive methane emissions from the oil and gas industry operations, including pipeline transmissions, are the leading anthropogenic source of methane pollution in the country.²⁵ Methane is an extremely potent greenhouse gas, with 86 times greater global warming potential than carbon dioxide over the short term.²⁶ A 2011 Cornell University study found that leaks from natural gas drilling, processing, storage and distribution amounted to 5.7 percent of the methane gas from unconventional wells and 3.8 percent from conventional wells.²⁷ Even small methane leaks add up, since the Pennsylvania alone produced 5.0 trillion cubic feet of shale gas in 2016.²⁸

While Marine East 2 is transporting NGLs like ethane, the risk of fugitive leaks is likely comparable, and similarly problematic since when ethane reacts with sunlight and other molecules in the atmosphere it forms ozone, the third largest contributor to human-caused global warming.²⁹ Moreover, the production of ethane and other NGLs are intertwined with the natural gas industry, especially the Pennsylvania fracking boom, meaning that every gallon of ethane, propane or butane pumped through the Mariner East 2 comes from upstream shale gas production, processing and transportation - and its associated methane emissions. NGLs are hydrocarbons present in certain gas reserves, which the industry calls «wet" gas.³⁰ The Marcellus and Utica shale plays in Pennsylvania and Ohio contain more "wet gas" than other plays, meaning they have higher concentrations of NGLs.³¹

Additionally, a portion of Mariner East 2's ethane will end up at ethane and natural gas fired Competitive Power Ventures power plant in Cambria County as a fuel source.³² Greenhouse gas emissions from gas power plants alone may considerably higher than thought. A 2017 study found that gas-fired power plants released more than 20 times more methane than the facilities estimated;³³ and, the greenhouse gas footprint of natural gas is actually worse than coal and oil because methane traps more heat in the atmosphere.³⁴ Natural gas power plants further accelerate greenhouse gas emissions that warm the planet, and scientists warn that if the Earth warms more than 2° Celsius, we will hit a threshold that could cause irreversibly destructive climate change.³⁵

On top of climate emissions, this natural gas infrastructure feeds power plants and petrochemical processing plants that emit air pollutants that endanger human health. For example, Coal, oil and natural gas-fired power plants pose significant health risks to nearby communities. Power plants release air pollutants like mercury, particulate matter, sulfur dioxide (SO₂) and nitrogen oxides (NO_x).³⁶ Although natural gas-fired plants release fewer air pollutants than coal or oil-fired plants, they are major NO_x emitters, contribute to ground level ozone and smog and threaten the environment and human health.³⁷ Ground-level ozone creates smog when it mixes with particulate matter, which itself has been linked to various cancers.³⁸ Prolonged exposure to smog has been connected to premature deaths in adults and to low-birth weight in babies.³⁹ Natural gas-fired power plants

can also release radon,⁴⁰ a naturally occurring radioactive material that is the second leading cause of lung cancer in the United States, immediately following smoking.⁴¹ Radon radiation exposure can damage DNA, which can result in cancer-causing mutations.⁴²

The Mariner East 2 is designed to reinforce and capitalize on the fracking boom and would help lock in more demand for fracking and decades more of global climate pollution - from the climate altering releases throughout the upstream (drilling and fracking in Pennsylvania) and downstream (power plant in Cambria County/ petrochemical manufacturing in Europe) gas supply chain.

The Mariner East 2 Pipeline Puts Locals at Risk to Benefit a Petrochemical Giant in Europe

It's clear that Sunoco will greatly benefit from the Mariner East 2 pipeline project, which will deliver fracked Appalachian gas byproducts to its Marcus Hook facility, all so it can be exported to Europe for the toxic production of petrochemicals and plastics.⁴³ In 2011, Sunoco began rebuilding its infrastructure necessary to transport ethane to Europe by revamping its retired Marcus Hook, Pennsylvania oil refinery facility and developing its Mariner East pipeline system to bring NGLs to Marcus Hook.⁴⁴ At the end of 2011, Sunoco inked a deal to deliver ethane to European petrochemical giant, Ineos.⁴⁵

While Sunoco stands to financially gain, the increased fracking risks are detrimental to the disadvantaged, lower-income, rural communities in Pennsylvania where most drilling occurs.⁴⁶ Pennsylvania has been ground zero of the fracking boom, with just over 10,000 shale gas wells drilled between 2005 (when commercial production first began) and 2016.⁴⁷ The number of new wells drilled has tapered off as the price of natural gas has fallen. After the early and dramatic increase in drilling, from 9 wells in 2005 to 1,957 in 2011, the number dropped to 504 in 2016.⁴⁸ The U.S. gas industry is promoting exports to maintain fracking's profitability, and more gas exports would drive additional drilling and gas extraction.⁴⁹

The fracking boom has led to extensive contamination of drinking water, while simultaneously polluting the air that communities breathe. For example, Dimock, Pennsylvania has been an "energy sacrifice zone" for decades. It used to be surrounded by coal mining but is now exposed to the more recent dangers associated with fracking,⁵⁰ with widespread pollution of drinking water that required much of the community to get water trucked to their homes.⁵¹ Likewise, once a well is fracked, during gas production, methane can escape from the well and mix with nitrogen oxide emissions from diesel fueled vehicles and drilling equipment to form ground-level ozone.⁵² When combined with particulate matter of a certain size (less than 2.5 micrometers), ozone can form smog. Chronic exposure can lead to asthmatic conditions and chronic pulmonary disease.⁵³ In general, many rural Pennsylvania communities lack the political power to protect themselves from the disproportionate pollution from the fracking industry.⁵⁴

Shipping ethane from the United States to Europe proliferates fracking's toxic legacy in Pennsylvania and threatens - through the gas drilling and production but also through the petrochemical and plastics manufacturing - human health, the climate and the environment. Already in Pennsylvania the fracking boom has contributed to earthquakes, health issues, traffic snarls, the destruction of the environment and farmland, while releasing climate altering methane

emissions into the atmosphere. 55 The last thing that Pennsylvanians need is an export-driven justification for the oil and gas industry to capitalize on shale gas at the expense of their health and well-being. Allowing the completion of Mariner East 2 will simply benefit oil, gas and petrochemical companies at home and abroad.

Conclusion

Approving Sunoco's request to modify its construction permits to allow two additional pipeline drilling and excavation techniques fails to address the company and its affiliates' terrible safety records. If these techniques were genuinely safer and more appropriate, why has it taken Sunoco more than a year to propose these approaches? Sunoco and its affiliates ensured the DEP that its originally proposed construction plan would be safe and cause no environmental disruption or risk to property or human life. It made the same pledge to guarantee safe pipeline construction after the DEP halted the construction after multiple construction failures. Now Sunoco and its affiliates are promising the newly proposed techniques would ensure safe construction, despite repeated and egregious failures to keep its past safety promises.

Allowing the continued construction of the Mariner East 2 pipeline would deliver a blow to the communities in its path and for the communities where gas drilling occurs. The DEP must make the right decision that puts the safety interests of the public - residents, communities and the environment - ahead of Sunoco's financial interests to reap profits from the exporting NGLs to a European market

The Mariner East 2 already has tainted water resources, and its prolonged construction will continue to disrupt air quality, climate, disrupt landscapes and imperil private property rights. It also helps create a demand and justification for more environmentally destructive energy extraction.

Promoting NGL infrastructure like Mariner East 2 encourages more gas drilling, locking in decades more fracking, while contributing to the climate crisis; and it will result in billions of dollars being spent on the infrastructure to support storing, transporting, exporting and burning gas, preventing Pennsylvanians from moving into a sustainable energy future.

Rather than continually permitting the buildout of infrastructure that benefits the fossil fuel and chemical industries, Pennsylvania must invest in clean, renewable energy to rapidly shed dependency on the climate destroying shale gas industry. The DEP must take the first step and reject request to modify its permits for two construction-related changes. Rather than modifying its permit, the DEP should terminate the Mariner East 2 project altogether.

Response

- a) With respect to pipeline safety, see response 3-a.
- b) With respect to karst terrain, see responses 1(a), 2(a), 4(c), and 5-a(d).
- c) With respect to inadvertent discharges, these were inadvertent returns of drilling fluid from the HDD construction method and are not accurately characterized as preventable "spills."

- d) With respect to the comments that reference concerns over natural gas infrastructure development generally and the use of hydraulic fracturing, those issues fall outside the Chapter 102 and Chapter 105 application review process.

28. COMMENT

As a resident of Chester County I am very concerned about the pipe line that is being put in place. I believe there should be a delay in completing the project until more research is done. The fact there are so many concerns makes proceeding irresponsible.

Do the right thing and look into the risks. Do not put money before people's health and safety.

Response

The Department acknowledges the commentator's comments regarding this proposed pipeline project. The Department believes it has taken sufficient time to consider the permit modification applications which were thoroughly reviewed by staff for conformance with the pertinent environmental statutes and regulations. With respect to pipeline safety, see response 3-a.

29. COMMENT

Below are my comments to the DEP on Sunoco's two requests for permit modifications on the Mariner East 2 pipeline.

The DEP should deny Sunoco's proposals for modification to the construction of the Mariner East 2 pipeline. Horizontal directional drilling was approved on the basis of its benefits over above-ground or trench drilling, which include less impact to the landscape and less soil displacement and contamination.

Switching to trench drilling will automatically increase landscape disruption, soil contamination, and wetland destruction. Whether Sunoco's original proposal for HDD was flawed or directly deceptive, Sunoco should be held to it or cease drilling. Changing to a more destructive method with a riskier pipeline breach potential is not an option.

This is basically a request for the PA DEP to approve permanently putting the citizens of Pennsylvania into a more dangerous blast zone (with a highly volatile and combustible mix of gases a mere four feet underground) and the irrevocable destruction of wetlands. This is what you are being asked to approve for no reason other than Sunoco's incompetence -or dishonesty - in planning.

There is no basis for imposing that destruction on Pennsylvania's land, or asking Pennsylvanians to pay for Sunoco's mistake -with the loss of their wetlands, their communities, and potentially their lives. With a dangerous pipeline close to the ground surface, the risk of these losses will only increase over time, and will be borne solely by the residents of Pennsylvania.

As the representative of Pennsylvania's citizens and wetlands in this matter, the PA DEP must deny Sunoco's request for modification.

Response

- a) With respect to the idea that HDD is preferred for its benefits, in this instance Aqua PA has directly requested Sunoco to avoid the use of HDD near its Hillside Drive wells in Exton, PA. With respect to FlexBor technology, see response 5b. The proposed combination of conventional trenching, conventional bore, and FlexBor are to avoid and

minimize impacts to streams, groundwater, and water supply wells, and to minimize complications of karst terrain.

- b) With respect to impacts to loss of wetlands, no wetlands will be lost as a result of the proposed modification. The forested wetland along the East Swedesford Road permit modification will be avoided through the use of conventional bore.
- c) With respect to “blast zone” and pipeline safety, see responses 3-a and 7(b).

30. COMMENT

I oppose horizontal directional drilling, conventional bore and open trench digging at the locations in West Whiteland township for the Mariner East 2 pipeline, as Sunoco proposed. This area is unstable for drilling.

Despite knowledge of the risk, DEP still approved permits the first time. Due to previous drilling, there are three sinkholes on Lisa Drive, close to train lines, risking residential homes and property, and exposing the original Mariner East pipeline.

There are local and state roads, businesses, homes, a library, and playing fields in this area. Further construction will have the potential risk of even more sink holes, drilling fluid spills, violations, and damaged aquifers and wells.

Fracking for the natural gas liquids to be transported in the pipelines releases gases into our atmosphere, continuing to increase climate change.

Clearly, Sunoco has no regard for public or environmental safety. Shamelessly, they continue to display that with over 100 spills of drilling fluid and 50 project violations.

Pennsylvania officials must no longer permit Sunoco to exploit our state and citizens for corporate profits. My family, and all Pennsylvanians, deserve clean air, water, and land as stated in the Pennsylvania constitution. This project is simply too dangerous. Explosive natural gas liquid pipelines do not belong in highly populated counties, such as Delaware and Chester County. Sunoco has not looked into rerouting the pipeline, and has not done a risk analysis as recommended.

I also support a complete closure of the Mariner East pipeline project. The future of the energy production, even in Pennsylvania, is in 100% renewable energy. We need to continue to be a leader in the world and not be left behind, clinging to antiquated fuels. I urge the DEP, PUC, and Governor Wolf will cease the assault on Pennsylvania, by denying permit modifications for West Whiteland township. Thank you for your consideration.

Response

- a) Horizontal directional drilling is no longer proposed.
- b) With respect to “blast zone” and pipeline safety, see responses 3-a and 7(b).
- c) The Department acknowledges the commentator’s other comments regarding this proposed pipeline project. Though these comments appear to fall outside of our regulatory purview, please note that the permit modification applications were thoroughly

reviewed by staff for conformance with the pertinent environmental statutes and regulations..

31. COMMENT

I am not a geologist but I have been a fifteen year resident here in Meadowbrook Manor. I am deeply concerned for my health, my neighbors and my home. Sunoco's plans for drilling though our living area is at best foolish. I have attended meetings where I heard more learned people who talked about karst geology, removal of established trees and Sunoco's limited experience with flex boring.

I am alarmed and amazed that Sunoco has such a disregard for American communities where we have built our lives. They need to be stopped. Open trenching in our populated area exposes us to all kinds of water contamination and diseases. Please stop this blatant disregard for our environmental safety. Thank you.

Response

- a) With respect to karst geology and the proposed construction plan, see responses 1(a), 2(a), 4(c), and 5-a(d).
- b) With respect to FlexBor, see response 5-a(b).

32. COMMENT

Thank you for providing the opportunity for citizens to express concern about the pipeline and construction in the area. I have been a resident of Uwchlan, living here 10 years. I live at the Uwchlan/West Whiteland township line.

I have aware that there were pipelines in the region. I do understand the need for commerce and the general utility of pipelines to deliver goods.

I am concerned both about the pipelines presence for transporting NGLs and the process of construction damaging our environment, especially given the karst geology present in the area. There are mature trees being removed and wetlands disturbed. There are construction methods used which alter the ecosystem and that damage may be permanent. I am concerned about possible water table contamination, the excessive noise and vibration of construction, spills of bentonite or other fluids, disturbances to wildlife, harm to citizens, and generally long lasting effects.

I would like to see more assurances and evidence that our natural habitat is not being permanently damaged by the pipelines.

Of course I am also worried about our personal safety and property values as a result of the pipelines, but for the DEP purposes, I request you halt construction permits and changes to construction procedures by Sunoco or ETP in the interest of preservation of our wetlands and environment.

Thank you for the opportunity to address these issues.

Response

Comments have been addressed in various places in this comment/response document. With respect to pipeline safety, see response 3-a.

33. COMMENT

Sunoco has repeatedly demonstrated the risks inherent with this project as well as their disregard for the citizens and resources of the Commonwealth. I urge the DEP fulfill its' mission to protect our communities and deny this new plan. It is DEP's mission to protect our air, water and land from pollution in order to provide for the health and safety of all its citizens.

I live in Westtown Township 1000 feet from the Mariner ROW. We currently use Aqua water but several of my neighbors rely on private wells. I am very concerned about the myriad of issues related to drinking water because of this project. Sunoco has already caused problems with private wells requiring homeowners to switch to public water. Now Aqua is questioning the safety of Sunoco's proposed construction in close proximity to the public water wells on Hillside Dr. in Exton.

The sites in Exton are among about 60 along the cross-state pipeline route that have been subject to a court-ordered "re-evaluation of local geology after a string of drilling-fluid spills and other issues last year. After years of consistent assurances about the safety of its methods Sunoco now proposes to change its plan for the pipelines to mitigate the risk of future well contamination. Further Sunoco is advising landowners at nearby locations to make prior arrangements for alternate water supply in anticipation of the certainty of well contamination from drilling. I find this very alarming. If not for the Environmental Hearing Board would Sunoco have proceeded unabated to wreak irreversible damage to our public water supply? The risks are exacerbated by Sunoco's proposed use of flex-bor technology which is very new. How could they possibly be allowed to proceed with this ill-conceived project after they have already demonstrated the dangers?

Response

- a) With respect to water wells, the proposed modifications to the construction plan are intended to avoid impacts to water supply wells.
- b) With respect to FlexBor, see response 5-a(b).
- c) With respect to "blast zone" and pipeline safety, see responses 3-a and 7(b).
- d) The Department acknowledges the commentator's other comments regarding this proposed pipeline project. Though these comments appear to fall outside of our regulatory purview, please note that the permit modification applications were thoroughly reviewed by staff for conformance with the pertinent environmental statutes and regulations..

34. COMMENT

Please accept this comment regarding the completion of the Mariner 2 project. This project needs to be shut down, The transmission of explosive gases through residential neighborhoods and near schools is not safe. My house is located within 500 feet of both Mariner 1 and Mariner 2. In 1991, there was a leak in Mariner 1 within 500 feet of my house, and 50,000 gallons of jet fuel was spilled. The neighborhood was turned into a war zone for 6 months while the mess was cleaned up.

Jet fuel is combustible, but not explosive. Had this leak been ethane, butane or any of the other highly volatile gasses which Sunoco seeks to transmit through Mariner 2, the results would have been deadly. Sunoco cannot ensure that there will be no leaks no matter how hard they try. A leak and subsequent explosion near the Glenwood Elementary School in Middletown could result in the death of 500 young children. No amount of new jobs or taxes is worth this kind of catastrophe. You need to put people's safety ahead of economic interest and shut this project down permanently

Response

With respect to pipeline safety, see response 3-a.

35. COMMENT

I am a homeowner in the vicinity of the Mariner II pipeline. A large sinkhole has appeared in my backyard causing concern. Having lived here for several decades with no prior problems with the topography here this sinkhole is troublesome and must be addressed. Please contact me at your earliest convenience.

Response

We advise you to contact Sunoco directly or consult a professional regarding your property's sink hole issues. An investigation can be conducted to see if the sinkhole is a result of Sunoco's activities.

36. COMMENT

To the Pennsylvania Public Utilities Commission-

Thank you for allowing me to provide input on the above project. I am a resident of East Goshen Township and moved to the area from New Jersey in 1992 when I got married. I hold degrees in Biological Sciences and Business Administration and I feel this gives me a more holistic perspective on this pipeline.

Back in 1902, Atlantic Refining Company built a refinery in the port city of Marcus Hook PA. With markets for their products in central and western areas of Pennsylvania, they later built an 8 inch pipeline from Marcus Hook to deliver these to more remote areas of the state. What they produced were refined petroleum products like gasoline and diesel fuel. This pipeline, now given the name Mariner East 1 [ME I], was constructed in the early 1930's through rural areas and farms. It most likely made a lot of sense to do this back then since it would create jobs in a depressed economy as well as provide for the development of jobs in areas in central and western Pennsylvania. It carried little risk to the areas it traversed other than the potential for soil contamination should there ever be a leak. I'm not sure if there was an awareness of the karst topography in some areas of the state that this pipeline was sited through at the time the decision was made determining the route this pipeline would take. Topography with voids like are found in karst can expose pipelines to unintended stress that can cause leaks. Leaks in areas like this can have ripple effects as the voids could cause contamination to migrate to areas not near the pipeline.

50 years ago [1968], the movie The Graduate starring Dustin Hoffman as Benjamin Braddock and Ann Bancroft as Mrs. Robinson was released. At his college graduation party, a party guest, Mr. McGuire, pulls Ben aside to give him a word of advice. That word is plastics. After this time, more and more plastic products were introduced. Containers of shampoo, baby wash,

condiments and innumerable other products went from being made from glass to being made from plastic. Car parts, plumbing pipes, wiring insulation and other products that were made from metal began to also be made from plastics. The technology has mushroomed with more and more applications where plastics are used.

The refinery in Marcus Hook changed hands a few times as Atlantic Refining Company merged with Richfield Oil to become ARCO. ARCO merged with PB Amoco and was later acquired by Sunoco which is how this pipeline got into Sunoco's hands. The Marcus Hook refinery closed in 2012 due to "deteriorating market conditions" which left the ME I pipeline unused. At some point after this happened, Sunoco decided to re-purpose the pipeline. In the more than 80 years since being constructed, a lot of things had changed around ME I. This didn't seem to be thought about by Sunoco. The rural farms had been developed into thriving suburban areas in both Chester and Delaware Counties. Homes, schools, nursing homes, 55+ community, shopping centers, offices, schools, apartments ... The list of owners of easements is varied and long. And the change of material carried and the pressure increase meant that soil contamination wasn't the only worry. The new products, ethane, propane and butane, are volatile & highly explosive. A leak would likely result in an explosion as these materials will easily ignite should there be a spark or other source that ignites the escaping gas. I've researched the devastating destruction that has occurred in other similar pipelines when there have been issue. I cannot fathom how any community in Southeast Pennsylvania could recover should there be an incident in this area like what happened in Sissonville, West Virginia in 2012. The ignition was immediate - as soon as the pipe ruptured from corrosion, the escaping gas ignited. There was no way to evacuate to safety as there was no notice nor time to evacuate. The leak had sat for a while before igniting or had found its way through multiple voids in the ground because it was in an area with karst topography, there would have been a much wider area of devastation.

From a common sense standpoint, the lives and wellbeing of tens of thousands of individuals were put at risk by Sunoco's siting decision. In addition to re-purposing the pipeline, Sunoco has decided to place 2 other pipelines in this easement. I see this as a convenience for them. Siting was not considered relative to the communities this pipeline goes through. Siting, unfortunately for the residents of Pennsylvania, is not regulated by any agency in the commonwealth but you would hope that the siting decisions of a public utility would take the lives and wellbeing of the population the utility serves into account when making decisions. Given the opposition that has happened with ME 1, 2 & 2X one can tell this is not the case.

Before construction of the 2 new pipelines began, people were told that the pipeline would be monitored by aircraft so trees that were removed could not be replanted as it would obstruct the view of the easement. This didn't make sense to me. If it was not OK to obstruct the view of ME 2 & 2X, why was it OK to block the view of ME 1? Shouldn't the easement have been cleared when the line was re-purposed so it could be monitored from the air? And why are these pipelines being constructed? The fictional, Mr. McGuire, summarized it well: Plastics. Much of what will be transported with be "cracked" and turned into plastic. Plastics have recently been in the news with countries like the United Kingdom and Taiwan banning certain plastic products. Places are not providing plastic straws to patrons because they can harm area animals. There are growing islands of plastic flotsam - bigger than Texas - creating hazards for marine life. The ingestion of plastic is found in 90% of seabirds and is slowing making its way into the human food chain as well. The process of turning raw material of ethane into plastic will also create heat and add to global warming. From my perspective, I see little public good that will come from the expansion of this public utility.

Given all the issues that have come up during construction - the inadvertent returns that spilled drilling fluid, the aquifers that were punctured causing wells to become contaminated or go dry, the fact that the whole community gets its water in the area of Exton/West Whiteland from the aquifers directly below the ME easement, the quality of life issues caused by drilling given the resultant noise and vibration - all these are reasons to have Sunoco pick a different route for this project.

At the end of the movie, *The Graduate*, Benjamin Braddock stops Mr. & Mrs. Robinson's daughter, Elaine's, wedding and they are seen catching a bus leaving lots of unanswered questions: Will Elaine and Ben get married? Will Elaine find out about Ben's affair with her mother? Will this effect Ben's and Elaine's fathers business relationship? The unanswered questions are because they didn't think through their whole plan. My feeling is that Sunoco didn't either. [I hope I didn't spoil the movie for you. There are interesting camera angles, double entendre as well as lots of good scenery and songs. Parsley, sage rosemary and thyme. I give it two thumbs up.]

Response

The Department acknowledges the commentator's comments regarding this proposed pipeline project. Though these comments appear to fall outside of our regulatory purview, please note that the permit modification applications were thoroughly reviewed by staff for conformance with the pertinent environmental statutes and regulations.

37. COMMENT

Please don't allow this drilling to happen. As a Realtor for 31 years, it's my professional opinion that all the people whose properties adjoin or are close to the pipeline, will experience a drop in their property values, and saleability of their homes.

I appreciate that Sunoco wants to make money, but so do all the property owners who have also invested quite a bit of their own money into their homes. We're talking 1000's of homes in congested and highly populated Chester and Delaware Counties.

If the aquifer is polluted for the public water supply, it will be disastrous to all the property owners who are effected. After the public water supply is polluted, what other recourse is there? This would definitely effect property values, not to mention health issues. Wouldn't this be a deep pocket law suit against the State, DEP, Sunoco, etc. There are a lot of lawyers living in Chester and Delaware Counties.

Please force Sunoco to get their product to Marcus Hook via some other means, not drilling underground through densely populated areas.

Response

With respect to the value of properties adjacent to pipelines, those issues fall outside the Chapter 102 and Chapter 105 application review process.

38. COMMENT

The tax-paying citizens along the Mariner East II pipeline demand that our government agencies protect our neighborhoods, our families, our habitat, and our watershed by holding Sunoco accountable and limit their ability to contaminate and destroy our environment. Our lives, property and vital resources are more important than corporate profits in Texas for a product that

will do nothing to increase American energy independence or even local jobs. Please serve the people of PA and not the corporate interests that continue to pollute our planet.

Response

The Department acknowledges the commentator's comments regarding this proposed pipeline project. Though these comments appear to fall outside of our regulatory purview, please note that the permit modification applications were thoroughly reviewed by staff for conformance with the pertinent environmental statutes and regulations.

39. COMMENT

Although living in the blast zone, i.e., now with a permanent and very real existential threat, has seriously degraded my sense of happiness and both my personal and financial security as well as palpably raised my sense of anxiety, I understand that the DEP is not interested in that and such comments will not be taken into consideration. Therefore I will limit my comment to regarding open trench digging. My home in Lynetree looks over Lynetree's beautiful "backyard" which is the area that runs above Michelle Drive. Every year, at least 10-20 times per year, this hollow area becomes flooded with rain, runoff, and melted snow, and a lake forms the size of which is rather striking to see. So most of the time the land is soggy, which gradually will tend to erode the scant four-foot earth covering of the pipeline thus exposing it eventually to freezing conditions in winter and heating from the summer sun. I am not an engineer, nor a scientist, but common sense tells me that the pipeline may also be impacted by the vibration of the heavy landscaping equipment that will be driven back and forth across it multiple times a day each week for four-to-six months out of the year, every year as well as by the various rodents who dig their dens in the area. As the aquifers become polluted the animal and plant life will be affected, as well as the human life from potential toxicity.

Response

With respect to pipeline construction in terrain that floods, and is subject to landscaping equipment and rodents, the general pipeline construction, restoration, and operation procedures generally preclude these types of forces from adversely affecting the pipeline. The construction, as proposed, should have no adverse impacts on human, animal, and plant life.

40. COMMENT

Sunoco, through its incompetence, lack of communication and professionalism, broken promises and violations, should not be allowed to continue this dangerous construction causing damage to people's property, wells, health, disrupting people's lives and putting them at risk.

Once negative news reports appeared in 2017, I contacted our Percheron Field agent about our concerns. He promised to discuss our concerns with Upper Management and get back to me asap. He repeatedly promises this for the next 5 months.

In our Reevaluation Report, our private well is measured as being 490 ft from the proposed HDD. It's 150ft away! Sunoco was out by 340 feet! After the water buffalo offer from Sunoco, I ask to see a contract or written agreement but -to my total disbelief -am told by Sunoco there is no contract. So what protection, remediation or compensation is there for us if there is damage caused by Sunoco? Percheron told me not to worry. Sunoco has qualified contractors to do the work and that they would obtain all the necessary paperwork and permits. Not true because the zoning officer at Edgemont Township informed me that, in fact:

- The Township struggled with Sunoco to gain compliance and get permits issued and safety inspections completed.
- Sunoco installed water buffalo's to properties without first contacting authorities for advice, permits or regulations.

What is it going to take to convince the relative authorities? A loss of life? National news reporters and cameras descending in our area, questioning why this was allowed to happen? And the subsequent prosecution of public officials for involuntary manslaughter as in the case of Flint, Michigan? That decision lies with the regulatory agencies, our public officials and our legislators. It's time to take a stand.

Response

With respect to the private well measurement, in early May Sunoco checked and determined the labels for wells were switched with another nearby well; the distances were accurate but the graphic labels indicating location were switched. A revised well map was submitted to PADEP.

The Department acknowledges the commentator's other comments regarding this proposed pipeline project. Though these comments appear to fall outside of our regulatory purview, please note that the permit modification applications were thoroughly reviewed by staff for conformance with the pertinent environmental statutes and regulations.

41. COMMENT

Sunoco Pipeline LP. has requested two permit modifications for work on the Pennsylvania Pipeline Project in West Whiteland Township:

Chapter 102 Permit No. ESG 01 000 15 001 Modification Request - E. Swedesford Road HDD 53-381

This request is due to a change in the methodology from a single long horizontal directional drill (HDD) to an open cut with some shorter auger bores and a shorter HDD under Valley Creek and Lincoln Highway. This change in methodology is the result of concerns from Aqua America regarding their Hillside Drive production well. A permit modification is needed to allow a larger limit of disturbance to accommodate the revised installation technique, as well as the associated revised erosion and sediment controls.

Chapter 102 Permit No. ESG 01 000 15 001 Modification Request - N. Pottstown Pike HDD 53-0370

This request is due to a change in the methodology from a single long HDD to a combination of open trenching and four conventional auger bores. A permit modification is needed to avoid geology which would make an HDD installation difficult.

West Whiteland Township has the following comments about the above referenced permit modifications, which also are repeated in the attached letter:

1) The PA Public Utility Commission recently issued an order reinstating service on Sunoco's Mariner East 1 pipeline, lifting an emergency order that suspended service after HDD installation apparently resulted in subsidence behind homes on Lisa Drive in West Whiteland Township. The PUC's order relied on the Bureau of Investigation and Enforcement Pipeline Safety Section's (BIE) concurrence with Sunoco's request for that action, which in turn relied on an evaluation conducted by BIE's geophysical consultant, ARM Group Inc. According to their report, ARM's concern that future HDD activities in the Lisa Drive area would likely result in additional subsidence features being formed and/or an expanded near ME1 was mitigated by Sunoco "changing the next pipeline installation in this area from an HDD installation to a trenching/direct burial installation."

West Whiteland's concern is that the change in installation from HDD that is at least implicitly required around Lisa Drive has not yet been evaluated in regards to the permit modifications referenced above. Pending confirmation of additional sections of the project to be converted from HDD to an alternate form of construction, we ask DEP to withhold approval of permit modifications for the two sections currently under review so that the cumulative impact of all nearby work can be evaluated and proper planning and coordination can be ensured.

2) Should DEP authorize approval for trenching ME2 and ME2X as requested in these permit modifications, both pipelines should be installed concurrently-to the extent possible - rather than causing an additional round of environmental disturbance and making nearby residents endure additional construction disturbance at a later date.

3) The modification to the Swedesford Road section includes a short HDD under Lincoln Highway and Valley Creek. To minimize the disturbance to nearby residents, drilling operations -and the loud equipment that accompanies it- should take place from the south side on the Laborers Training Center property, rather than from the north side next to homes in the Meadowbrook Manor neighborhood.

4) The Meadowbrook Manor neighborhood is a changing older development with narrow, residential roads that were never intended to accommodate long-term truck traffic use. To minimize the impact to the Meadowbrook Manor neighborhood, construction-related vehicles should be limited to accessing the work area from the parking lots of the Exton Square Mall and Chester County Library, rather than the roads of Meadowbrook Manor, except as absolutely necessary.

5) Meadowbrook Manor is prone to flooding and next to large commercial and institutional uses. The change to open trenching will increase the number of trees to be removed or cut back, with the potential to increase flood risk and reduce the existing buffer between the neighborhood and the adjacent mall and library activities. Care should be given to the time of year when trees are cut back to protect the health of those trees and compensatory plantings should be required for the trees to be removed.

6) In response to the heightened concern about the impact of these sections of ME2 and ME2X, we urge Sunoco to host a kickoff meeting with affected neighbors to provide an

overview of the planned work, a work schedule and contact information for anyone who might have questions during construction.

7) Many people appreciated that DEP officials conducted the public hearing on April 30th for these permit modifications. Given the heightened interest and concerns about this project, if additional permit modifications are requested, we urge DEP to conduct public hearings for those matters as well.

Thank you for this opportunity to comment on the permit modifications.

Response

- a) Incremental impacts of this permit modification have been added to the cumulative impacts of the entire Project, in terms of stream and wetland acreage impacts.
- b) The short HDD is no longer proposed under Valley Creek and Lincoln Highway. Instead, a conventional bore is proposed under Valley Creek and its associated forested wetland, and a FlexBor trenchless technique is proposed under Lincoln Highway.
- c) With respect to flooding and tree removal, see response 5-1(a), 5-a(c), and 10a.
- d) The Department acknowledges the commentator's other comments regarding this proposed pipeline project. Though these comments appear to fall outside of our regulatory purview, please note that the permit modification applications were thoroughly reviewed by staff for conformance with the pertinent environmental statutes and regulations.

42. COMMENT

I'M CONCERNED AND SCARED!!!

I live less than three miles from the proposed Mariner East pipeline. What safety regulations are in place? What will happen if the gas escapes? Since it's odorless will there be any time to evacuate and what is the evacuation plan? I am also concerned about the value of my property. Please advise.

Response

- a) With respect to "blast zone" and pipeline safety, see responses 3-a and 7(b).
- b) With respect to an evacuation plan, that issue falls outside the Chapter 102 and Chapter 105 application review process. Local Fire Departments and the Chester County Department of Emergency Services may be contacted regarding emergency plans which should include information for evacuations, sheltering in place and other possible response activities. Sunoco has indicated that it coordinated with emergency responders in Chester County.
- c) With respect to the value of your property, that issue falls outside the Chapter 102 and Chapter 105 application review process..

43. COMMENT

I am deeply worried about the possible permission for Sunoco to continue and to enhance drilling in the PA area. They are disrupting many homes and communities in order to ship oil to foreign shores and to benefit the proceeds for their own company. They are committing a travesty on PA residents to line their own pockets.

I respectfully request that this permission be denied. Furthermore, I believe that Sunoco should not be allowed to continue their disruptive current drilling in the PA area.

Thank you for listening.

Response

- a) The current proposal involves a combination of trenched, conventional bore, and FlexBor construction methods. FlexBor is a type of horizontal directional drilling activity. See responses 1(a) and 2(a).
- b) The Department acknowledges the commentator's other comments regarding this proposed pipeline project. Though these comments appear to fall outside of our regulatory purview, please note that the permit modification applications were thoroughly reviewed by staff for conformance with the pertinent environmental statutes and regulations.

44. COMMENT

I am a concerned mother of three beautiful, intelligent future contributing members to society, living in Uwchlan Township. The pipeline runs right through my neighborhood. Not a single one of us that's concerned about the safety of our children and our entire community has anything against pipefitters or the "safest" means to transport volatile gasses to get overseas. We are concerned with keeping our families alive and healthy. If I had to live without ever seeing another piece of plastic again, I would do it in a millisecond if it meant that my kids would grow up with clean drinking water, no threat of explosion near their home or all the schools they will ever attend, the stores they shop in, the parks they play in, etc. I want to see them grow up.

Putting Sunoco first is ethically wrong. Our lives and homes are being put on the line to make it a little easier for a billion dollar company to cut corners in order to make themselves more money. The first pipeline was put in before all of our houses were built! It is dangerous and reckless to allow this corporation to dig up the easement and put more pipelines in!

We moved here because Chester County is one of the best places to raise a family, and for the school district. Now, in the near future, we will live in constant fear of Sunoco's many, many mistakes as this dangerous liquid flows just underground from us. Their digging has caused so many issues in our area, from ruining wells to creating a sinkhole. And after hearing many of the residents speak at the hearing, you can see how it will continue to wreak havoc here. Please, for the sake of our environment, and more importantly the humans that reside here, do not allow these permit modifications.

People over Pipelines is not just a catchy saying. It's something that should be our right as human beings. Paying off constant violations and having no transparency at all, should not be something that's allowed. With their safety record, and no safety measures in place, or honestly no ability to have safety measures in place, short of adding an odor to the gas so that we have a chance of getting out alive, it's negligent to allow Sunoco to keep moving forward.

Response

The Department acknowledges the commentator's comments regarding this proposed pipeline project. Though these comments appear to fall outside of our regulatory purview, please note that the permit modification applications were thoroughly reviewed by staff for conformance with the pertinent environmental statutes and regulations. With respect to pipeline safety, see response 3-a.

45. COMMENT

I live in Meadowbrook Manor and want to know Why is The Evacuation Plan a Secret?? Is untenable? In my mind secrets equal shame.

What is Sunoco ashamed about if they believe this pipeline is safe. My family and I are not expendable. DEP you DO NOT have to protect Sunoco. You have to protect me, my family and the environment.

Please Do Not allow Sunoco to put this pipeline through Meadowbrook Manor. We have residents who could never evacuate in time if there was a leak.

Response

See response 42(b).

46. COMMENT

I grew up in western PA. Attended college at Carnegie Mellon, Temple and Thomas Jefferson and now own a home in Exton PA.

I have lived and been educated in the great Commonwealth of Pennsylvania my entire life because I love it here.

The Mariner East 2 pipeline runs alongside the entire back of my property on which I have built an amazing and beautiful environment for my family which is full of natural flora and fauna. My family and I have worked diligently to pay off our mortgage and now we own our Exton home. The Mariner East 2 pipeline will transport natural gas liquids (NGLs) which under pressure convert to hazardous highly volatile liquids that directly threaten our home and the environment that surrounds our home that includes forests, streams and a bird sanctuary.

Living in the blast zone of the Mariner East 2 pipeline means if this pipeline is allowed to exist, or be modified and utilized to transport NGLs that our living environment as well as that of the wildlife that we enjoy every day will be ruined.

This fear of the impending environmental impact is not unfounded as to date sink holes, contaminated water, sickened wildlife, diseased trees are real consequences that are occurring now due to mariner East pipeline drilling in Chester County.

Stop this drilling now. Pennsylvania cannot benefit from this environmental raping of our lands and the poisoning of our flora, fauna, trees and waterways.

Please do not take my homeland away from my family. Please stop the Mariner East 2 pipeline project now and help me defend what I love.

Response

The Department acknowledges the commentator's comments regarding this proposed pipeline project. Though these comments appear to fall outside of our regulatory purview, please note that the permit modification applications were thoroughly reviewed by staff for conformance with the pertinent environmental statutes and regulations. With respect to "blast zone" and pipeline safety, see responses 3-a and 7(b).

47. COMMENT

Hello, I want to stop the Mariner East 2 Pipeline from finishing completion. I live one mile from the pipeline and am very concerned about my safety. A gas leak will not be detectable in time for my evacuation, especially if I am sleeping.

Residences near the Limerick Nuclear Power Plant have evacuation notices and alerts they get from PECO

annually. How will local neighborhoods be warned of a gas leak? How quickly do we need to evacuate before my health and well being is harmed? I fear Sunoco is not to be trusted with this project and it should be shut down.

Response

See response 42(b).

48. COMMENT

Just to the north of us, Sunoco has made serious mistakes. Wells were destroyed. Inadvertent returns have polluted streams, retaining walls have cracked and crumbled, drilling mud has gushed into yards.

Just to the south of us, Sunoco has made serious mistakes. Giant sinkholes have exposed the ME1 pipeline, property values have been destroyed, lives have been disrupted, and families forced out of their homes.

Sunoco has left a path of destruction.

WE ARE NEXT.

Sunoco plans to come through our neighborhood, a low lying wetland, using three different methods: trench, flexbore and HDD. Flexbore is a technique less than two years old. Has it been used in delicate wetlands? Has it been tested in areas with karst formation? Will the percussion hammer cause shifting of the limestone? Will the vibration damage homes?

Will our well be impacted?

HDD will be used in the back of the neighborhood. Will those homes be subject to sinkholes just like the homes, one mile to the south, at Lisa Drive? Will our pond and streams be polluted? Will the removal of trees in this delicate ecosystem cause flooding?

Sunoco has made many serious mistakes. They have the worst safety record in the industry.

WE ARE NEXT

How on earth can we possibly feel confident?

How on earth can the DEP feel confident confident that they are protecting citizens, our property and the natural landscape?

The fear that we feel is justified.

If a construction company damaged the home to the left of you causing their roof to leak, and then worked at the home to the right of you, and the roof caved in, would you hire them to work on your home?

When Sunoco makes their next mistake, and surely they will, what will be harmed this time? We cannot take that chance. Please deny this permit.

Response

- a) Point of clarification, the proposed plan is now a combination of open trench, FlexBor, and conventional bore. FlexBor is a type of HDD activity.

- b) With respect to the pond and streams, see responses 4(a), 5-a(a), 5-a(c), and 7(c).
- c) With respect to tree removal and flooding, see responses 5-a(a), 5-a(c) and 10(a).
- d) The Department acknowledges the commentator's other comments regarding this proposed pipeline project. Though these comments appear to fall outside of our regulatory purview, please note that the permit modification applications were thoroughly reviewed by staff for conformance with the pertinent environmental statutes and regulations.

49. COMMENT

I strongly oppose horizontal directional drilling, conventional bore and open trench digging at the proposed locations in West Whiteland township for the Mariner East 2 pipeline, under the permit modifications proposed by Sunoco.

The unique geology of this area makes it unstable for drilling because of Karst formations. Sunoco and the DEP are aware of these risks, yet still originally approved permits. The previous drilling in this location has caused three sinkholes on Lisa Drive, a location close to Amtrak lines. This risks residential homes and property, and exposes the original Mariner East pipeline. I believe this issue alone is reason enough to discontinue all pipeline construction in this area! This busy area is home to many local and state roads, businesses, homes, shopping centers, a library and little league fields. Any further construction will have the potential risk of causing more sink holes, drilling fluid spills, violations and damaged wells and aquifers. There will also be loss of trees, adding to the possibility of greater flooding. Fracking for the natural gas liquids to be transported in the Mariner East pipelines releases gases into our atmosphere, continuing to cause climate change. Sunoco has no regard for public or environmental safety; and the company continues to display its disregard with over 100 spills of drilling fluid and 50 violations, so far, associated with the project. Pennsylvania officials are allowing Sunoco to exploit our people and environment for corporate profits. These highly volatile liquids are being transported to Europe to make plastic. Sunoco has not looked into rerouting the pipeline, and has not performed a risk analysis as recommended. Since it is not safe to drill in land with Karst formations and not safe to drill in populated counties, this pipeline does NOT belong here at all! The Pennsylvania constitution calls for clean air, water and land for citizens of Pennsylvania, and we should not have to risk our lives for this dangerous project. Explosive natural gas liquid pipelines have no place in highly populated areas like Delaware and Chester Counties.

I personally don't understand why this project was approved in the first place and I support a complete shutdown of the entire Mariner East pipeline project. I believe that the future of energy production is in 100% renewables and I think Pennsylvania should be investing in producing this cleaner form of energy. I hope DEP, PUC and Governor Wolf can act responsibly and stop the assault on Pennsylvania by denying permit modifications for West Whiteland township.

Response

- a) Point of clarification, the proposed plan is now a combination of open trench, FlexBor, and conventional bore. FlexBor is a type of HDD activity.

- b) The proposed construction methods are intended to reduce the risk of impacts as a result of the karst terrain. See responses 1(a), 2(a), 4(c), and 5-a(d).
- c) With respect to pipeline safety, see response 3-a.
- d) With respect to alternatives, see responses 1(b), 2(b), and 4(b).
- e) The Department acknowledges the commentator's other comments regarding this proposed pipeline project. Though these comments appear to fall outside of our regulatory purview, please note that the permit modification applications were thoroughly reviewed by staff for conformance with the pertinent environmental statutes and regulations.

50. COMMENT

Comments by May 11, 2018 to DEP on open-trench method of laying ME II pipeline in Exton, PA area, 9 May 2018.

To Whom this may Concern:

No further work on the ME II in Whiteland Township should be allowed, at all.

It does not matter what method Sunoco is proposing for work on the Mariner East II. They should not be allowed to do it in Exton at all, end of story. Open trench or horizontal drilling, makes no difference. Both are a bad idea.

Sunoco has shown themselves, with over 50 infractions against code this past year alone, to be egregiously reckless in their desire to bulldoze their way through with this ill-conceived plan. Already they have ruined many people's wells and contaminated numerous bodies of water.

Our precious water is finite, and must not be tampered with, especially by a greedy corporation which simply cares about its bottom line and shareholders' profits.

The fact that sinkholes have appeared, means that more could be on the horizon. An 80-year-old pipeline, or a brand new one - either one - which crosses a sinkhole, is liable to bend. A bending pipe is liable to leak. A leak of ethane or butane will cause a huge explosion, resulting in Joss of properties, and more importantly - loss of human lives.

It is just not worth it. I live just 5 miles away from Marcus Hook, Pennsylvania, the endpoint of Mariner East. If there is an explosion there, my house is in the evacuation zone.

Please do the right thing, and say no to Sunoco. No more drilling of any kind in Exton. Thank you for considering my views.

Response

The Department acknowledges the commentator's comments regarding this proposed pipeline project. Though these comments appear to fall outside of our regulatory purview, please note that the permit modification applications were thoroughly reviewed by staff for conformance with the pertinent environmental statutes and regulations. With respect to "blast zone" and pipeline safety, see responses 3-a and 7(b)

51. COMMENT

I am writing to provide reasons why Sunoco should not install Mariner East pipelines carrying hazardous, highly volatile materials through the residential/commercial/ recreational heart of West Whiteland Township. My opposition is based on several factors. First, is the high

consequence nature of Exton. Second, is the geological and ecological terrain that both science and common sense suggest is not appropriate for installation of hazardous pipelines. Third, is Sunoco's precedent of granting "alternatives" that reroute Mariner East for reasons less conspicuous and imperative than those evident throughout Chester County. Fourth, is evidence that Chester County deserves special attention and careful deliberation because the magnitude of its risk exceeds that of any other portion of this 350-mile pipeline project

1. High Consequence Nature of Exton. In their "Horizontal Directional Drill Analysis Swedesford Road Crossing" (SPLP HDD S3-0381), Sunoco Pipeline L.P. acknowledges that West Whiteland Township "is a very developed area, having both residential areas (cul-de-sac and developments) and industrial/commercial areas (shopping malls and assorted businesses)." In fact, the short distance between Pottstown Pike (Route 100) and Lincoln Highway (Route 30) includes:

- Assorted individual businesses;
- Target;
- Fairfield Place Shopping Center occupied by Giant, Staples, numerous retail stores, and several restaurants;
- Sunrise Senior Living Facility;
- Aqua America's Hillside Drive production well;
- Exton Commons, a 60-unit center with medical and professional offices;
- Meadowbrook Manor Park that includes two Little League fields, a playground, and tennis courts;
- Chester County Library - it should be noted that there is a narrow 64-foot gap between the library and the home at 408 Winding Way-if ME2 and ME2x are installed, four pipelines would run between these buildings, including two older 8-inch steel pipes already in place;
- Exton Mall with retail, restaurant, and Main Line Health Care medical facilities;
- Two residential neighborhoods -Swedesford Chase and Meadowbrook Manor.
- Two busy state highways, Route 30 and Route 100

2. Geology and ecology in the area of the Swedesford Road Crossing. West Whiteland Township sits on karst geological formations. Disruptions of these formations, with their pockets and fissures, create sinkholes and contaminate water supplies. To the south of us, Sunoco caused multiple sinkholes on Lisa Drive because they underestimated the faults and fissures in our area. To the north of us, they contaminated multiple wells because they ignored the hydrology of our area. The fragile nature of the karst geology in the Swedesford Road Crossing is exemplified by the fact that in 2002 Chester County Library built an addition that is located within feet of the intended path of M E2 and M E2x. During construction it was necessary to fortify the addition's foundation with "grout" that was pumped through hoses by subcontractor Eastern Gunite. Exton's karst geology is porous and fractured and our high consequence area would be at risk with multiple hazardous pipelines running through this terrain.

Additionally, this proposed Mariner East route traverses a wetland, West Valley Creek, and an identified FEMA floodplain. Sunoco's revised installation plan (open cut, flex-bore, and HDD) requires damming West Valley Creek in an area categorized as a 100-year floodway. Sunoco's plan states "an open cut workspace with a width of 75 feet will be required to accommodate pipeline and provide sufficient space for trench excavation, spoil storage, and allowing the pipeline to be installed with sufficient separation from the existing 8" pipeline for integrity

management" In the process of crossing this area, Sunoco would destroy mature trees, vegetation, and the stream's riparian buffer that serves as a sanctuary for wildlife.

If Sunoco's current proposal is approved, these pipelines, with the capacity of transporting tens of millions of gallons of hazardous, highly volatile liquids on a daily basis, will "require a minimum of 48-inches of cover over the installed pipeline beneath the bottom of the watercourse." This is dangerous and unacceptable for such a densely developed, well-used hub.

3. Alternative routes. Sunoco's plan follows the path of Mariner East 1, an 8" steel pipe originally laid during 1932 to transport petroleum products-not highly hazardous liquefied gases -from the Marcus Hook refinery for use in Western Pennsylvania. They claim they want to follow the course of this old but "repurposed" line so they will not create a new "green field." This appears to be another attempt to make things simple for themselves while ignoring the welfare and wishes of the public. There is ample precedent for the establishment of alternative routes.

Sunoco Pipeline L.P.'s Pennsylvania Pipeline Project Alternatives Analysis (revised March 2016) presents many examples of minor and major route alternatives that were implemented. For instance, the Cresson-Altoona Southern Bypass (approximately 20 miles) was adopted to avoid "the heavily developed City of Altoona and the Allegheny Portage Railroad National Historic Site." The Blairsville Northern Bypass (approximately 5.5 miles long) was adopted to "avoid a highly developed area including residential, commercial, and recreational uses (i.e. Chestnut Ridge Golf Course, etc.)." If Cresson-Altoona and Blairsville were granted bypasses, Exton would certainly seem worthy of consideration.

Alternatives are available in the area that would be less disruptive, damaging, and dangerous. For instance, the western section of Exton Park is an open space that would pose a reduced risk to the environment and the citizens of West Whiteland Township. It would also provide a direct link to the already positioned line along Ship Road.

4. Why Chester County deserves special attention and careful deliberation. Chester County is disproportionately at risk of harm from Mariner East To highlight the extent of the danger, it is helpful to examine the maximum capacities of these pipelines and the number of people residing within their blast zone.

MARINER EAST PIPELINE CAPACITIES

The volume of an oil barrel is 42 gallons. Table 1 shows the quantity of natural gas liquids moving across Pennsylvania with Sunoco's three pipelines operating at full capacity. Most of these materials (ethane, propane, and butane) are scheduled for export to European petrochemical manufacturers.

Table 1

Daily Capacity of Mariner East Pipelines			
Pipeline	Diameter	Barrels	Gallons
Mariner 1	8-inch	70,000	2,940,000
Mariner 2	20-inch	450,000	18,900,000
Mariner 2X	16-inch	250,000	10,500,000
TOTAL		770,000	32,340,000

WHO IS AT RISK?

According to written testimony presented by the Middletown Coalition for Community Safety (November 2016), a pipe containing natural gas liquids (NGLs) that leaks and explodes creates a blast zone of approximately 1100-1500 feet, with thermal impacts (such as severe burns or property damage) up 2200-3000 feet.

FracTracker (December 2017) estimates that 105,419 Pennsylvanians live within Mariner East's blast zone; almost one-third of these residents live in Chester County. Table 2 rank orders the five Pennsylvania counties whose populations are most at risk.

Table 2

Residents within the Blast Zone of Mariner East Pipelines		
Rank	County	Number of residents
1	Chester	31,632
2	Delaware	17,791
3	Westmoreland	11,183
4	Cumberland	10,498
5	Berks	7,644

Further highlighting the county's vulnerability, FracTracker found that thirteen (32.5%) of the 40 Pennsylvania public and private schools lying within Mariner East's thermal impact zone are located in Chester County.

Thank you for your consideration.

Response

- a) With respect to pipeline safety in densely developed and actively used areas, see responses 3-a, 7(b) and 10(e).
- b) With respect to karst geology, see responses 1(a), 2(a), 4(c), and 5-a(d).
- c) With respect to West Valley Creek and the associated forested wetlands, this area will be crossed using conventional bore, avoiding impacts to these resources. No damming of these resources is proposed as part of this crossing method.
- d) With respect to alternatives, see responses 1(b), 2(b), and 4(b).
- e) The Department acknowledges the commentator's other comments regarding this proposed pipeline project. Though these comments appear to fall outside of our regulatory purview, please note that the permit modification applications were thoroughly reviewed by staff for conformance with the pertinent environmental statutes and regulations.

52. COMMENT

Sunoco has shown themselves, with over 50 infractions against code this past year alone, to be egregiously reckless in their desire to bulldoze their way through with Mariner East II Project. Already they have ruined many people's wells and contaminated numerous bodies of water.

Many Exton residents now have sinkholes in their backyards, thanks to Sunoco.

It does not matter what method Sunoco is proposing for work on the Mariner East II ... They should not be allowed to do it in Exton at all. Open trench or horizontal drilling, makes no

difference. Both are a bad idea. It is particularly upsetting that they would even consider putting a pipeline near such highly trafficked areas as the Chester County Library in Exton!! Please say no to Sunoco. No more drilling of any kind in Exton. Thank you for considering my views.

Response

The Department acknowledges the commentator's comments regarding this proposed pipeline project. Though these comments appear to fall outside of our regulatory purview, please note that the permit modification applications were thoroughly reviewed by staff for conformance with the pertinent environmental statutes and regulations.

53. COMMENT

Please protect the water supply at all costs. The existing drilling damage as well as future risk, to Aqua's and to private wells, is too much for us, the residents, to pay in costs. Even if some drilling takes place closer to the surface, as proposed, easier spread of the contamination risk from the spaces in our karst geology is very concerning.

Please preserve the little remaining wetlands in Chester County for wildlife, environmental stability, and protection from increased flooding and erosion. I remember and miss when there were much more wetlands in this area.

I don't want to miss the trees and green space around the library, with its fragile wetland location and ground that had to be shored up prior to remodeling. I don't want to mourn the loss of the wildlife and its certified habitat along the Chester Valley Trail. Children deserve clean, green playing spaces like the ball field and playgrounds in Exton, and not just reminiscences of them. Seniors and adults deserve clean air, land and water, near their homes, workplaces, places of worship and train tracks, and not just memories of a healthy environment, a properly flowing Valley Creek to help manage flooding and erosion, or a house with no sinkholes out back.

Please consider the archaeological remnants of our first inhabitants. Evidenced by archaeological artifacts found in this area, Native Americans occupied this area. The three archeologically significant sites have not been factored in any trenching plans.

Regarding the methods of construction, the heavy vehicles damage the earth, compressing it and increasing runoff. And, what is the specific evidence that the FlexBore technology will prevent frac-out? Our neighborhood doesn't want to be the testing ground for using it in karst and in wetlands. Are there examples of FlexBore being used in similar conditions, with the wetlands, land, water and people's homes / foundations fully preserved after drilling takes place?

The deficiencies you, the DEP identified were never resolved in February 2017 for the permitting of this work.

This new proposed drilling method was deemed to be less environmentally acceptable by Sunoco and DEP until HDD didn't work. So this modified plan should not be approved.

Finally, the human safety aspect needs mention. The flowing of these odorless, volatile substances through our county, through and past neighbors' homes as well as public accommodations, is very frightening and feels like a violation of our rights as citizens to a safe environment. The history of accidents in less populated areas supports that fear and frustration. Please consider the above concerns. Thank you.

Response

- a) With respect to protecting water wells, the proposed construction methods are intended to reduce the chance of impacting water supplies. See responses 1(a) and 2(a).
- b) With respect to preserving wetlands and addressing flooding, see responses 4(a), 5(a), and 10(a).
- c) With respect to the archaeological sites, see response 8-b(e).
- d) With respect to FlexBor preventing frac-out, see response 5(b).
- e) With respect to pipeline safety, see responses 3-a.

54. COMMENT

North Pottstown Pike Crossing - SPLP HDD No. S3-0370

Deny the Chapter 102 permits for the Swedesford Road Crossing and North Pottstown Pike Crossing. The flooding situation in our neighborhood is precarious. I have watched one too many times as the water breached Pond B-11 and threatened my property. The plans for staging the trenching and boring include the removal of too many trees. Trees that we depend on to keep the flooding in check. How in the heck is Sunoco Logistics permitted to open trench and bore right through a FEMA-designated flood zone?

Deny the Chapter 102 permits. This construction threatens the health of our public Aqua wells on Hillside and the private wells on Exton Lane. There is no reason to believe that Sunoco's construction methods will not impact the aquifer feeding these wells. In fact all reason leads one to believe that our aquifer in this fractured karst geology WILL BE impacted. Do NOT grant the permit modifications.

Demand that a detailed alternate route analysis be provided by Sunoco.

You have no idea what this SuNOco project is doing to me & my neighborhood. I have had a sick feeling for months. Please consider our pleas & do the right thing. Thank you.

Response

- a) With respect to flooding, tree clearing, Pond B-11, and flood zones, see responses 4(a), 5-a(a), 5-a(c), 7(c), and 10(a).
- b) With respect to Aqua wells and karst geology, see responses 1(a), 2(a), 4(c), 5-a(b), and 5-a(d).
- c) With respect to alternatives, see responses 1(b), 2(b), and 4(b).

55. COMMENT

I moved into my neighborhood right before construction started on the Mariner East 2 pipeline. I saw the yard signs protesting the pipeline, but it didn't deter me from purchasing a home along with my husband and two young daughters aged 6 and 2. I honestly thought I could trust the DEP and even thought I could trust Sunoco with ensuring the installation was proper and safe and, when in service, the pipeline would continue to be safe. We settled into our home and as the weeks and months passed, I've been continually horrified, dismayed, and completely

disappointed by the lack of respect for the citizens affected or potentially disastrously affected by the installation and use of this pipeline. So many errors on the part of Sunoco have caused undue stress and harm to the people of the affected counties and their properties.

This pipeline is the antithesis of what I'd expect the DEP to be in favor of. The toxic and explosive liquids flowing just feet from our home are being sent overseas to make plastic. Plastic which takes so long to biodegrade and is so very harmful to our planet and wildlife. I'm ashamed the US is so far behind in environmental conservation and I'm totally dismayed it's happening right in my own back yard. I homeschool my two children, therefore we spend a lot of time in our beautiful home and yard. I fully expect that we will be completely vaporized or suffocated if we happen to be home when a leak happens. Given Sunoco's track record in the past year, this seems inevitable.

Parents already worry so much for their children's safety and well being even when they don't live near a ticking time bomb of a pipeline. Please. I implore you. Reconsider allowing Sunoco to gamble with our lives and the lives of so many within our densely populated area. This is not the location nor is it the time in history to be installing backwards thinking infrastructure that is dangerous.

It seems clear to me that a company with such a tarnished past and present of fatal mistakes should not be permitted to risk our lives for the sake of cash.

Thank you sincerely for reading my message. This is something weighing on my mind every day.

Response

The Department acknowledges the commentator's comments regarding this proposed pipeline project. Though these comments appear to fall outside of our regulatory purview, please note that the permit modification applications were thoroughly reviewed by staff for conformance with the pertinent environmental statutes and regulations.

56. COMMENT

Remarks to DEP

This request should be denied.

This company has one of the worst safety records in the industry. It has arrogantly & blatantly disregarded safety measures & the permitting process itself.

It has shown itself to be a bad actor who cannot be trusted to abide by any permit, no matter what it has agreed to in writing.

It does not merit any consideration for further permitting.

It does not merit any business relationship, period. This is a corporation seeking to expand its business, & profits, in our state. If this corporation refuses to obey what few regulations we do have, this government is under no obligation to continue doing business with it. In point of fact, this government is obligated to its citizens, to their protection, & to the welfare & safety of the commonwealth.

And what is Sunoco Logistics expanded business? It's not business as usual; it's not transporting natural gas, but the transporting of a new combination of highly volatile gases: ethane, butane & propane through densely populated areas. Allowing this business to go forward without, at the very least, a risk assessment of the danger of a leak, of an explosion, of a toxic vapor cloud, is not just mismanagement of the highest order, but Congress' complete abdication of its oversight role & legislative responsibility. It is unconscionable.

Consequently, it is we, the residents & taxpayers, who will see virtually no economic benefit, while being coerced to put our lives & our property at risk - with no legal redress available to us. It is beyond time for this government, at all levels, to exercise leadership & oversight of a state-wide exploitation by private industry, for private, obscene gain.

Response

The Department acknowledges the commentator's comments regarding this proposed pipeline project. Though these comments appear to fall outside of our regulatory purview, please note that the permit modification applications were thoroughly reviewed by staff for conformance with the pertinent environmental statutes and regulations.

57. COMMENT

I am strongly opposed to these following permit requests of Sunoco Logistics:

- 1) Swedesford Road Crossing,
- 2) SPLP HDD No. S3-0381,
- 3) North Pottstown Pike Crossing and,
- 4) SPLP HDD No. S3-0370

For the following reasons:

- 1) The drilling process as well as fluids will corrupt the aquifer due to the nature of the underlying geology in ways that can not be fully estimated now but are already occurring In Berks, Chester, Delaware and Lebanon County pipeline sites. It isn't clear to the public that the drilling fluids have been proven to be safe, nor that private well and sewerage systems will remain unpoluted.
- 2) The proposed pipeline path through downtown Exton endangers one of the few wetlands still remaining in the area.

For these reasons, as well as substantial public safety and urgent energy policy considerations, I encourage you to use your authority to deny these permits.

Response

- a) With respect to the construction methods, the proposed plan is now a combination of open trench, FlexBor, and conventional bore. FlexBor is a type of HDD activity. See responses 1(a) and 2(a).
- b) With respect to karst geology, see response 4(c) and 5-a(d).
- c) With respect to the wetland in Exton, see response 4(a).
- d) With respect to pipeline safety, see responses 3-a.

58. COMMENT

I strongly oppose Horizontal directional drilling, conventional bore and open trench digging at all proposed locations in West Whiteland township for the Mariner East 2 pipeline, under the permit modifications proposed by Sunoco. The unique geology of this area is unstable for any drilling due to karst formations. Sunoco and the DEP are aware of the risks to drilling, yet still approved permits the first time. Due to previous drilling at this location there are already three sinkholes on Lisa Drive, close to Amtrak lines, risking residential homes and property, and

exposing the original Mariner East pipeline. This alone is reason enough to discontinue all construction in this area! There are many local and state roads, businesses, homes, shopping centers, a library and little league fields in this busy area. Any further construction will have the potential risk of even MORE sink holes, drilling fluid spills, violations and damaged wells and aquifers. There will also be loss of trees, adding the possibility of flooding. Fracking for the natural gas liquids to be transported in the Mariner East pipelines releases gases into our atmosphere, continuing to cause climate change.

Sunoco has no regard for public or environmental safety; and they continue to display that with over 100 spills of drilling fluid and 50 violations on the project! Pennsylvania officials are allowing Sunoco to exploit our state and citizens for corporate profits. These highly volatile liquids are being transported to Europe to make plastic. Citizens of Pennsylvania deserve clean air, water and land as the Pennsylvania constitution states, and should not be risking their lives for this dangerous project. Explosive natural gas liquid pipelines have no place in highly populated counties, such as Delaware and Chester County. Sunoco has not looked into rerouting the pipeline, and has not performed a risk analysis as recommended. If it's not safe to drill in Karst land and not safe to operate in populated counties, then these pipelines do NOT belong here at all!

Furthermore I support a complete shut down of the entire Mariner East pipeline project. Pennsylvania has been one of the leading states in energy for years, but the future of the energy production is in 100% renewable energy. The rest of the world in the Paris Climate Accord is transitioning to a carbon free planet. We need to continue to be a leader in the world and not be left behind in yesterday's destructive technology! I hope the DEP, PUC and Governor Wolf can do the right thing and stop the assault on Pennsylvania, by denying permit modifications for West Whiteland township. Thank You.

Response

- a) Point of clarification, the proposed plan is now a combination of trench, FlexBor, and conventional bore. FlexBor is a type of HDD activity.
- b) The proposed construction methods are intended to reduce the risk of impacts as a result of the karst terrain. See responses 1(a), 2(a), 4(c), and 5-a(d).
- c) With respect to loss of trees and flooding, see responses 5a-(a), 5-a(c), and 10(a).
- d) With respect to pipeline safety related to existing development and little league fields, see responses 3-a, 7(b) and 10(e)
- e) The Department acknowledges the commentator's other comments regarding this proposed pipeline project. Though these comments appear to fall outside of our regulatory purview, please note that the permit modification applications were thoroughly reviewed by staff for conformance with the pertinent environmental statutes and regulations.

59. COMMENT

The Marcellus Shale Coalition (MSC) was formed in 2008 and is comprised of approximately 220 producing, midstream, transmission and supply chain members who are fully committed to

working with local, county, state and federal government officials and regulators to facilitate the safe development of natural gas resources in the Marcellus, Utica and related geological formations. Our members represent many of the largest and most active companies in natural gas production, gathering, processing and transmission in the country, as well as the suppliers and contractors who service the industry.

The MSC supports the permit modification applications submitted by Sunoco Pipeline, LP to change the pipeline installation methodology for two construction locations of the Mariner East 2 pipeline in West Whiteland Township, Chester County. With respect to Major Modification 1 along East Swedesford Road, this proposed change would address concerns raised by Aqua America related to a nearby public water supply well. By avoiding the utilization of horizontal directional drilling (HDD) along the entirety of this specific segment of the project, and instead utilizing a partial open cut, conventional boring and a shorter HDD, potential impacts to both the public drinking water supply, as well as other environmental sensitive areas, can be avoided.

Major Modification 2² in the area of North Pottstown Pike represents an updated methodology based upon an in-depth hydrogeology analysis and seismic testing. More extensive testing and evaluation done in preparation for the Department-approved HDD determined that the proposed path was in close proximity to existing vertical fractures and faults, with enough subterranean voids, as to make an inadvertent return likely during the construction phase. To avoid this possibility, the proposed permit revision proposes to utilize an open trench approach and four conventional bores. To facilitate this revised approach, a larger temporary surface disturbance is necessary, along with the requisite erosion and sediment controls.

The completion of the Mariner East 2 pipeline system is critically important to enhancing the market development of Pennsylvania's natural gas liquids market. It will create economic opportunities on both ends of the pipeline, while supporting thousands of construction and service related jobs along the pipeline route. Additionally, Mariner East 2 will provide crucial delivery points for Pennsylvania-produced propane to southeast Pennsylvania and beyond at a time when the region has been exposed to critical propane shortages in recent years.

The development of the nation's energy resources is also critical to strengthening our geopolitical interests, while enhancing our Commonwealth's environmental efforts to reduce harmful emissions and achieve significant carbon emission reductions. Pipeline transport has been demonstrated to be far and away the safest manner in which to transport natural gas liquids, and these benefits will begin to be realized once Mariner East 2 is placed into operation. These proposed permit modifications are environmentally responsible and responsive to concerns which have been expressed locally. The MSC urges the Department of Environmental Protection to approve these permit modifications, which were originally submitted in October 2017, in as timely a manner as possible.

Thank you for your consideration of this request and comments. Should you require any additional information, please do not hesitate to contact me.

Response

The Department acknowledges the commentator's comment regarding this proposed pipeline project. The permit applications were thoroughly reviewed by staff for conformance with the pertinent environmental statutes and regulations.

60. COMMENT

As I consider the conditions that will be caused at the rear of my property at 108 Hillside Dr., M.M. Exton, I find it unthinkable that no one has brought up the aftermath of the deforestation of the land behind my house. Flooding is a regular issue in this area even with all the vegetation that is there now. By mowing/digging up ALL this soil eroding cover and leaving behind MUD the flooding will increase in volume and spread farther toward the houses along this trenched area.

It is grade school science that with NO vegetation to slow the speed of the water flow the erosion and flooding will greatly increase. I CAN'T AFFORD TO MOVE OR REDO MY ENTIRE HOUSE TO PREVENT ITS FLOODING. WE NEED YOU ON OUR SIDE; BIG BUSINESS MAY RUN THE GOVERNMENT BUT WE. TAXPAYERS PAY YOUR SALARIES. Defend our rights!!!

Response

With respect to flooding and tree removal, see responses 4(a), 5-a(a), 5-a(c), and 10(a).

61. COMMENT

Please accept the following comments in response to the major modification permit request submitted by Sunoco Pipeline, L.P. for DEP Permit number EIS-862, HDD Reference number S3-0381, PA-CH-0219.0000.

In general, I found the proposals presented by Sunoco related to the modification of construction activities in West Whiteland Township concerning. It is apparent that while the Department outlined direct requirements meant to ensure environmental and public safety, both during and following construction activities, Sunoco is once again simply ignoring such requirements and providing excuses as to why such efforts are not needed. Perhaps the most concerning aspect of Sunoco's relates to their argumentative denial of the need for additional geophysical studies in West Whiteland. This attempt to circumvent additional investigation regarding the sensitive geology of this region runs directly counter to common sense and ignores specific recommendations by their own professional geologists. By simply explaining away the need for precautionary studies based on the change from HDD to FlexBore (a.k.a. HDD Lite) is potentially dangerous and could easily result in future damage to environmental conditions and put the public at considerable risk.

While Sunoco has gone through the motions of reevaluation, it is clear that the information provided is insufficient. It is my strong recommendation that the Department reject this report as inadequate and require Sunoco to perform complete geophysical evaluations to ensure construction activities do not cause permanent and irreparable harm to the environment and citizens in West Whiteland Township.

Response

- a) With respect to pipeline safety, see responses 3-a and 7(b).
- b) With respect to geophysical surveys, see response 8(a).

62. COMMENT

Please accept the following comments in response to the major modification permit request submitted by Sunoco Pipeline, L.P. for DEP Permit number E 15-862, HDD Reference number S3-0370. PA-CH-0212.0000.

In general, I found the proposals presented by Sunoco related to the modification of construction activities in West Whiteland Township concerning. It is apparent that while the Department outlined direct requirements meant to ensure environmental and public safety, both during and following construction activities, Sunoco is once again simply ignoring such requirements and providing excuses as to why such efforts are not needed. Perhaps the most concerning aspect of Sunoco's relates to their argumentative denial of the need for additional geophysical studies in West Whiteland. This attempt to circumvent additional investigation regarding the sensitive geology of this region runs directly counter to common sense and ignores specific recommendations by their own professional geologists. By simply explaining away the need for precautionary studies based on the change from HDD to FlexBore (a.k.a. HDD Lite) is potentially dangerous and could easily result in future damage to environmental conditions and put the public at considerable risk.

While Sunoco has gone through the motions of reevaluation, it is clear that the information provided is insufficient. It is my strong recommendation that the Department reject this report as inadequate and require Sunoco to perform complete geophysical evaluations to ensure construction activities do not cause permanent and irreparable harm to the environment and citizens in West Whiteland Township.

Response

- a) With respect to pipeline safety, see responses 3-a and 7(b)
- b) With respect to geophysical surveys, see response 8(a).

63. COMMENT

I'm here on behalf of the Chester County members of the Laborers International Union of North America (LiUNA) who work on this project. I encourage the Pennsylvania Department of Environmental Protection (DEP) to grant the modifications to the permit and allow construction of the Mariner East 2 line to continue without delay.

LiUNA stands as one of America's preeminent construction trade associations, representing 500,000 members across the country and more than 18,000 members in Pennsylvania alone. Since 1903, LiUNA has been tirelessly advocating for tradesmen and women and the opportunities that allow them to thrive.

The modifications currently under review are considered industry best practices and are necessary to ensure the most environmentally safe installation of the pipeline in the designated areas. Over 90-percent of mainline construction has been completed utilizing conventional bore and open trench installation and over 50-percent of approved HDDs have been completed, the very form of installation proposed here. These modifications were proposed many months ago and should be approved without further delay.

Working on large infrastructure projects like Mariner East 2 are what we at the Laborers International Union of North America do for a living. And we build these projects well. Pipelines have proven to be the safest means to transport energy resources and building this pipeline using

local union-trained labor like LIUNA ensures that the pipeline will be built with the best trained, highest skilled labor available to ensure the safety of the pipeline during construction as well as once it is in operation.

Mariner East 2 and its corollary projects will provide over \$9 billion in economic benefit for Pennsylvania. Not only will it provide increased access to affordable, efficient clean burning energy to local Pennsylvania consumers, this project will also generate nearly 60,000 jobs, most of which are local union labor workers who live, work, and play in Pennsylvania communities. For decades, Sunoco has been safely operating in Pennsylvania, helping meet the state's energy needs and establishing the industry as a cornerstone of our economy. Approval of this permit modification will ensure that this critically important project can be completed in an environmentally sensitive way and the Laborers International Union of North America trusts that you will approve this modification so that we can get to work. I appreciate your attention to this matter.

Response

The Department acknowledges the commentator's comment regarding this proposed pipeline project. The permit applications were thoroughly reviewed by staff for conformance with the pertinent environmental statutes and regulations.

64. COMMENT

Subject: Swedesford Road Crossing SPLP HDD No. S3-0381 North Pottstown Pike Crossing SPLP HDD No. S3-0370.

Good morning, I am contacting the DEP to write in opposition of these above mentioned permits being granted. The siting of this pipeline is unsafe and threatens the health and safety of those who live, work, go to school, worship etc within the potential blast radius if a pipeline leak and explosion were to occur. If the DEP cares an ounce about the safety of those affected, this permit shall be denied. If not, you are complicit In the risk associated with this project. What that risk is would be a great thing to have - a publicly available, independent assessment of the risk of these three pipelines.

Additionally, please reference this state law:

<http://www.legis.state.pa.us/WU01/LI/LI/CT/HTM/35/00.077..HTM>

Chapter 77 Miscellaneous Provisions...7702 – Duties Concerning Disaster Prevention.

Response

The Department acknowledges the commentator's comment regarding this proposed pipeline project. Though your comments appear to fall outside of our regulatory purview, please note that the permit modification applications were thoroughly reviewed by staff for conformance with the pertinent environmental statutes and regulations. With respect to "blast zone" and pipeline safety, see responses 3-a and 7(b)

65. COMMENT

I oppose granting permit applications for Swedesford Rd. Crossing (SPLP HDD No. 53-0381) and N. Pottstown Pike Crossing (SPLP HDD No. 53-0370) because these pipelines pose a significant threat to our environment here in Meadowbrook Manor. We have our public water

aquafer directly under our development and it will be threatened by any drilling nearby. The flex technology is new and untested in Karst geology and we are being forced to act as guinea pigs for Sunoco's convenience and greed. We have seen the recent devastation on Lisa Drive (only 1 mile away) and we also know of many nearby water wells fouled by Sunoco/ETP in Exton. How long will they be allowed to endanger our water supplies?

Meadowbrook Manor is prone to flooding. Three houses have already been removed by FEMA. Damming our streams, as planned, will make our flooding even worse! Also, when the wetland area around the Exton library is compromised by tree removal and soil compaction from the huge vehicles accompanying the drilling procedure, that will also increase our flood danger. Must we lose even more homes to accommodate Sunoco's greed?

Sunoco says bentonite, a main component of drilling mud, is safe when it pollutes our streams. Recently baby products containing bentonite were recalled by the FDA because of high lead content. I seriously doubt commercial drilling mud is more carefully vetted than cosmetic & baby products! My grandchildren love playing in my creek, catching crayfish, etc. this will not be safe if drilling takes place here. At Meadowbrook Manor we have one of the few wetland/green spaces in Exton. Contaminated creeks are another side effect we can expect from Sunoco's proposed drilling. And no one knows what effect these chemicals pose for invertebrates and the birds and fish that depend on them. We know that Sunoco has the worst safety record in the industry, many spills and violations have occurred wherever they work. We can expect our beloved neighborhood to be despoiled if they come here. PLEASE DENY THESE PERMITS!

Response

- a) There are no prohibitions in Commonwealth statutes or regulations to preclude the siting of pipelines in areas with carbonate geology. Karst terrain was considered.
- b) After the pipeline is installed, the ROW and workspaces are to be restored to their preconstruction elevations and contours, and revegetated. Adverse impacts to flood management are not anticipated as a result of construction or operation of the project.
- c) With respect to pipeline safety, see responses 3-a and 7(b)

66. COMMENT

The two permits in question are for the section of Mariner East that begins at the Laborers Union, moves west under Route 30, traverses through wetlands, narrowly threads between Meadowbrook Manor and the Chester County library, ploughs through the Little League fields, goes under Swedesford Road, through the corner of Swedesford Chase, between houses on Exton Lane, snakes behind the Giant/Fairfield Place shopping center, travels alongside the Sunrise Living Senior Center, and under Route 100 and ends at Shoen Road.

This section is less than 2 miles but it has the highest resident population directly impacted by this pipeline as it traverses the state from Ohio to Marcus Hook through 17 counties. Those numbers do not even include the influx of daily workers and visitors to this commercial region. I ask you to forget that the majority of Mariner East 2 is nearing completion. That is an economic factor. We are not here to discuss the economic impact that could result when you deny the Chapter 102 and 105 permits. We are here to present testimony about the environmental impacts of the proposed switch.

I live in Meadowbrook Manor. I am surrounded by Exton shopping centers. But when I look out to my backyard what do I see? A green oasis in this sea of cement and traffic. This morning I observed an osprey circling the pond in my backyard. I watched as the osprey dived and snared a fish which she carried to a nearby telephone pole to leisurely snack upon.

This pond adjacent to my backyard, labeled Pond B-1 in the Sunoco Logistic maps, thrives with wildlife. It is classified as a PubHh wetland. We see migrating egrets and herons, both the Green Blue heron and the small Green Heron. Eagles and ospreys return year after year to fish in Pond B-1. Kingfishers nest in the banks of the pond. Snapping turtles mate and produce eggs yearly. The pond hosts muskrats, beavers, otters, frogs and turtles. Its populated with numerous types of fish.

How will this wildlife be impacted by the nearby pipeline construction? Will upstream open trenching and boring degrade this pond? No one really knows or has properly addressed the impact of this construction on this wildlife. That lack of data alone is enough reason to deny these permits.

This pond empties into the West Valley Creek (a Chapter 93 designated waterway) and adjacent PFO wetland. This wetland is a triangle of emerald greenery that thrives next to the cement and asphalt that is the Exton Commercial Center.

And now Sunoco Logistics claims that they need to use a portion of this rare and exceptional wetland. It wasn't that long ago that they claimed how wonderful their originally intended HDD plan was. It would avoid impacting this very wetland.

But now, somehow they think it is suitable to cut down vital life-giving trees. That it is ok to dig a pit in the center of this wetland, bring in all their heavy and noisy equipment, disturb the topsoil and waterflow, disrupt the wildlife that lives and visits here, compact the soil and reduce the size of this precious greenery.

This is clearly an egregious encroachment on this triangle of green that has managed to thrive in West Whiteland Twp.

Protect this ecosystem by denying these permits.

Response

No additional impacts to waterways or wetlands will occur as a result of the permit modifications.

67. COMMENT

Hi, my name is Margaret Quinn. I'm a resident of Exton in Chester County. DEP's purpose is to protect Pennsylvania's air, land and water from pollution, and to provide for the health and safety of its citizens through a cleaner environment. You state you will work with partners, individuals, organizations, governments and businesses to prevent pollution and restore our natural resources. That's according to your mission statement. You need to revoke and not issue any more Mariner pipeline permits. Sunoco/ETP is a reckless company and should not be allowed to proceed after all of their mistakes and fines. It is your duty to stop this reckless project. Sunoco's construction damaged the local aquifer in West Whiteland. People lost their wells. On Exton Place in West Whiteland the whole street shares a well. When construction on the street starts, that well will also be contaminated. For the residences of Swedesford Chase and Meadowbrook, the pipeline will go very close to their fresh water pumping station. Your mission statement says that you will protect our water. The trees, grass and bushes are anchors for the soil. When they are removed, water

will not be able to be controlled. Heavy equipment will compact the soil to cause even more runoff. Your duty is to protect and restore, not grant permits to destroy. People's houses will flood and foundations will weaken and crumble. Look how close this pipeline is to this home as well as others. Ray Charles would even say that they will surely be shaken off their foundations and sink. The Meadowbrook neighborhood lies on the wetlands. Wetlands act as water purification, flood protection and water recharge. A pre-construction damage assessment needs to be done by field research and damage assessments including stormwater management, damming and stream crossings, according to PA Code 105.5, 105.313 and 105.314 Dam Safety and Water Encroachment. Where will that water divert to? And what will be the effect or is that going to be a big surprise? What about those inadvertent returns that Sunoco was famous for? Fish, frogs, birds and other wildlife will be affected. I implore you to pull the permits. Where is the -? Where is the PA Department of Conservation and Natural Resources? I see Patrick McDonald on Facebook planting trees and Governor Graham and Francis Wolf celebrating Earth Day. I don't get it. We need to protect our earth every day. It is our job. During construction, how will you protect the health and clean air? People will not be able to sit in their yards or open their windows because of the air and the noise pollution. Some will flee because of their asthma. And mental health will be affected. Now, for the elephant in the room that nobody's allowed to talk about and nobody's allowed to address. But safety is embedded in your mission statement as well as in the minds of the parents who tuck their little ones in 25 feet from this pipeline. The material being transmitted is capable of causing major damage in a huge blast zone, endangering the lives of all those within at least a mile-wide radius and property damage for up to three miles, depending on the conditions at the time of the accident. DEP, honor your mission statement and protect our land, air and water. Provide for the health and safety of the citizens of Chester and Delaware Counties, as well as all the people along the Mariner pipeline.

Response

After the pipeline is installed, the ROW and workspaces are proposed to be restored to their preconstruction elevations and contours, and revegetated. With respect to “blast zone” and pipeline safety, see responses 3-a and 7(b)

68. COMMENT

Thank you for holding this hearing. My name is Stacey Lavelle, and I live in Swedesford Chase, and the pipeline will run through my back yard as close as 36 feet from my children's bedrooms. When Sunoco first approached us, they talked about this pipeline, under the assumption that the DEP-approved method of HDD would be used, which they assured us was better for the environment and safer overall. Well, all of that would change if these permit changes are approved. First, there is the known and unavoidable environmental destruction that will occur. There would be a path of wreckage resulting in the loss of hundreds of mature trees, 17 on my property, the disruption of wetlands and wildlife and dug-up yards and ballfields. But what about the other unknown environmental concerns that this permit change could cause? What if the trenching and boring interferes with the underground water table or aquifers, leading to contaminated waters or spills? What if the new and existing pipes are subject to damage from wildlife or other factors since the pipes are exposed? There are deer that have barreled down many of the stakes in our yard. What if they would get through? What if the loss of trees and the

replaced compacted soil impacts grading and the absorption of rainwater and causes flooding in areas, or in our basement, like so many others have experienced? What if the trenching weakens our Karst geology or creates ponding of water which would lead to sinkholes in our yards or under the heavily traveled Swedesford Road? At the March township meeting, when asked about the sinkholes on Lisa Drive, a DEP representative said that what happened was unexpected. How do you know when something else unexpected or even catastrophic could occur? No one knows. There are too many unknowns and the permit changes would only add to those unknowns. Have there been adequate scientific and geophysical studies done? Are you comfortable that you are completely informed and know exactly what new challenges this change could cause? If not, then as an affected homeowner, I ask that you vote no to these permit changes. Sunoco has the industry's worst safety record and it would be negligent if you approve this permit without having all the data. And as a parent worried about safety, how can I accept that there is a pipeline running feet from my children's bedrooms that could leak odorless, colorless and highly-explosive gases? The permit change would allow the pipes to be only four feet underground. Four feet, can you imagine? Which would provide for absolutely zero time for leak detection, notification and evacuation. Not to mention that there is not adequate monitoring measures or concrete notification plans in place. My family and everyone who lives, works and attends schools here are being made to assume an unacceptable risk. What if? So I ask you, with the data that you have, can you give me a 100 percent guarantee that nothing unexpected or catastrophic could occur due to these permit changes? And would you be willing to bet your lives on it? Because if you can't, please don't make us bet ours. I'm asking that you vote no for these permit changes.

Response

After the pipeline is installed, the ROW and workspaces are to be restored to their preconstruction elevations and contours, and revegetated. With respect to "blast zone" and pipeline safety, see responses 3-a and 7(b).

69. COMMENT

Hello. My name is Michelle Waugh, and I thank you for your time this evening. The DEP approved the installation of this pipeline via horizontal directional drilling. Due to Sunoco's lack of understanding the geology in this area, and the number of problems occurring, they are asking to change the permit to trenching. Trenching can involve a lot of ground disturbance. And any disturbance in our Karst terrain can lead to complications. In the event of a leak, the contents will become highly explosive when ignited. We are all igniters, every minute of every hour of every day. At any given moment, someone can spark, whether we use cell phones, start our cars or ring the doorbell. This is how we live every day. The severity of this situation is just not measurable. And now we are going to consider putting it only four feet underground. I have seen holes at the beach four feet deep. And the thought of a highly-volatile pipeline this close to the surface of our everyday living and existing is just plain scary. This should be considered dangerous and unacceptable. You are here tonight to address a trench permit request and we're here to ask you to vote no. Trenching can destroy many mature trees. If approved, our back yard is slotted as a staging area. And these immensely heavy trucks, along with the trenching, will forever change the behavior of the soil, the grading of our property and the loss of 30 trees, 20 years old. The heavy equipment will compact the soil of these areas, making them more prone to flooding. The chosen route will disrupt the wetlands, one of the few remaining ones in

Exton. The loss of the wetland will also contribute to the flooding and is currently home to a variety of wildlife. Have you followed through with the permit requirement by law to investigate alternative routes? In the plan filed with the DEP, they stated their geologist's report indicates more testing is needed. Did DEP perform additional testing? Neighborhoods have already replaced storm drains, properties have been permanently damaged with sinkholes. Sinkholes that Sunoco and DEP had no idea would occur. What else will occur? Has enough testing been performed for you to say with confidence it won't happen again? To conclude, the environment around us will be negatively changed forever. There will be substantial damage to land, business and home structures. Removing the trees will have significant impact. Sunoco has proven lack of understanding the geology in the area. Wetlands and wildlife will be destroyed. I ask you to think of how many things are actually buried much deeper than four feet underground? Do you feel comfortable burying a highly-volatile pipeline only four feet from the ground's surface? Exposure to this is easily accessible. We are not prepared to handle an emergency situation when the pipeline is far in ground let alone four feet. Do you feel comfortable? Because we don't. Thank you.

Response

After the pipeline is installed, the ROW and workspaces are to be restored to their preconstruction elevations and contours, and revegetated. Various aspects, including Karst terrain, were considered. With respect to "blast zone" and pipeline safety, see responses 3-a and 7(b)