

APPENDIX R

RESPONSES TO DRAFT EIS COMMENTS

NEXUS Gas Transmission Project
Comments on the Draft EIS and Responses

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* An asterisk identifies a gap in the numbering sequence due to duplicate or form letter submittals.

We note that the clarity of some letter images is low due to the necessity of reducing the files for our responses in this appendix. Appendix R and each of the individual comment letters are available for viewing in their native formats on the FERC eLibrary website (www.ferc.gov) to resolve any issues with image constraints due to printing.¹

¹ Individual comment letters are available for viewing on the FERC Internet website (<http://www.ferc.gov>). Using the “eLibrary” link, select “General Search” from the eLibrary menu, enter an appropriate date range and “Docket No.” excluding the last three digits (i.e., CP16-22, CP16-23, CP16-24, or CP16-102), and follow the instructions. For assistance, call 1-866-208-3676, or e-mail FERCOnlineSupport@ferc.gov.

FEDERAL AGENCIES/ELECTED OFFICIALS

FA1 – U.S. Department of the Interior

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IN REPLY REFER TO:

United States Department of the Interior

OFFICE OF THE SECRETARY
Office of Environmental Policy and Compliance
Custom House, Room 244
200 Chestnut Street
Philadelphia, Pennsylvania 19106-2904

August 22, 2016

9043.1
ER 16/0379

Honorable Kimberly D. Bose, Secretary
Federal Energy Regulatory Commission
888 First Street NE
Washington, D.C. 20426

Re: Comments on the Draft Environmental Impact Statement for the Proposed Nexus Gas Transmission Project and Texas Eastern Appalachian Lease Project, FERC No. CP16-22-000, CP16-23-000, CP16-24-000, and CP16-102-000.

Dear Secretary Bose:

The U.S. Department of the Interior (Department) has received the Notice of Availability of the Draft Environmental Impact Statement (DEIS) Nexus Gas Transmission Project (Nexus Project) and Texas Eastern Appalachian Lease Project (TEAL Project, collectively the Projects), proposed by NEXUS Gas Transmission, LLC (NEXUS or the Applicant). We have reviewed the DEIS for the Projects and offer these comments to the Federal Energy Regulatory Commission (FERC).

These comments are provided pursuant to the Endangered Species Act (ESA) (87 Stat. 884, as amended; 16 U.S.C. 1531 et seq.), the Fish and Wildlife Coordination Act (FWCA) (48 Stat. 401; 16 U.S.C. 661 et seq.), the Bald and Golden Eagle Protection Act (BGEPA) (16 U.S.C. 668-668c), the Migratory Bird Treaty Act (MBTA) (16 U.S.C. 703-712), and Executive Order 13186 (E.O. 13186): Responsibilities of Federal Agencies to Protect Migratory Birds (January, 2001).

Listed Species

- FA1-1 | The text of the DEIS states that there is an average level of risk of an inadvertent return of drilling materials from the HDD crossing of the Vermillion River; therefore, FERC concluded that the Project is likely to adversely affect the rayed bean mussel. However, the rayed bean is currently considered extirpated from the Vermillion River in Ohio, so the Department concurs that the project may affect, but is not likely to adversely affect the rayed bean.
- FA1-2 | Based on our understanding, all survey work for the eastern massasauga rattlesnake was completed in 2016. No further surveys are planned, and given the results of the surveys, we agree that the surveys are adequate to determine that the species is not present in the action area. The EIS should be updated to reflect the information in the applicant prepared Biological Assessment.

FA1-1

Comment noted.

FA1-2

EIS updated to reflect BA and FWS comments.

R-1

FEDERAL AGENCIES/ELECTED OFFICIALS

FA1 – U.S. Department of the Interior (cont'd)

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Migratory Birds

- FA1-3 Section 4.6.6 of the DEIS addresses the existing environment in the area of the Projects with regard to migratory birds. In section 4.6.6.1, the DEIS states “On March 30, 2011, the FWS and the Commission entered into a Memorandum of Understanding that focuses on avoiding or minimizing adverse impacts on migratory birds and protected bat species and strengthening migratory bird conservation through enhanced collaboration between the two agencies.” While the Memorandum of Understanding (MOU) between the U.S. Fish and Wildlife Service (Service) and FERC does address avoidance and minimization of impacts, it is not to the exclusion of other methods of mitigation, which include restoring the impacted environment, reducing impacts over time, and compensating for impacts by replacing or providing substitute resources. Also, the MOU does not address listed bat species. We recommend the previous statement be revised to “On March 30, 2011, the FWS and the Commission entered into a Memorandum of Understanding that focuses on avoiding, ~~or~~ minimizing, **or mitigating** adverse impacts on migratory birds ~~and protected bat species and~~ strengthening migratory bird conservation through enhanced collaboration between the two agencies.”
- FA1-4 Section 4.6.6.2 of the DEIS addresses impacts and proposed mitigation for the Projects. The Applicant has consulted with the Service to develop a Migratory Bird Conservation Plan (MBCP) that evaluates expected impacts of the Projects to migratory birds and measures to mitigate those impacts. While there has been consultation with the Applicant on their MBCP, we suggest the statement “FWS region 3 and field office staff approved of the methodology used to develop the MBCP for the Michigan portion of the Projects” be modified as “FWS region 3 and field office staff **concurred with** ~~approved of~~ the methodology used to develop the MBCP for the Michigan portion of the Projects”.
- FA1-5 The Service has reviewed draft versions of the MCBP for the Projects and submitted comments to NEXUS. On July 20, 2016, the Service received the final Migratory Bird Conservation Plan from NEXUS for review. Overall, the Service is very impressed with the final MBCP. The plan uses a tiered approach, following the Service recommendation to clear vegetation in migratory bird habitat between September 1 and March 31 to the extent practicable, and developing a contingency plan if clearing cannot be completed within that window. (We also note that the Service has issued additional clearing recommendations for habitat used by listed species, including listed bats.) By limiting the timing of construction in migratory bird habitat (to the extent practicable) to avoid the core of the bird nesting season, we believe that the Projects have minimized the potential for take of migratory birds, eggs, and nests. We believe that identifying habitats and determining clearing windows based on the birds of conservation concern (BCCs) and state-listed species expected to breed in those habitats is a sound and reasonable method of planning construction while also providing for the conservation of migratory birds. The Department also notes that the Applicant has signed an MOU with the Service, committing NEXUS to mitigate for unavoidable impacts to migratory bird habitat. Given the MBCP’s inclusion of compensatory mitigation for loss of migratory bird habitat, the Department concurs that the Projects have avoided, minimized, and mitigated the impacts on migratory birds and their habitats to the greatest extent practicable. NEXUS is continuing to consult with the Service to determine the final compensatory mitigation for the Projects.

- FA1-3 EIS updated with recommended language.
- FA1-4 EIS updated with recommended language.
- FA1-5 Comment noted.

R-2

FEDERAL AGENCIES/ELECTED OFFICIALS

FA1 – U.S. Department of the Interior (cont'd)

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FA1-6 It is observed that, in Ohio, the species-specific nesting dates in the MBCP (Appendix A) closely reflect the “safe dates” for the Ohio Breeding Bird atlas. It is also noted that these dates refer to the survey period where the assumption that local birds are part of the breeding population (rather than migrants) is likely to be valid. These dates deliberately truncate the beginning and end of the breeding season, and clearing windows based on these dates may not protect every bird nest for the species. For this project, we believe that using safe dates to determine clearing windows is reasonable, and will minimize the potential for take of bird nests, even if the potential for take is not zero. Whether safe dates are appropriate guides for setting clearing windows may differ across projects.

FA1-7 Section 4.6.6.2 includes the following recommendation from FERC staff: *“Prior to construction of the NGT Project, NEXUS should file with the Secretary its final MBCPs developed in consultation with the FWS incorporating any additional avoidance or mitigation measures incorporated into the plans.”* For increased consistency with recent Environmental Impacts Statements for FERC-regulated projects, including the proposed Rover Pipeline, Panhandle Backhaul, and Trunkline Backhaul Projects (FERC No. CP15-93-000, CP15-94-000, CP15-96-000) and the proposed Leach Xpress Project and Rayne Xpress Expansion Project (FERC No. CP15-514-000, CP15-539-000), we suggest modifying this recommendation as follows: *“Prior to construction of the NGT Project, NEXUS should file with the Secretary its final MBCPs developed in consultation with the FWS incorporating ~~any additional~~ avoidance, **minimization, and or mitigation measures incorporated into the plans.**”* The Service will notify FERC promptly when mitigation has been fulfilled and this recommendation has been fully met.

We appreciate the opportunity to provide these comments.

Sincerely,



Lindy Nelson
Regional Environmental Officer

cc: Jeff Gosse, FWS

FA1-6 Comment noted.

FA1-7 NEXUS has filed the final MBCP with the Secretary. As such, the condition language has been removed from the final EIS.

R-3

FEDERAL AGENCIES/ELECTED OFFICIALS

FA2 – U.S. Environmental Protection Agency



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

AUG 26 2016

REPLY TO THE ATTENTION OF:
E-19J

Kimberly D. Bose, Secretary
Federal Energy Regulatory Commission
888 First St., N.E., Room 1A
Washington, DC 20426

Re: FERC Draft Environmental Impact Statement (DEIS) NEXUS Gas Transmission Project and Texas Eastern Appalachian Lease Project (NGT/TEAL Projects) [FERC Docket Nos. CP16-22-000 and CP16-23-000, respectively; and, CP16-24-000 (DTE Gas Company) and CP 16-102-000 (Vector Pipeline L.P.)] (CEQ No. 20160159)

Dear Ms. Bose:

In accordance with our responsibilities under Section 309 of the Clean Air Act, the National Environmental Policy Act (NEPA), and the Council on Environmental Quality (CEQ) regulations for implementing NEPA, the United States Environmental Protection Agency (EPA) has completed its review of the Federal Energy Regulatory Commission's (FERC) draft environmental impact statement (DEIS) for the NGT/TEAL Projects, proposed by NEXUS Gas Transmission, LLC (NEXUS) and Texas Eastern Transmission, LP (Texas Eastern), (Project Proponents), respectively.

The Project Proponents request FERC authorization to construct and operate a new greenfield natural gas pipeline and related facilities, and expand an existing pipeline system from the Appalachian Basin to deliver 1.5 million dekatherm per day to markets in Northern Ohio, Southeastern Michigan, and Ontario Canada, as well as other markets in the Midwest including the Chicago Hub through interconnections with other pipelines. DTE Gas Company and Vector Pipeline LP are requesting approval to lease capacity on their systems to NEXUS.

EPA has rated the DEIS EC-2 Environmental Concerns, Insufficient Information. The EC-2 rating indicates that we have concerns that the document does not contain enough information to fully assess the environmental impacts that should be avoided in order to fully protect human health and the environment. See the enclosed Summary of Rating Definitions for a detailed explanation of EPA's ratings.

EPA concerns are primarily due to insufficient information documenting avoidance, minimization and mitigation of impacts: 1) to wetlands and streams, 2) to upland forest, interior (core) forest and associated species, 3) to contaminated sites, 4) from noise, 5) regarding emergency response plans, 6) from greenhouse gases and methane leakage. The DEIS does not include: 1) wetland/stream mitigation plans, 2) upland interior (core) forest mitigation plans, 3)

FEDERAL AGENCIES/ELECTED OFFICIALS

FA2 – U.S. Environmental Protection Agency (cont'd)

2

a Migratory Bird Conservation Plan, nor 4) NEXUS[®] and Texas Eastern's emergency response plans. Enclosed are our detailed comments, which include recommendations for additional information to include in the Final EIS.

When FERC submits the Final EIS to EPA headquarters, also send EPA Region 5 one (1) paper copy and three (3) sets of CDs of the Final EIS.

If you or your staff have any questions or concerns, I can be reached at 312-886-2910, or contact Virginia Laszewski of my staff at laszewski.virginia@epa.gov or 312-886-7501.

Sincerely,



Kenneth A. Westlake, Chief
NEPA Implementation Section
Office of Enforcement and Compliance Assurance

Enclosures: Summary of Rating Definitions
EPA Detailed Comments

cc (email): Federal Energy Regulatory Commission, Joanne Wachholder, Environmental Project Manager, joanne.wachholder@ferc.gov
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FEDERAL AGENCIES/ELECTED OFFICIALS

FA2 – U.S. Environmental Protection Agency (cont'd)

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U. S. EPA Comments on the Draft Environmental Impact Statement
NEXUS Gas Transmission Project and Texas Eastern Appalachian Lease Project
(NGT/TEAL Projects) [FERC Docket Nos. CP16-22-000 and CP16-23-000, respectively;
and CP16-24-000 (DTE Gas Company) and CP 16-102-000 (Vector Pipeline L.P.)]
(CEQ No. 20160159)

The following comments follow the numbered topic order as presented in the Draft Environmental Impact Statement (DEIS).

EXECUTIVE SUMMARY

PROPOSED ACTION (pages ES-1 and ES-2): *“The NGT and TEAL Projects include about 260.6 miles of pipeline composed of the following facilities:*

- *NEXUS’ mainline, which consists of about 255.7 miles of new 36-inch-diameter mainline pipeline in Ohio and Michigan;*
- *NEXUS’ interconnecting pipeline, which consists of about 0.9 mile of new 36-inch diameter interconnecting pipeline in Ohio;*
- *Texas Eastern’s pipeline loop, which comprises about 4.4 miles of new 36-inch-diameter loop pipeline in Ohio; and*
- *Texas Eastern’s connecting pipeline, which comprises about 0.3 mile of new 30-inch diameter interconnecting pipeline in Ohio.*

The Projects’ aboveground facilities include:

- *NEXUS’ 4 new compressor stations, 6 new metering and regulating (M&R) stations, and 17 new mainline valves;*
- *Texas Eastern’s new compressor station, modifications of an existing compressor station, two new pig launchers/receivers, and temporary pig launcher/receiver; and*
- *additional new facilities and modifications, such as pig launchers/receivers, communication towers, and regulators, installed at other aboveground facility sites.*

The Projects would provide for the transportation of 1.5 million dekatherms per day of natural gas from the Appalachian Basin to consuming markets in Northern Ohio and Southeastern Michigan as well as the Dawn Hub in Ontario, Canada. Supply also would be able to reach the Chicago Hub in northern Illinois and other Midwestern markets through interconnections with other pipelines.”

1.1 PROJECT PURPOSE AND NEED

The DEIS (page 1-3) states *“While this EIS will briefly discuss NEXUS’ and Texas Eastern’s*

FA2-1

The purpose and need of each project identified in the EIS is based on material filed in support of the applications for a Certificate of Public Convenience and Necessity (Certificate) for the Projects. As identified in section 1.1 of the EIS, the capacities of each project are based on binding precedent agreements between the applicants and their customers. Therefore, the purpose and need has been appropriately defined for each project for NEPA purposes, and any alternatives evaluated should be capable of meeting those contractual capacities.

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FA2-1

FEDERAL AGENCIES/ELECTED OFFICIALS

FA2 – U.S. Environmental Protection Agency (cont'd)

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FA2-1 (cont'd)	<p><i>stated purposes, it will not determine whether the need for the Projects exists, as this will be determined separately by the Commission.”</i></p> <p>Recommendation: EPA recommends this section of Final EIS better identify when the Commission makes a need determination for the Proposed Projects in relation to FERC’s release of the Final EIS.</p>
FA2-2	<p>1.2 PURPOSE AND SCOPE OF THE EIS 1.2.2 U.S. Environmental Protection Agency Purpose and Role DEIS (page 1-6) states, in part “<i>The EPA has authority to review and veto the decisions on Section 404 permits.</i>” This section of the DEIS does not explain what a “404 permit” is nor identify the federal agency responsible for issuing “404 permits.”</p> <p>Recommendation: EPA recommends the Final EIS section 1.2.2 identify that the U.S. Army Corps of Engineers (Corps) as the federal agency responsible for issuing Clean Water Act (CWA) Section 404 permits for discharges of dredge and/or fill materials in Waters of the U.S. in Ohio, and Michigan Department of Environmental Quality (MDEQ) issues CWA Section 404 permits in Michigan. EPA has authority to review and veto the Corps’ CWA Section 404 permits and object to MDEQ’s decisions on CWA Section 404 permits.</p>
FA2-3	<p>1.5 PERMITS, APPROVALS, AND REGULATORY REQUIREMENTS Table 1.5-1 Major Environmental Permits, Licenses, Approvals, and Consultations for the NGT and TEAL Projects (DEIS, pages 1-14 and 1-15): According to the information in the DEIS the proposed locations for the NGT/TEAL Projects are Michigan and Ohio. Michigan and Ohio are within EPA Region 5, not Region 3 as currently shown on Table 1.5-1.</p> <p>Recommendation: EPA recommends Table 1.5-1 be corrected to show that EPA Region 5 (not EPA Region 3) has “<i>Oversight of federal and state delegated permits</i>” for the proposed NGT/TEAL Projects located in Ohio and Michigan.</p> <p>2.0 DESCRIPTION OF PROPOSED ACTION</p> <p>2.1.1 NGT Project</p>
FA2-4	<p>Figure 2.1.1-1 NEXUS Gas Transmission Project – Overview Map (DEIS, page 2-2): This figure does not identify nor depict the existing pipeline and pipeline facility that NGT would connect to in order to deliver NGT natural gas to Ontario, Canada.</p> <p>Recommendation: We recommend Figure 2.1.1-1 (NEXUS Gas Transmission Project - Overview Map) identify/depict the existing pipeline, pipeline route and its associated facility in Michigan that would receive and deliver NGT natural gas to the Dawn Hub in Ontario, Canada. Update the figure’s color coded legend accordingly.</p> <p>2.1.2 TEAL Project 2.1.2.1 Pipeline Facilities</p>

- FA2-2 Section 1.2.2 has been updated to clarify Section 404 permitting responsibilities for Michigan and Ohio.
- FA2-3 Table 1.5-1 has been updated to reflect the correct EPA regional office.
- FA2-4 See figure 3.2.1-1 for a depiction of existing pipeline systems in the vicinity of the Projects.

FEDERAL AGENCIES/ELECTED OFFICIALS

FA2 – U.S. Environmental Protection Agency (cont'd)

R-8

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FA2-5 | **Figures 2.1.1-2 Texas Eastern Appalachian Lease Project – Overview Map** (DEIS page 2-3): This figure does not show how proposed locations for the TEAL pipeline/facilities relate to Texas Eastern's existing pipeline/facilities, nor other companies' pipelines/facilities, including the proposed NGT Project.

Recommendation: EPA recommends Figure 2.1.1-2 (TEAL Overview Map) clearly show the locations of the proposed TEAL project in relation to the proposed NGT Project (pipeline/s and facilities), Texas Eastern's existing pipeline/s and facilities, and other companies' existing pipelines/facilities. Include the additional information in the figure's color coded legend.

FA2-6 | DEIS (page 2-14) states *"To reduce construction impacts, NEXUS and Texas Eastern would implement their respective Erosion and Sediment Control Plans (E&SCP). These plans are based on our Upland Erosion Control, Revegetation, and Maintenance Plan (FERC Plan or Plan) and Wetland and Waterbody Construction and Mitigation Procedures (FERC Procedures or Procedures)."*⁵

EPA appreciates the direct weblink provided in footnote 5 to the FERC's *Upland Erosion Control, Revegetation, and Maintenance Plan* and *Wetland and Waterbody Construction and Mitigation Procedures*. However, NEXUS and Texas Eastern's E&SCPs are not included in appendices of the DEIS nor direct weblinks provided.

FA2-7 | In addition, DEIS (page 2-15) *Table 2.3-2 – Construction, Restoration, and Mitigation Plans Associated with the NGT and TEAL Projects* identifies additional existing and pending Plans, many of which are not included in the DEIS Appendices nor direct weblinks provided.

Recommendation: EPA recommends the Final EIS Appendices also include the following NEXUS and Texas Eastern plans/documents regarding their respective projects:

- E&SCPs
- Draft Spill Prevention Control and Countermeasure Plans (SPCC Plans)
- Fugitive Dust Control Plan
- Winter Construction Plan
- Invasive Plant Species Management Plan (IPSMP)
- Unanticipated Discovery Plan
- Issue Resolution Plan
- Final Migratory Bird Conservation Plan
- Signed/dated Memorandum of Understanding (MOU) between the U.S. Fish and Wildlife Service (FWS) and NEXUS regarding forest mitigation
- Wetland and Stream Mitigation Plan

2.2 LAND REQUIREMENTS

FA2-8 | *Table 2.2-1 – Summary of Land Requirements Associated with the Projects* (DEIS, page 2-9) discloses that construction and operation of the proposed Projects would impact 5,223.7 acres and 1,741.9 acres of land, respectively.

FA2-5 | See figure 3.2.1-1 for a depiction of existing pipeline systems in the vicinity of the Projects.

FA2-6 | Erosion and sediment control procedures are described in NEXUS' *E&SCPs*, which can be accessed on the FERC eLibrary using the accession numbers provided in the EIS.

FA2-7 | NEXUS' environmental plans can be accessed on the FERC eLibrary using the accession numbers provided in the EIS.

FA2-8 | Section 5.1.5 has been updated.

FEDERAL AGENCIES/ELECTED OFFICIALS

FA2 – U.S. Environmental Protection Agency (cont'd)

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FA2-8 (cont'd)	<p>DEIS (pages 5-5 and 5-6) state “Construction of the Projects would affect 371.5 acres of forested upland, 43.3 acres of forested wetland, 571.8 acres of open upland, 43.8 acres of emergent wetland, and 19.5 acres of scrub-shrub wetland. The remaining 4,202.7 acres are agricultural land, developed land, or open water. Operation of the Projects would affect 148.0 acres of forested upland, 26.7 acres of forested wetland, 154.5 acres of open upland, 21.0 acres of emergent wetland, and 10.0 acres of scrub-shrub wetland. The remaining 1,347.4 acres are agricultural land, developed land, or open water.”</p> <p>2.5 ENVIRONMENTAL INSPECTION, COMPLIANCE MONITORING, AND POST-APPROVAL VARIANCES</p>
FA2-9	<p>2.5.4 Compliance Monitoring The DEIS (page 2-31) states “NEXUS filed information with the Commission on June 12, 2015 indicating it would like to implement a third-party compliance monitoring program on the NGT Project. The overall objective of a third-party compliance monitoring program is threefold: to assess environmental compliance during construction in order to achieve a higher level of environmental compliance throughout a project; to assist FERC staff in screening and processing variance requests during construction; and to create and maintain a database of daily reports documenting compliance and instances of noncompliance.”</p> <p>Recommendation: EPA recommends the Final EIS include NEXUS’ written commitment to implementing a third-party compliance monitoring program.</p>
FA2-10	<p>However the DEIS (page 2-32) also states “Texas Eastern is not proposing to implement a third-party compliance monitoring program; therefore, Texas Eastern would not gain the benefits of expedited processing of variance requests during construction.”</p> <p>Recommendation: EPA recommends Texas Eastern reconsider and commit to using FERC’s third-party compliance monitoring program for TEAL. EPA recommends the FEIS document whether or not Texas Eastern has made this commitment.</p> <p>3.0 NGT AND TEAL PROJECT ALTERNATIVES</p> <p>3.2 SYSTEM ALTERNATIVES</p> <p>Figure 3.2.1-1 Existing Pipeline Systems – NGT and TEAL Projects (DEIS, page 3-6):</p>
FA2-11	<p>Figure 3.2.1-1 does not show the route of the existing pipeline in Michigan that would receive NGT gas and deliver it to the Dawn Hub in Ontario, Canada.</p> <p>Recommendation: We recommend the Final EIS Figure 3.2.1-1 – Existing Pipeline Systems identify/depict the existing pipeline and the facility that would receive NGT gas in Michigan, and show the pipeline’s existing route in Michigan to the proposed receiving facility in Ontario, Canada. Modify the figure’s color coded legend accordingly.</p>

- FA2-9 NEXUS will be participating in the third-party compliance monitoring program and has committed to doing so in writing. Therefore, this will be required as part of NEXUS' committed measures if the Project is approved. There is no need to recommend a condition in this regard.
- FA2-10 Texas Eastern has elected not to participate in the voluntary third-party compliance monitoring program. Because the Project will still be subject to extensive construction inspection monitoring and because FERC staff will be conducting monthly inspections during construction, we find no need to recommend a condition in this regard.
- FA2-11 Figure 3.1.1-1 has been updated to include the existing DTE and Vector systems.

FEDERAL AGENCIES/ELECTED OFFICIALS

FA2 – U.S. Environmental Protection Agency (cont'd)

R-10

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FA2-12 | 3.5.1 NGT Compressor Station Alternatives
3.5.1.1 Hanoverton Compressor Station (CS1, Columbiana County) (DEIS, pages 3-83 to 3-85): EPA concurs with FERC staff recommendation that additional information is needed concerning the Proposed Site Alternative and the Alternative Site A, as follows: "an analysis indicating:

- whether the proposed Hanoverton Compressor Station site at MP 1.4 could be developed without permanently filling or altering the waterbody on the site, and if not, the types of permanent waterbody impacts that would be required; and
- whether Alternative Site A to the Hanoverton Compressor Station, as depicted on figure 3.5.1-1 of the draft EIS, could be purchased and developed without forest clearing, and what impacts would be associated with realigning the proposed pipeline to the site or building suction/discharge lines from the site to the proposed pipeline."

Recommendation: EPA recommends the Final EIS include the above mentioned information/analysis.

4.0 ENVIRONMENTAL ANALYSIS

4.1.3 Geologic Hazards

4.1.3.4 Karst NGT Project

FA2-13 | DEIS (page 4-13) states "NEXUS conducted an electromagnetic (EM) geophysical survey to identify areas of shallow bedrock between MP 124.0 and MP 202.0, including within the Bellevue-Castalia Karst Plain. These EM data are currently being analyzed to identify possible karst features along the alignment that might warrant further field investigation and engineering design."

Recommendation: EPA recommends Final EIS disclose the results of the EM geophysical survey. If applicable, amend Table 4.1.3-2 – Karst Features within 1,500 feet of the NGT Project.

4.2 Soils

FA2-14 | There is no discussion here of the Projects' potential to contact contaminated soils during construction.

Recommendations: Include a "Contaminated Soils" subsection in Section 4.2 – Soils. Provide a discussion here as well as Section 4.3. Groundwater and Section 4.9.0 Contaminated Sites of the Final EIS regarding the potential for impacting contaminated soils if Resource Conservation and Recovery Act (RCRA) corrective action, Leaking Underground Storage Tanks (LUSTs), and/or Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) (Superfund) sites are within the Projects' construction areas. Identify the databases that were used to make the determinations. Identify the procedures to notify the state/s and EPA if contaminated areas are found.

FA2-12 | EPA comments have been incorporated into conditions listed in section 3.5.1.1.

FA2-13 | FERC has recommended that NEXUS provide the results of electromagnetic geophysical surveys prior to construction.

FA2-14 | Please refer to the discussion of contaminated soils in section 4.9.

FEDERAL AGENCIES/ELECTED OFFICIALS

FA2 – U.S. Environmental Protection Agency (cont'd)

4.3 WATER RESOURCES

4.3.1 Groundwater Resources

FA2-15 **Wellhead and Aquifer Protection Areas** (DEIS, pages 4-33 to 4-35)
DEIS (page 4-33): *"The NGT Project mainline would cross 15 WHPAs at 25 locations in Ohio. Four (4) of the WHPAs crossed are for non-community wells, and the remaining 12 are for community wells. None of the proposed compressor stations would be within a designated WHPA. The NGT Project would cross one WHPA in Monroe and Washtenaw Counties in Michigan (MDEQ, 2016). The TEAL Project would not traverse any WHPAs."*

Recommendation: We recommend the Final EIS confirm all water suppliers in the WHPAs potentially impacted by the Project have been consulted and discuss the outcome of the consultations, including any water supplier requested mitigation measures.

4.3.2 Surface Water Resources

FA2-16 **Surface Water Supplies and Surface Water Protection Areas**
NGT Project (DEIS page 4-43) states *"Public surface water intakes located within 3 miles downstream of the NGT Project mainline are summarized in table 4.3.2-2. Four surface water intakes in Ohio and one in Michigan would be located within 3 miles downstream of the NGT Project crossings."*

Recommendation: EPA recommends the Final EIS confirm all Municipalities with water intakes within 3 miles downstream of the NGT Project have been consulted and discuss the outcome of the consultation, include any requested mitigation measures.

Federal Emergency Management Agency Flood Zones (page 4-47)

FA2-17 **Recommendations:** We recommend the Final EIS identify and discuss: 1) how many acres will be within each of the Flood Hazard Zones, 2) if there are any impacts to surrounding areas prone to flooding, and 3) if construction will occur during times of the year that have higher risks of flooding. Also, address if the project will create new and/or additional flooding in areas affected by an increase in impervious surface due to project access roads and aboveground facilities.

4.3.2.2 Impacts and Mitigation

FA2-18 **Construction** (DEIS pages 4-48 to 4-52)
Regarding NEXUS' plans to horizontal directional drill (HDD), the DEIS (page 4-52) states *"NEXUS was not able to adequately characterize risk at four of the proposed HDD sites, including the Nimisila Reservoir (MP 41.1), Tuscarawas River (MP 48.1), West Branch of the Black River (MP 92.4), and the U.S. Highway 12/RACER site (MP 254.3)."*

EPA concurs with FERC staff's recommendation presented here in the DEIS.

Recommendation: EPA recommends that the Final EIS discuss the results of NEXUS' geotechnical feasibility studies for the Nimisila Reservoir (MP 41.1), Tuscarawas River

FA2-15 We have recommended that the applicant file this information prior to construction and will include as recommendation number 21 in the Final EIS.

FA2-16 There are five (5) surface water intakes within 3 miles of the proposed project. Three of the five crossings (River Raisin in Michigan and the West Branch Black River and Swanton Reservoir in Ohio) will be crossed by either HDD or bore which avoids direct contact with the water source. The remaining two (Swanton Reservoir and West Branch Black River in Ohio) are both three miles from the crossing as the crow flies but greater than 3 river miles downstream. Accordingly, we conclude that the surface water intakes would not be impacted and that consultation with Municipalities would not be necessary.

FA2-17 As described in greater detail in section 4.3.2.3 of the EIS, floodplains that would be crossed by the pipeline could be temporarily affected by trenching and spoil piles. The removal of vegetation within a floodplain would be temporary and itself would not result in increased flooding on adjacent properties. NEXUS would implement several mitigation measures within floodplains to minimize the potential effects from flood events, including installing and maintaining erosion and sediment control structures; restoring floodplain contours and waterbody banks to their preconstruction condition, and conducting post-construction monitoring to ensure successful revegetation.

FA2-18 The final EIS has been revised based on the results of geotechnical surveys.

FEDERAL AGENCIES/ELECTED OFFICIALS

FA2 – U.S. Environmental Protection Agency (cont'd)

R-12

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FA2-18 (cont'd)	(MP 48.1), West Branch of the Black River (MP 92.4), and the U.S. Highway 12/RACER site (MP 254.3).
FA2-19	<p>DEIS (page 4-50) also states “NEXUS characterized three HDD sites as high risk of experiencing difficulty during construction, including the Sandusky River (MP 145.9), Maumee River (MP 181.6), and Huron River (MP 250.9). Each of these rivers is designated as sensitive for fish, recreation, and/or historic values.”</p> <p>Recommendation: Based on FERC staff’s recommendation here in the DEIS, EPA recommends the Final EIS identify and discuss whether NEXUS has submitted to FERC adequate justification for preferring the use of the HDD crossing method for the Sandusky River (MP 145.9), Maumee River (MP 181.6), and Huron River (MP 250.9), as opposed to an alternative crossing method, such as winter wet trench construction or direct pipe installation.</p>
FA2-20	<p>Regarding Additional Temporary Work Space (ATWS), the DEIS (page 4-52) states “The FERC Procedures require that ATWS be setback at least 50 feet from the edge of waterbodies . . . To date, Texas Eastern has not fully justified its request to locate ATWS within 50 feet from a total of seven workspaces.”</p> <p>Recommendation: Based on FERC staff’s recommendation here in the DEIS, EPA recommends the Final EIS identify whether Texas Eastern has submitted adequate justification to FERC for ATWS-13, 14, 18, 19, 35, 36, and 37 or has decided to move those workspaces to a distance of 50 feet or greater from wetlands and waterbodies.</p>
FA2-21	<p>4.3.2.3 Water Withdrawal</p> <p>The DEIS (page 4-53) states “Table 4.3.2-5 presents approximate MPs, estimated withdrawals, and water sources for the proposed hydrostatic test waters for pipeline segments, aboveground facilities, and HDD segments for the Projects. In total, the Projects would require approximately 67.5 million gallons of water for hydrostatic testing of the pipeline facilities, 0.8 million gallons for testing the aboveground facilities, and 1.8 million gallons for HDD crossings.”</p> <p>Table 4.3.2-5 Potential Sources of HDD and Hydrostatic Test Water for NGT and TEAL Projects (DEIS pages 4-54 and 4-55).</p> <p>Recommendations: We recommend Table 4.3.2-5 include additional categories to identify: 1) the proposed intake areas, 2) daily water flow amounts for each water intake, 3) where water will be recycled from one segment to another, and 4) the amount of water that will be recycled in each segment. Also identify the potential municipal source, where applicable.</p>
4.4 WETLANDS	
FA2-22	DEIS (page 4-56) states “Wetlands impacted by the NGT and TEAL Projects are federally and state-regulated. On the federal level, USACE regulates wetlands under Section 404 of the CWA and Section 10 of the Rivers and Harbor Act (RHA), and the EPA shares responsibility to

- FA2-19 EPA comments have been incorporated into conditions listed in section 4.3.2.2.
- FA2-20 Section 4.14.8.9 has been updated to better clarify that emissions from upstream production and downstream end-use combustion of natural gas are not considered a reasonably foreseeable indirect impact of the Project, finding that natural gas production drives the need for natural gas transmission projects (not the other way around). Upstream and downstream emissions from production or end-use burning are not sufficiently casually connected to be considered indirect impacts. However, section 4.14.8.9 of the EIS has been updated to more clearly reflect the cumulative impacts from those production facilities that are within the geographic scope of the Project. Further this section does disclose end-use combustion GHG emission estimates based on reasonably available EPA methodology.
- The EIS also erred in comparing GHG emissions from the Project with national GHG emissions. Section 4.14.8.9 of the EIS has been updated to compare estimated Project GHG emissions with state emissions. This comparison provides a frame of reference for emissions, and is not an indicator of significance.
- FA2-21 The OEPA and the MDEQ are responsible for issuing water allocation permits and overseeing the conservation and development. NEXUS and Texas Eastern would be required to adhere to any avoidance and minimization measures included in the permits issued by these agencies. The EIS is meant to be a summary document and the same level of detail provided in permit applications is typically not also included in the EIS.
- FA2-22 Section 4.4 has been updated to clarify Section 404 permitting responsibilities for Michigan and Ohio.

FEDERAL AGENCIES/ELECTED OFFICIALS

FA2 – U.S. Environmental Protection Agency (cont'd)

FA2-22 (cont'd) administer and enforce the Section 404 program. Wetland activities under Section 401 of the CWA are delegated to the appropriate state agencies: the OEPA in Ohio and MDEQ in Michigan.”

Recommendation: The above statement regarding CWA Section 404 permitting authorities in OH and MI is incomplete/inaccurate. See EPA’s earlier recommendation under 1.2.2 (page 5) and amend the Final EIS accordingly.

FA2-23 4.4.1 Existing Wetland Resources (pages 4-56 and 4-57)
The DEIS (pages 4-56 and 4-57) states “The applicants conducted wetland surveys during the 2014 and 2015 growing seasons, as landowner permissions allowed . . . Wetlands were delineated per the methods set forth in the USACE 1987 Wetland Delineation Manual (Environmental Laboratory, 1987), applicable Regional Supplements: Regional Supplement to the Corps of Engineers Wetland Delineation Manual: North Central and Northeast Region (Version 2.0)(USACE, 2012), . . .”

The DEIS [page 4-59, Ohio Rapid Assessment Methodology (ORAM)] states “Wetlands in Ohio are categorized by using the ORAM as a quantitative tool to determine the quality of wetlands, and also outline the functionality of those wetlands. The quality and functionality of wetlands enact differing levels of protection and are utilized as part of the review process for compensatory mitigation where impacts to wetlands are unavoidable. There are three wetland categories (i.e., Category 1, Category 2, and Category 3) where quality directly correlates to minimal, good, and superior quality wetlands, respectively (Mack, 2001).”

Recommendations: EPA recommends the Final EIS provide an update on the status of wetland field delineations for the Projects. Disclose the percentage of the Projects’ area where wetlands have not yet been field delineated. Add two additional columns to the wetlands tables in Appendix I to identify each wetlands’:

- 1) field delineation status, and
- 2) ORAM category (Category 1, 2, or 3).

Provide a brief summary of the above information in this section of the Final EIS.

FA2-24 4.4.3.1 Project-specific Impacts and Mitigation
The DEIS (page 4-62) states “As presented in table 4.4.3-1, a total of 191.6 acres of wetlands would be impacted by construction of the NGT and TEAL Projects, including 171.4 acres in Ohio and 20.1 acres in Michigan. . . . Construction of the NGT Project would . . . impact . . . 72.4 acres of PFO wetlands.” The majority of wetland impacts are associated with the NGT Project.

NGT Project

The DEIS (page 4-64) states “NEXUS would create a project-specific Wetland Mitigation Plan in consultation with USACE, MDEQ, and OEPA. Mitigation would include the purchase of wetland mitigation credits from established wetland mitigation banks, the use of an in-lieu fee

FA2-23 Appendix I has been updated to include delineation status and ORAM category.

FA2-24 NEXUS’ environmental plans can be accessed on the FERC eLibrary using the accession numbers provided in the EIS.

FEDERAL AGENCIES/ELECTED OFFICIALS

FA2 – U.S. Environmental Protection Agency (cont'd)

FA2-24 (cont'd) | *program, or a combination of the two. However, . . . this mitigation plan has not been finalized, . . .”*

Recommendation: EPA recommends the Final EIS include NEXUS’ draft wetland and stream mitigation plan (the final plan if available) for the NGT Project.

FA2-25 | **TEAL Project**
The DEIS (page 4-65) states “*Texas Eastern would create a project-specific Wetland Mitigation Plan in consultation with USACE and OEPA. Mitigation would include the purchase of wetland mitigation credits from established wetland mitigation banks, the use of an in-lieu fee program, or a combination of the two. However, . . . this mitigation plan has not been finalized, . . .”*

Recommendation: EPA recommends the Final EIS include Texas Eastern’s draft wetland and stream mitigation plan (the final plan if available) for the TEAL Project.

4.5 VEGETATION

4.5.2 Impacts and Mitigation

4.5.4 Noxious Weeds and Pathogens

FA2-26 | DEIS (page 4-75 and 4-76) disclose that both NEXUS and Texas Eastern have developed Invasive Species Management Plans (ISMPs) to minimize and control the spread of the noxious and invasive species.”

Recommendation: The ISMPs are not included in the DEIS. We recommend the Final EIS include NEXUS’ and Texas Eastern’s ISMPs in an Appendix.

4.5.6 Pollinator Habitat

FA2-27 | DEIS (page 4-8). FERC staff make the following recommendation: “*Prior to construction of the NGT Project, NEXUS should provide a plan describing the feasibility of incorporating plant seeds that support pollinators into the seed mixes used for restoration of construction workspaces. This plan should also describe NEXUS’ consultations with the relevant federal and/or state regulatory agencies.*”

Recommendation: EPA recommends the Final EIS document NEXUS consultation with the relevant federal and state regulatory agencies and include NEXUS’ plan (draft if final is not available) to incorporate plant seeds that support pollinators into the seed mixes used for restoration of construction workspace.

4.6 WILDLIFE

Upland Forest, Wetlands, Habitat, Migratory Birds

FA2-28 | DEIS (pages 4-88) discloses that construction of the NGT Project would result in the loss of approximately 332.2 acres of upland forest and 43.1 acres of forested wetlands. Construction of the TEAL Project would result in the loss of approximately 29.7 acres of upland forest and 0.1 acre of forested wetlands. The NGT and TEAL Projects construction schedules would overlap with the migratory bird nesting season.

FA2-25 | NEXUS’ environmental plans can be accessed on the FERC eLibrary using the accession numbers provided in the EIS.

FA2-26 | NEXUS’ environmental plans can be accessed on the FERC eLibrary using the accession numbers provided in the EIS.

FA2-27 | The applicant has been asked by FERC to provide this information prior to construction. Accordingly, it will only be included in the Final EIS in the event that it is received prior to issuance.

FA2-28 | The final *MBCP* has been added to the FEIS in appendix E-6. The MOU between NEXUS and FWS will be posted to the docket once executed.

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FEDERAL AGENCIES/ELECTED OFFICIALS

FA2 – U.S. Environmental Protection Agency (cont'd)

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FA2-28 (cont'd) | DEIS (pages 4-88) states “*To address FWS concerns about migratory birds, the applicants have prepared a draft Migratory Bird Conservation Plan (MBCP) . . .*”

The DEIS (page 4-89) identifies that the applicants have committed to “*Actively working on a Memorandum of Understanding (MOU) whereby NEXUS agrees to mitigate for loss of forested habitat, including avoidance and minimization of impacts, and providing mitigation funding for loss of forested migratory bird habitat. . . . the final MBCPs for Michigan and Ohio are not yet complete . . .*”

Recommendation: EPA recommends NEXUS continues to work with FWS and the Final EIS include the following documents:

- Final MBCP developed in consultation with and approved by the FWS, and
- Signed/dated MOU between the applicants and FWS documenting agreement to mitigate for loss of forested habitat, including avoidance and minimization of impacts, and providing mitigation funding for loss of forested migratory bird habitat.

4.8 SPECIAL STATUS SPECIES

FA2-29 | **4.8.1 Federally Listed Species and Endangered Species**
Eleven federally listed threatened, endangered or proposed for listing species are potentially present in the vicinity of the Rover Project (DEIS page 4-94). FERC will prepare a final Biological Assessment (BA) to submit to FWS (DEIS page 4-95) and FWS will issue a Biological Opinion (BO).

Recommendation: We recommends the Final EIS provide an update since the DEIS on the status of FERC’s BA and FWS’ BO. If feasible, include the BA and BO in the Final EIS.

FA2-30 | **4.8.2 State-listed Species**
Nineteen of the Ninety-one species that are state-listed as threatened, endangered, or of special concern potentially present in the Projects area may be impacted by the Projects (DEIS page 4-104).

Recommendation: EPA recommends the Final EIS provide an update since the DEIS regarding any state agencies’ species-specific required/requested mitigation and discuss how NEXUS and Texas Eastern will implement the mitigation measures.

4.9 LAND USE, RECREATION, SPECIAL INTEREST, AND VISUAL RESOURCES

FA2-31 | **4.9.9 Contaminated Sites** (pages 4-164 and 4-165)
The DEIS (page 4-164) states “*One of the sites, the former Willow Run Powertrain Plant, would be crossed between MPs 253.3 and 254.1 using the HDD method. . . . In March 2011, Revitalizing Auto Communities Environmental Response (RACER) Trust acquired the property as part of a national program to rehabilitate former General Motors plants and has since been*

FA2-29 | FERC’s BA and the FWS’s BO are in progress. The FERC’s BA is included as appendix E-7.

FA2-30 | Section 4.8.2 of the EIS has been updated to include any additional information provided regarding state agencies’ requested or required mitigation.

FA2-31 | We are recommending in the final EIS that, prior to construction, NEXUS should file with the Secretary for review and approval of the Director of OEP an updated *SPCC Plan* and *E&SCP* that acknowledge the potential to encounter pre-existing contamination during construction, specifically at the Willow Run/RACER property, as well as other locations. We also are recommending that the updated *SPCC Plan* and *E&SCP* should detail site-specific measures NEXUS would implement to avoid exacerbating existing contamination, if encountered.

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FEDERAL AGENCIES/ELECTED OFFICIALS

FA2 – U.S. Environmental Protection Agency (cont'd)

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FA2-31 (cont'd) responsible for maintaining and rehabilitating the property. The site is being administered under the EPA's Resource Conservation Recovery Act and overseen by the MDEQ.

There have been numerous environmental assessments of the Willow Run site during the past 30 years and a number of concerns have been identified (University of Michigan, 2013):

- Oil accumulation underneath portions of the main plant building;
- Presence of light non-aqueous phase liquid containing low levels of polychlorinated biphenyls (PCB) and some metals in soil around the site;
- Chlorinated volatile organic compounds (VOC) were found on-site, particularly in areas where parts cleaning units once operated; however, recent surveys suggest that the levels of these compounds are low and are not detected in perimeter monitoring wells; and
- Historic soil and groundwater suggest the presence of benzene, aluminum, mercury, and others pollutants.

Based on NEXUS' preliminary evaluation of readily available analytical data, and conversations with RACER representatives, NEXUS would now avoid the site by installing the pipeline using the HDD method. Extra workspace areas associated with HDD entry and exit points would be located outside the known parameters of the RACER site."

Recommendation: EPA recommends the Final EIS disclose whether or not MDEQ concurs with using HDD to avoid contamination of soil, surface water and groundwater resources from contaminants at the Willow Run site. Include an MDEQ approved HDD plan, if applicable, in the Final EIS.

FA2-32 The DEIS (page 4-164) goes on to state: "In addition to the RACER site, NEXUS identified 11 other sites where file reviews were recommended to assess the potential for existing contamination on soil and groundwater resources that could impact the NGT Project. Because information regarding the extent and degree of contamination is pending..." EPA concurs with FERC staff's DEIS recommendations.

Recommendation: EPA recommends the Final EIS present the results of the file reviews for the 11 other sites and include site specific plans, as applicable, to properly manage any contaminated soil or groundwater in compliance with applicable regulations.

4.11 CULTURAL RESOURCES

FA2-33 **Recommendation:** We recommend the Final EIS include an update on FERC's compliance with Section 106 of the National Historic Preservation Act (NHPA) for the NGT and TEAL Projects. Include relevant correspondence from State Historic Preservation Officers (SHPOs) and the Advisory Council on Historic Preservation (ACHP).

FA2-32 EPA comments have been incorporated into conditions listed in section 4.9.9.

FA2-33 The final EIS has been updated to include correspondence with SHPO and ACHP regarding the Section 106 process.

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FEDERAL AGENCIES/ELECTED OFFICIALS

FA2 – U.S. Environmental Protection Agency (cont'd)

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4.12 AIR QUALITY AND NOISE

4.12.1 Air Quality

4.12.1.3 Air Quality Impacts and Mitigation (pages 4-211 to 4-220)

FA2-34 Greenhouse Gas Emissions, Methane Leakage, Climate Change

Recommendation: (See EPA's recommendations regarding greenhouse gas emissions, methane leakage and climate change later under 4.14 Cumulative Impacts, 4.14.8.9 Air Quality and Noise.)

4.12.2 Noise

4.12.2.1 Construction Noise Impacts and Mitigation (pages 4-222 – 4-227)

HDD Operations

FA2-35 The DEIS (page 4-226) states "*As indicated (in bold) in table 4.12.2-2, 17 of the HDD entry or exit sites could exceed the FERC's 55 dBA Ldn noise guideline at the nearest NSA. NEXUS estimates that the work associated with HDD installations would range from 14 to 89 days.*"

These increased noise levels may, in part, affect sleep patterns and consequently, adult job performance and children's ability to learn in school.

Recommendations: EPA recommends the Final EIS discuss potential noise mitigation measures for NSA households during HDD operations, including the conditions that might warrant those mitigation measures. Noise mitigation discussion should include the feasibility of temporary relocation.

4.12.2.2 Operational Noise Impacts and Mitigation (pages 4-227 – 4-231)

Compressor Stations

FA2-36 Table 4.12.2-5 Estimated Noise Levels for NGT Project Compressor Stations (page 4-229)

The Table appears to show that 4 of the NSAs already experience calculated ambient L_{dn} noise levels above 55 dBA and 6 NSAs would be above 55 dBA if the Wadsworth, Clyde and Waterville Compressor Stations went into operation.

Recommendation: EPA recommends the Final EIS provide an update on the noise mitigation measures that NEXUS and TEAL propose to undertake for operation of the Projects.

4.13 RELIABILITY AND SAFETY

FA2-37 DEIS (page 4-236) states "*We [FERC] received numerous comments regarding the safety of homes, schools, hospitals, etc., that would be within the potential impact radius for the NGT Project pipeline, which would be 1,100 feet. For the NGT Project compressor stations, the potential impact radius would be 943 feet. The potential impact radius is designed to identify locations where additional safety measures are required to ensure and promote pipeline safety in populated areas. NEXUS would develop a Public Awareness Program as outlined in 49*

FA2-34 Comment noted.

FA2-35 The EIS already includes the information EPA requests in the text following table 4.12.2-2, which identifies numerous mitigation measures to actively reduce noise levels at the HDD sites. Because each HDD is estimated to last between 2 weeks and 3 months, we find that temporary relocation (which would not aid to actually reduce noise levels from the HDD) is an unreasonable burden to impose on individuals. Table 4.12.2-3 demonstrates the HDD noise levels with mitigation measures implemented. The noise associated with NEXUS' proposed HDDs would be below 55 dBA. Therefore, HDD noise impacts would not be significant and additional noise mitigation beyond what is presented in the EIS is not warranted.

FA2-36 The EIS clearly identifies our criterion for the evaluation of noise impacts is 55 dBA Ldn from the proposed Project facilities. This criterion is not used to evaluate the significance of background noise levels, not subject to the Commission's jurisdiction. As shown in table 4.12.2-5 of the EIS, the "Sound Level During Operation" for each compressor station would be below our 55 dBA Ldn criterion. This table also demonstrates that for all NSAs where existing noise levels are above 55 dBA Ldn, the compressor station would contribute a less than 1 dBA increase in noise, and therefore be imperceptible. The combined noise levels that are above 55 dBA Ldn in table 4.12.2-5 are because of existing noise levels, and not due to the compressor station operations. We have also recommended post construction noise surveys to ensure the compressor stations do not exceed our 55 dBA Ldn criterion. No additional mitigation is warranted.

FA2-37 The Public Awareness Program is a regulatory requirement under PHMSA's jurisdiction (49 CFR 192.616). Our NEPA review bears no weight on the adequacy or approval of this program for compliance with PHMSA regulation. The EIS adequately summarizes the required elements of the program, and Algonquin's commitment to comply with the regulations. The regulation cited by EPA, and development of this program is a requirement under PHMSA's operating regulations. Therefore, this program is often not developed until a facility is placed into service, and PHMSA is ultimately responsible for ensuring compliance with its regulations and the adequacy of this program. We do not have or maintain any copies in draft or final form this program. Commenters wishing to review this program should contact the DOT.

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FEDERAL AGENCIES/ELECTED OFFICIALS

FA2 – U.S. Environmental Protection Agency (cont'd)

FA2-37 (cont'd) | *CFR 192.616, which would provide outreach measures to the affected public, emergency responders, and public officials.*"

Recommendation: EPA recommends the Final EIS include a copy of NEXUS' Public Awareness Program for the NGT Project.

FA2-38 | DEIS (page 4-229) states *"In accordance with 49 CFR 192.615, NEXUS would develop, maintain, and implement a written emergency response plan to minimize the hazards from a pipeline emergency."*

Recommendation: EPA recommends a Final EIS appendix include both NEXUS' and Texas Eastern's Emergency Response Plans for the NGT and TEAL Projects.

4.14 CUMULATIVE IMPACTS

4.14.5 Non-jurisdictional Project-related Facilities

4.14.5.1 DTE Gas Company Modifications (pages 4-254 – 4-255)

4.14.5.2 Vector U.S. Modifications (page 4-255)

FA2-39 | DEIS (page 4-254) states *"To support the NGT and TEAL Projects, DTE Gas would make modifications to three existing facilities: Willow Gate, Willow Run, and Milford Compressor Stations. In addition, Vector U.S. would make modifications to the existing Milford Meter Station in Oakland County, Michigan to support the NGT and TEAL Projects. While FERC has no jurisdiction over these planned modifications, we disclose the potential cumulative impacts below."*

Recommendation: EPA recommends the FEIS disclose existing and estimated noise levels at the nearest NSAs associated with the Willow Gate, Willow Run and Milford Compressor Stations, and the Milford Meter Station. Identify the noise mitigation measures DTE and Vector could implement, if projected noise levels at NSA's warrant noise mitigation.

4.14.8.9 Air Quality and Noise

Greenhouse Gas Emissions

FA2-40 | The Draft EIS included a helpful discussion of the greenhouse gas (GHG) emissions associated with construction of the project, and annual emissions from the operation of the compressor stations, but did not include estimates of the GHG emissions associated with the production, leakage, and combustion of the natural gas brought into production as an indirect effect of this project. Because of the global nature of climate change, regardless of where the ultimate end use of the natural gas occurs, these additional greenhouse gas emissions attributable to the project would affect the U.S. Because of the causal relationship between this project and the emissions, it is appropriate and consistent with NEPA and CEQ regulations to consider and disclose the emissions levels in NEPA analyses. EPA recommends that for the climate change section of this EIS, that FERC follow the approach outlined by the CEQ's August 1, 2016 Final Guidance on the Consideration of Greenhouse Gas Emissions and the Effects of Climate Change in NEPA reviews. For example, on the topic of direct and indirect GHG emissions, the CEQ guidance

FA2-38 | The *Emergency Response Plan* is a regulatory requirement under PHMSA's jurisdiction (49 CFR 192.615). Our NEPA review bears no weight on the adequacy or approval of this plan for compliance with PHMSA regulation. The EIS adequately summarizes the required elements of the plan, and Algonquin's commitment to comply with the regulations. The regulation cited by EPA, and development of this plan is a requirement under PHMSA's operating regulations. Therefore, this plan is often not developed until a facility is placed into service, and PHMSA is ultimately responsible for ensuring compliance with its regulations and the adequacy of this plan. We do not have or maintain any copies in draft or final form this plan. Commenters wishing to review this plan should contact the DOT.

FA2-39 | The modifications at the Willow Gate Station do not involve new significant sources of noise, as such there would be no cumulative impacts on noise from this modification. As is identified in the EIS, the Milford Compressor Station is located about 20 miles from the nearest NGT Project facility. Based on this distance and noise attenuation, it is outside of the geographic scope for noise and would not result in any cumulative noise impacts. Section 4.14.8.9 of the EIS has been updated to more clearly reflect the cumulative noise impacts from the Willow Run Compressor Station and M&R Station. We note that the Commission has no authority to require or recommend specific noise mitigation measures for DTE's expansion of the Willow Run Compressor Station. Moreover, projected cumulative noise levels would be below 55 dBA Ldn, and therefore, would not be significant. If noise is found to be excessive, DTE and Vector could implement similar measures taken by NEXUS and Texas Eastern at similar facilities. However, requirements to implement such measures would depend on state or local regulations.

FA2-40 | Sections 1.4, 4.14.3.2, and 4.14.8.9 of the EIS explain that emissions from production of natural gas are not considered a reasonably foreseeable indirect impact of the Project, finding that natural gas production drives the need for natural gas transmission projects (not the other way around), and there already exist numerous production facilities that have developed a network of pipelines for natural gas to flow to various users or interstate pipelines. Upstream and downstream emissions from production or end-use burning are not sufficiently casually connected to be considered indirect impacts. However, section 4.14.8.9 of the EIS has been updated to more clearly reflect the cumulative impacts from those production facilities that are within the geographic scope of the Project.

The EIS also erred in comparing GHG emissions from the Project with national GHG emissions. Section 4.14.8.9 of the EIS has been updated to compare estimated Project GHG emissions with state emissions. This comparison provides a frame of reference for emissions, and is not an indicator of significance.

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FEDERAL AGENCIES/ELECTED OFFICIALS

FA2 – U.S. Environmental Protection Agency (cont'd)

FA2-40 (cont'd) states: "If the direct and indirect GHG emissions can be quantified based on available information, including reasonable projections and assumptions, agencies should consider and disclose the reasonably foreseeable direct and indirect emissions when analyzing the direct and indirect effects of the proposed action."

In the DEIS, FERC includes comparisons of project-level greenhouse gas emissions to nationwide emissions levels. FERC should not evaluate GHG emissions by comparing them to U.S. emissions. According to CEQ, such comparisons are "not an appropriate method for characterizing the potential impacts associated with a proposed action and its alternatives and mitigations because this approach does not reveal anything beyond the nature of the climate change itself: the fact that diverse individual sources of emissions each make a relatively small addition to global atmospheric GHG concentrations that collectively have a large impact."¹

Recommendations: We recommend that the Final EIS include estimates of emissions from production and combustion of the natural gas brought into production. We also recommend that FERC remove comparisons of the proposed project's estimated emissions to aggregate emissions.

FA2-41 Methane Leakage
The DEIS does not describe efforts to reduce methane leakage from the proposed action. EPA has compiled useful information on technologies and practices that can help reduce methane emissions from natural gas systems, including specific information regarding emission reduction options for natural gas transmission operations. This information can be found at: (http://www.epa.gov/gasstar/methaneemissions/onshore_transmission_storage.htm)

Recommendation: We recommend that the Final EIS describe potential best management practices (BMPs) to reduce leakage of methane associated with operation of the pipeline and compressor stations.

FA2-42 Climate Change (pages 4-268 to 4-271)
DEIS (pages 4-269 and 4-270) discloses that the U.S. Global Change Research Report (USGCRP, May 2014) states "*annual precipitation has increased by about 20 percent over the past century, particularly from increased high-intensity rainfall events, and this trend is projected to continue*" for the Midwest region of the U.S.

Recommendation: EPA recommends the Final EIS discuss the Projects Proponents' and FERC's consideration of the Projects' susceptibility to impacts associated with climate change and identify mitigation measures. For example, discuss the risk of the Projects' pipelines being exposed due to increases in flooding, scouring, and/or upland erosion due to expected heavy precipitation events associated with climate change.

¹ CEQ Final Guidance on the Consideration of Greenhouse Gas Emissions and the Effects of Climate Change in NEPA Reviews, pg.11.

FA2-41 Section 4.12.1.3 - Operation Emissions of the EIS has been updated to address mitigation measures for methane leaks.

FA2-42 Section 4.14.8.9 of the EIS has been updated to address climate change impacts on the project and mitigation measures.

FEDERAL AGENCIES/ELECTED OFFICIALS

FA2 – U.S. Environmental Protection Agency (cont'd)

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4.14.9 Conclusion

FA2-43 DEIS (page 4-272) states *“For the NGT and TEAL Projects, the majority of cumulative impacts would be temporary and minor when considered in combination with past, present, and reasonably foreseeable activities; however, some long-term cumulative impacts would occur on wetland and upland forested vegetation and associated wildlife habitats. . . .”*

Recommendation: To help insure that NEXUS and Texas Eastern demonstrate that impacts to wetlands and upland forest and associated wildlife habitats, including migratory bird habitats have been avoided and minimized to the maximum extent practicable, and adequate compensation mitigation is identified and implemented, EPA recommends the Final EIS include the following plans/documents for the NGT and TEAL Projects:

- Signed/dated Memorandum of Understanding (MOU) between the U.S. Fish and Wildlife Service (FWS) and NEXUS regarding forest mitigation,
- Final Migratory Bird Conservation Plan,
- Invasive Plant Species Management Plan (IPSMP), and
- Wetland and Stream Mitigation Plan

5.0 CONCLUSIONS AND RECOMMENDATIONS

FA2-44 The DEIS (page 5-1) states *“The conclusions and recommendations presented in this section are those of the FERC environmental staff. Our conclusions and recommendations were developed with input from the EPA and FWS as cooperating agencies.”*

Recommendation: This section in the Final EIS will need to be updated after consideration of additional input provided by the cooperating/resources agencies and others since FERC’s release of the DEIS for public and agency review and comment.

APPENDICES

FA2-45 **Appendix A - Draft EIS Distribution List – Federal Government Agencies** (DEIS page A-1)

Recommendations: We recommend the following corrections/changes for the EPA listings in Appendix A for the FEIS Distribution List – Federal Government Agencies), as follows:

- replace “Cliff Rader” with “Karin Leff” for Director, NEPA Compliance Division;
- replace “Susan E. Bromm” with “Rob Tomiak” for Director, Office of Federal Activities, and

FA2-43 Comment noted.

FA2-44 Conclusions and recommendations have been updated based on agencies and public review of the draft EIS.

FA2-45 Distribution List (appendix A) has been updated accordingly.

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FEDERAL AGENCIES/ELECTED OFFICIALS

FA2 – U.S. Environmental Protection Agency (cont'd)

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FA2-45
(cont'd)

- add “NEPA Implementation Section” after “Kenneth Westlake, Chief.”

Appendix B – NGT and TEAL Route Maps

FA2-46

Recommendation: EPA recommends that the Final EIS Appendix B route maps also distinctly identify the locations of the following:

- delineated wetlands w/identifying numbers, and NWI wetlands,
- co-locations,
- ATWS,
- contractor yards and staging areas, and
- proposed new, improved, and private access roads.

The above recommended information can be found in tables in the sub-appendices of Appendices C, H and I.

Appendix C – Project Description Tables (Sub-appendices C-1 through C-5), Appendix H – Water Resources Tables (Sub-appendices H-1 through H-6), and Appendix I – Wetlands Tables (Sub-appendices I-1 and I-2):

FA2-47

Recommendation: EPA recommends all Final EIS tables in Appendices C, H, and I include an additional column that identifies the specific Appendix B route map and map page number where each listing can be found/located.

FA2-46 Comment noted.

FA2-47 Comment noted.

R-21

FEDERAL AGENCIES/ELECTED OFFICIALS

FA2 – U.S. Environmental Protection Agency (cont'd)

SUMMARY OF RATING DEFINITIONS AND FOLLOW UP ACTION

Environmental Impact of the Action

LO-Lack of Objections

The EPA review has not identified any potential environmental impacts requiring substantive changes to the proposal. The review may have disclosed opportunities for application of mitigation measures that could be accomplished with no more than minor changes in the proposal.

EC-Environmental Concerns

The EPA review has identified environmental impacts that should be avoided in order to fully protect the environment. Corrective measures may require changes to the preferred alternative or application of mitigation measures that can reduce the environmental impacts. EPA would like to work with the lead agency to reduce these impacts.

EO-Environmental Objections

The EPA review has identified significant environmental impacts that must be avoided in order to provide adequate protection for the environment. Corrective measures may require substantial changes to the preferred alternative or consideration of some other project alternative (including the no action alternative or a new alternative). EPA intends to work with the lead agency to reduce these impacts.

EU-Environmentally Unsatisfactory

The EPA review has identified adverse environmental impacts that are of sufficient magnitude that they are unsatisfactory from the standpoint of public health or welfare or environmental quality. EPA intends to work with the lead agency to reduce these impacts. If the potential unsatisfactory impacts are not corrected at the final EIS stage, this proposal will be recommended for referral to the CEQ.

Adequacy of the Impact Statement

Category 1-Adequate

The EPA believes the draft EIS adequately sets forth the environmental impact(s) of the preferred alternative and those of the alternatives reasonably available to the project or action. No further analysis or data collecting is necessary, but the reviewer may suggest the addition of clarifying language or information.

Category 2-Insufficient Information

The draft EIS does not contain sufficient information for the EPA to fully assess the environmental impacts that should be avoided in order to fully protect the environment, or the EPA reviewer has identified new reasonably available alternatives that are within the spectrum of alternatives analyzed in the draft EIS, which could reduce the environmental impacts of the action. The identified additional information, data, analyses, or discussion should be included in the final EIS.

Category 3-Inadequate

EPA does not believe that the draft EIS adequately assesses potentially significant environmental impacts of the action, or the EPA reviewer has identified new, reasonably available alternatives that are outside of the spectrum of alternatives analyzed in the draft EIS, which should be analyzed in order to reduce the potentially significant environmental impacts. EPA believes that the identified additional information, data analyses, or discussions are of such a magnitude that they should have full public review at a draft stage. EPA does not believe that the draft EIS is adequate for the purposes of the NEPA and/or Section 309 review, and thus should be formally revised and made available for public comment in a supplemental or revised draft EIS. On the basis of the potential significant impacts involved, this proposal could be a candidate for referral to the CEQ.

*From EPA Manual 1640 Policy and Procedures for the Review of the Federal Actions Impacting the Environment

FEDERAL AGENCIES/ELECTED OFFICIALS

FA3 – Representative Tim Walberg

20160908-0008 FERC PDF (Unofficial) 09/07/2016

TIM WALBERG
7TH DISTRICT, MICHIGAN

EMAIL VIA WEBSITE:
walberg.house.gov

COMMITTEE ON
OVERSIGHT AND GOVERNMENT REFORM

COMMITTEE ON
EDUCATION AND THE WORKFORCE
CHAIRMAN, SUBCOMMITTEE ON
WORKFORCE PROTECTIONS

Congress of the United States

House of Representatives

Washington, DC 20515-2207

August 29, 2016

OFFICE OF
EXTERNAL AFFAIRS

2016 SEP - 1 P 5:05

FEDERAL ENERGY
REGULATORY COMMISSION

Ms. Kimberly Bose, Secretary
Federal Energy Regulatory Commission
888 First Street, NE
Washington, DC 20426

Subject: Docket No. CP16-22-000 (NEXUS Gas Transmission Pipeline Project)

Dear Secretary Bose:

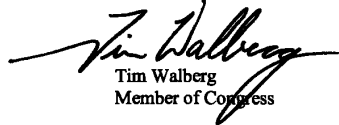
I am submitting these comments for the record concerning Docket No. CP16-22-000 and the proposed NEXUS Gas Transmission pipeline project being pursued by DTE Energy in partnership with Spectra Energy.

FA3-1 Michigan families and businesses rely on clean and affordable energy as they work to grow our economy and create good-paying jobs. It is important that we have the necessary infrastructure in place to enable these efforts and the NEXUS Gas Transmission pipeline project will deliver abundant natural gas to Michigan to meet our state's growing energy demands.

FA3-2 Southeastern Michigan remains a key manufacturing and economic center and maintaining a reliable and affordable energy supply is crucial to the region's future economic competitiveness. The NEXUS project, of which Michigan-based DTE Energy is a partner, will interconnect into existing natural gas infrastructure and position the region to compete and grow.

In my capacity as the federal representative of Michigan's 7th District, I am pleased to register my support for the NEXUS project, which is expected to lower electricity costs for my constituents and contribute important economic benefits to the state and communities I represent. Thank you for your consideration.

Sincerely,



Tim Walberg
Member of Congress

WASHINGTON, D.C.:
2430 RAYBURN HOUSE OFFICE BUILDING
WASHINGTON, D.C. 20515
(202) 225-6278
FAX: (202) 225-6281

JACKSON:
110 1ST STREET, SUITE 2
JACKSON, MI 49201
(517) 780-9075
FAX: (517) 780-9081

PRINTED ON RECYCLED PAPER

2016-00148

FA3-1 Comment noted.

FA3-2 Comment noted.

R-23

FEDERAL AGENCIES/ELECTED OFFICIALS

FA4 – U.S. Fish & Wildlife Service



UNITED STATES DEPARTMENT OF THE INTERIOR
U.S. Fish and Wildlife Service
Ecological Services Office
4625 Morse Road, Suite 104
Columbus, Ohio 43230
(614) 416-8993 / Fax (614) 416-8994



October 21, 2016

Alisa M. Lykens, Chief
Federal Energy Regulatory Commission
Gas Branch 2
Division of Gas – Environment and Engineering
Washington, D.C. 20426

TAILS# 03E15000-2015-F-0009

Dear Chief Lykens,

This letter acknowledges the U.S. Fish and Wildlife Service's (Service's) receipt of your October 20, 2016 letter and Biological Assessment (BA) requesting section 7 consultation under the Endangered Species Act. The consultation concerns the possible effects of NEXUS Gas Transmission, LLC's NEXUS Gas Transmission Project on the federally listed endangered Indiana bat (*Myotis sodalis*) and rayed bean (*Villosa fabalis*), and threatened northern long-eared bat (*Myotis septentrionalis*). You are requesting initiation of formal consultation for the Indiana bat and northern long-eared bat and concurrence that the project is not likely to adversely affect the rayed bean.

- FA4-1 The Service has reviewed the project description and concurs with your determination that the project, as proposed, is not likely to adversely affect the rayed bean. This concurrence is based on the applicant's commitment to implementing horizontal directional drilling (HDD) under any streams where extant and historical rayed bean populations occur, including the River Raisin and Huron River in Michigan and Swan Creek and the Vermillion River in Ohio. This concludes
- FA4-2 consultation on this action for the rayed bean, as required by section 7(a)(2) of the ESA. If new information reveals effects of the action that were not previously considered, consultation with the Service should be reinitiated to assess whether the determination is still valid.

All information required of you to initiate formal consultation for the Indiana bat and northern long-eared bat was included in your BA or is otherwise accessible for our consideration and reference. We have assigned TAILS# 03E15000-2015-F-0009 to this consultation. Please refer to that number in future correspondence on this consultation.

Section 7 allows the Service up to 90 calendar days to conclude formal consultation with your agency and an additional 45 days to prepare our biological opinion (unless we mutually agree to an extension). Therefore, we expect to provide you with our biological opinion no later than March 3, 2017.

FA4-1 The updated information provided will be incorporated into the EIS as appropriate.

FA4-2 Comment noted.

R-24

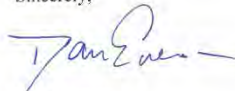
FEDERAL AGENCIES/ELECTED OFFICIALS

FA4 – U.S. Fish & Wildlife Service (cont'd)

As a reminder, the Endangered Species Act requires that after initiation of formal consultation, the Federal action agency may not make any irreversible or irretrievable commitment of resources that limits future options. This practice insures agency actions to not preclude the formulation or implementation of reasonable and prudent alternatives that avoid jeopardizing the continued existence of endangered or threatened species.

If you have any questions or concerns about this consultation or the consultation process in general, please feel free to contact Angela Boyer, of my staff, at (614) 416-8993, ext. 22.

Sincerely,



Dan Everson
Field Supervisor

R-25

NATIVE AMERICAN TRIBES

NAT1 – Nottawaseppi Huron Band of Potawatomi

R-26

NAT1-1

Douglas R Taylor, Fulton, MI.
Refer to:
CP16-22-000, CP16-23-000, CP16-24-000, CP16-102-000.
Date 12 September, 2016.

Thank you very much for contacting the Nottawaseppi Huron Band of the Potawatomi (NHBP) Cultural and Historic Preservation Office in reference to your upcoming project. Based on a review of the information you provided to NHBP of this project, we indicate no potential impacts at this time. In the event of an inadvertent discovery of Native American (Potawatomi) human remains within your project area. Please contact Mr. William Johnson at 989-775-4730, Michigan Anishinabek Cultural Preservation and Repatriation Alliance (MACPRA) in Mount Pleasant, Michigan to assist in removing Native American remains. Once again thank you very much for contacting us in this matter.

Very Respectfully
Douglas R. Taylor
Contractor
MACPRA Representative
Nottawaseppi Huron Band of the Potawatomi
2221 1 ½ Mile Rd., Fulton, Michigan 49052
Doug.Taylor@nhbpi.com
Cell: 269-275-4260

NAT1-1 Comment noted.

STATE AGENCIES/ELECTED OFFICIALS

SA1 – Ohio Department of Agriculture

20160824-0015 FERC PDF (Unofficial) 08/24/2016



Governor John R. Kasich • Lt. Governor Mary Taylor
Director David T. Daniels

Division of Soil and Water Conservation
8995 East Main Street, Reynoldsburg, OH 43068
Phone: 614-265-8610 • Fax: 614-466-6124
www.agri.ohio.gov • dswc@agri.ohio.gov

August 15, 2016

Nathaniel J. Davis, Sr.
Deputy Secretary
Federal Energy Regulatory Commission
888 First Street NE, Room 1A
Washington, D.C. 20426

Reference: OEP/DG2E/Gas 4
Projects: Nexus Gas Transmission (NGT) Project
Nexus Gas Transmission, LLC.
Texas Eastern Appalachian Lease (TEAL) Project
Texas Eastern Transmission, LP
Docket Nos.: CP16-22-000; CP16-23-000

Dear Mr. Davis:

The Ohio Department of Agriculture – Division of Soil and Water Conservation (ODA-DSWC) has reviewed the draft environmental impact statement (DEIS) prepared by FERC and the Erosion & Sediment Control Plan submitted by Nexus for the pipeline projects in the above-referenced dockets.

Under the authority of Ohio Revised Code 939.02, ODA-DSWC (formerly via the Ohio Department of Natural Resources) has maintained a Pipeline Standard applicable to pipeline and other improvement projects that affect soil and water resources, including surface and subsurface drainage. This Pipeline Standard recommends measures to retard erosion and protect soil and water resources. It was developed in 1998 and has been revised on numerous occasions. The standard has been effectively utilized in previous interstate pipeline work in Ohio. **ODA-DSWC recommends that the Ohio Pipeline Standard and Construction Specifications be attached as a condition to any authorization issued by the FERC on these projects. The Ohio Pipeline Standards and Construction Specifications can be found at:** <http://www.agri.ohio.gov/divs/SWC/docs/PIPELINE%20STANDARD.pdf>

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2016 AUG 24 P 4:06
FEDERAL ENERGY REGULATORY COMMISSION

R-27

SA1-1

SA1-1

NEXUS will implement their *E&SCP*, which is based on FERC's *Upland Erosion Control, Revegetation, and Maintenance Plan (Plan)* and *Wetland and Waterbody Construction and Mitigation Procedures (Procedures)*. FERC's *Plan* and *Procedures* are a set of construction and mitigation measures that were developed in collaboration with other federal and state agencies and the natural gas pipeline industry to minimize the potential environmental impacts of the construction of pipeline projects in general.



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STATE AGENCIES/ELECTED OFFICIALS

SA1 – Ohio Department of Agriculture (cont'd)

20160824-0015 FERC PDF (Unofficial) 08/24/2016



**Department of
Agriculture**

Governor John R. Kasich • Lt. Governor Mary Taylor
Director David T. Daniels

Division of Soil and Water Conservation
8996 East Main Street, Reynoldsburg, OH 43068
Phone: 614-265-6610 • Fax: 614-466-6124
www.agri.ohio.gov • dawc@agri.ohio.gov

Nathaniel J. Davis, Sr.
August 9, 2016
Page 2

Thank you for the opportunity to provide these comments. If you have questions or if we may be of further assistance in this matter, please contact Justin Reinhart at 614-265-6691 or Justin.Reinhart@agri.ohio.gov.

Sincerely,

A handwritten signature in black ink, appearing to read 'David T. Daniels', written over a horizontal line.

David T. Daniels
Director

Cc: Timothy G. Schirmer, Senior Staff Counsel
Kirk Hines, ODA-DSWC Chief
Justin Reinhart, ODA-DSWC Conservation Engineer



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R-28

STATE AGENCIES/ELECTED OFFICIALS
SA2 – Ohio State Historic Preservation Office

20160909-0040 FERC PDF (Unofficial) 09/09/2016

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COMMISSION

2016 SEP -9 P 4:01

FEDERAL ENERGY
REGULATORY COMMISSION

August 31, 2016

Nathaniel J. Davis, Sr., Deputy Secretary
Federal Energy Regulatory Commission
888 First Street NE, Room 1A
Washington, DC 20426

Re: OEP/DG2E/Gas 2; NEXUS Gas Transmission, LLC
Texas Eastern Transmission, LP; DTE Gas Company; Vector Pipeline
L.P. Docket Nos. CP16-22-000, CP16-23-000, CP16-24-000, CP16-102-000
FERC/EIS-270D

In reply, please refer to:
2014-MLT-29513



ORIGINAL

Dear Mr. Davis:

This is in response to correspondence from your office dated July 18, 2016 (received July 18). Comments of the Ohio State Historic Preservation Office (SHPO) are offered pursuant to provisions of the National Historic Preservation Act of 1966, as amended, and its implementing regulations at 36 CFR 800.

The correspondence includes a CD containing the Draft EIS Volumes 1 and 2 for the NEXUS and TEAL Projects. The DEIS contains a very large volume of information. We acknowledge that there is a great deal of useful, pertinent, and vital information on the projects and on efforts to identify and consider impacts to cultural resources. That said, the Ohio SHPO is not at this time ready to concur with findings. It is our opinion that there are several key steps in the Section 106 review process where we do not see sufficient information for us to understand the basis of decisions. It is our recommendation that the FERC, with the assistance of the applicant and the applicant's Cultural Resource Management team, should integrate into the DEIS additional information on fundamental review components, and ensure that these are reviewed, prior to finalizing the EIS and moving forward with FERC's decision on the authorization for the projects.

While there are many pieces where we have concerns, to reach a level of sufficiency allowing accommodation of cultural resources impacts we recommend that strengthening and clarification is needed for the following three areas: (1) Identification of Consulting Parties; (2) Verification of level and intensity of cultural resources investigations along the final selected route, including all last minute adjustments and reroutes; and (3) Presentation of the steps that conclude the review process, including memorialization of preservation commitments so that consulting parties and the public clearly understand the basis for these commitments.

800 E. 17th Ave., Columbus, OH 43211-2474 • 614.297.2300 • ohiohistory.org

SA2-1

Updated information has been incorporated into section 4.11 of the final EIS. We understand that NEXUS has not completed cultural resources surveys and/or NRHP evaluations, and consultation with the SHPOs for both Projects is not yet complete. The recommendation in Section 4.11.4 would ensure compliance with Section 106 of the NHPA is completed.

R-29

SA2-1

STATE AGENCIES/ELECTED OFFICIALS

SA2 – Ohio State Historic Preservation Office (cont'd)

20160909-0040 FERC PDF (Unofficial) 09/09/2016

Nathaniel J. Davis, Sr.
August 31, 2016
Page 2

SA2-2 Identification of consulting parties. We understand from state and local news coverage that FERC has held several public meetings regarding the proposed Nexus pipeline. We have not been provided with meeting minutes or documentation that illustrate public concerns or comments that might be meaningful to SHPO staff while performing review of the undertaking. Will public meeting comments be available to our office? Has Section 106 been a direct topic at the public meetings?

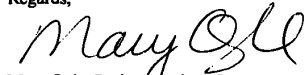
SA2-3 Verification of final route. Our office has received archaeology and history architecture survey reports for NEXUS. We requested information on thirteen architectural properties, but have yet to receive additional information to continue the review. Our office has received archaeology and history architecture survey reports TEAL, which we are currently reviewing and waiting for a revised architectural report. Upon receipt of the revised report, we will continue the review and provide comments. We strongly recommend that FERC work closely with the applicant to verify the extent of the final route that has been the subject of an intensive survey for cultural resources and to make the findings of this verification available to the SHPO and consulting parties for their review.

With the combination of waiting to receive additional information about the effects to historic resources and the noted proposed route alternates in the DEIS, how will our office be given the opportunity to review and provide comment on the final undertaking prior to certification by FERC?

SA2-4 Concluding the review process. Please describe the review steps that FERC will follow to fully consider our comments and recommendations prior to reaching a decision on certification. Following our completed review and recommendations, how will the avoidance plans, minimization plans, and mitigation measures be executed? Given the proximity of the projects to significant cultural resources the SHPO anticipates the likelihood of concluding the Section 106 review with a formal agreement. Does FERC anticipate that there will be an MOA executed to conclude the Section 106 review and if so has FERC initiated steps to guide the preparation of an agreement?

Any questions concerning this matter should be addressed to David Snyder or Mary Ogle at (614) 298-2000, between the hours of 8 am to 5 pm. Thank you for your cooperation.

Regards,



Mary Ogle, Project Reviews Manager
State Historic Preservation Office

Serial: 1064450

xc:

Tracy L. Millis, Senior Archaeologist
TRC Environmental Corp.
50101 Governors Drive, Suite 250
Chapel Hill, NC 27517

OHIO HISTORY CONNECTION

800 E. 17th Ave., Columbus, OH 43211-2474 • 614.297.2300 • ohiohistory.org

SA2-2 The transcripts from Public Meetings held in Swanton, Uniontown, Wadsworth, Elyria, and Fremont, Ohio between August 10 and August 18, 2016 can be found on FERC's eLibrary (<http://elibrary.ferc.gov>) under docket numbers CP16-22 and CP16-23.

SA2-3 NEXUS provided the requested information on thirteen architectural properties to the Ohio SHPO on September 23, 2016. We understand that NEXUS has not completed cultural resources surveys and/or NRHP evaluations, and consultation with the SHPOs for both Projects is not yet complete. The recommendation in section 4.11.4 would ensure the SHPOs receive all required information, reports, studies, and any required treatment/mitigation plans and that compliance with Section 106 of the NHPA is completed.

SA2-4 Following receipt of SHPO comments, the applicant would be required to address the comments, and produce any required avoidance/minimization plans. Since we anticipate that NEXUS would avoid or minimize impacts, we also anticipate that there would be no adverse effects on historic properties, in which case, a memorandum of agreement (MOA) would not be required. Since this has, as yet, not been determined, we have not initiated preparation of an MOA.

R-30

LOCAL AGENCIES/ELECTED OFFICIALS

LA1 – Tim S. Crawford, Summit County Council

20160725-0019 FERC PDF (Unofficial) 07/25/2016

SUMMIT COUNTY COUNCIL

COUNTY OF SUMMIT, OHIO

MEMBERS OF COUNCIL

Michael T. Callahan
Daniel Congrove
Tim Crawford
Pete Crossland
Paul Gallagher



MEMBERS OF COUNCIL

Louise Heydorn
Michael J. King
Andrea L. Norris
Cazzell M. Smith, Sr.
Thomas A. Teodosio
Kimberly A. Zurz

David E. Hannan, Jr., MMC
Clerk of Council

July 18, 2016

To: Nathaniel J. Davis Sr.
Dept. of Sec. FERC
888 First St. NE Room 1A
Washington, DC 20426

Re: CP16-22-000
Nexus Gas

From: Tim S. Crawford
Summit County Council
4109 S. Cleve-Mass Rd
Norton, OH 44203

ORIGINAL

FILED
SECRETARY OF THE
COMMISSION
2016 JUL 25 P 4:24
FEDERAL ENERGY
REGULATORY COMMISSION

I would like to protest the current routing of the Nexus Pipeline. There are way too many environmental impacts in the current route. Constructing the pipeline within inches of homes, cutting down old growth trees, and the impact to the wet lands is beyond my comprehension. I know that many people say (NIMBY) that is not in my background. I know other people have proposed alternate routes, but none were good alternates.

LA1-1

Nexus current route is 255 miles, from Kensington to Detroit. Here are some alternate routes.

- 1- From Kensington, Ohio to Detroit, from Kensington follow St. Route 30 west to St. Route 250 to interstate 75 which would be 234 Miles.
- 2- From Kensington follow St. Route 30 west to St. Route 23 then North to St. Route 75 which would be 254 miles.

Both the above routes follow a State route, where 90% of the right of way is owned by the State of Ohio.

- 1- Less environmental impact to the Wet Lands, Steams Crossing, Well Water
- 2- Using option 2 Nexus is one mile shorter.
- 3- Less Proximal to homes & urban areas
- 4- Less Home water well disturbed
- 5- Avoids the Eagle Nesting sites in Summit County.

Sincerely,

Tim S. Crawford

Ohio's First Charter County

175 S. Main Street, 7th Floor, Akron, Ohio 44308-1314
(330) 643-2725 • FAX (330) 643-2531 Northern Summit County 1-800-582-2699

LA1-1

We did not evaluate the route alternatives suggested in this comment because doing so would route the pipeline through the center of several large urban and suburban communities, including Canton, Wooster, Ashland, Norwalk, Fremont, Findlay, Bowling Green, and/or Toledo, Ohio; and Monroe, Romulus, Dundee, and/or Milan, Michigan. Not only would routing the pipeline through these communities result in greater impacts on home and urban areas, the pipeline would also be required to cross the same streams and wetlands as the highways, lending them unlikely to reduce environmental impacts on those resources.

R-31

LOCAL AGENCIES/ELECTED OFFICIALS

LA2 – Daniel Hodge, East Union Township Trustee

R-32

Daniel, Apple Creek, OH.
 East Union Township Trustees
 PO Box 222
 Apple Creek, OH 44606
 Wayne County

August 13, 2016

RE: NEXUS Pipeline Case Docket Number: CP16-22-000

Dear FERC,

This is a letter expressing reasons why we are opposed to the City of Green alternate route of the NEXUS pipeline.

LA2-1 As a seventh generation farmer and Township Trustee, though I am not personally affected by the proposed re-route of the NEXUS pipeline, I know many landowners who are. Industry-based areas want inexpensive natural gas delivered to them. Two of these areas are located north of the City of Green. Those communities that want the gas delivered to them should accept the responsibility and should accept this pipeline in their area since they will reap the benefit. Southern Wayne County does not benefit and therefore should not have to bear the burden.

LA2-2 Secondly, to divert the gas line would result in an additional five miles out of the path of delivery. This is five more miles of environmental issues. Please be aware of our occasional steep slopes due to rolling topography. Also, our woodlands are managed to harvest trees for our many woodshops and furniture shops. These are very popular with out-of-county customers who love handmade Amish products.

LA2-4 A third important factor is the very short notice we have to respond and to get involved in the evaluation process as the August 29th deadline is coming quick. I understand that 1200-plus pages of the entire EIS draft concerns only those impacted in original route through the City of Green, and not the re-route through southern Wayne County. It appears more than a year of thought and input has gone into that EIS. How can you accomplish the same due diligence and courtesy to the residents of Wayne County by the August 29th deadline?

LA2-5 Fourth, we already have Rover and Utopia going through our farming community. The possibility of another line will be even more disruptive to our livelihood. The farmers, many of them being organic and many Amish, depend on their land to produce crops to feed their livestock and vegetables for local markets. Another pipeline may make it more difficult to continue their livelihood economically. We make our living off the land, not in offices and factories. This is especially true of the Amish community because of their connection to their land and the cultural way of life.

LA2-6 Additionally, we Township Trustees provide fire and EMS services to the area. We have a volunteer fire department- not a paid staff. This means if multiple safety situations should occur, our first responders have to leave their jobs, if able, and the second shift worker would have to awake from sleep. This could leave us understaffed to deal with another potential situation. Our fire department may not be equipped and staffed like a paid city fire department is.

These are just a few thoughts that I hope you will consider when deciding where the pipeline would cause the least upheaval of people's livelihoods. Those communities that reap the benefit of receiving this natural gas needed for their economic enrichment should bear the burden of the pipeline.

Sincerely,

Daniel Hodge, East Union Township Trustee

LA2-1 Comment noted.

LA2-2 Comment noted.

LA2-3 Comment noted. Based on our review, we did not find the City of Green Route Alternative provides a substantial environmental advantage when compared to the corresponding segment of the proposed route and did not recommend that it be incorporated as part of the Projects.

LA2-4 Comment noted.

LA2-5 Comment noted.

LA2-6 Regardless of the route selected, sections 4.10.5 and 4.13 address local emergency response, including DOT requirements to develop emergency response plans in coordination with state and local officials. These emergency procedures would provide for adequate means of communication, notification, and coordination with appropriate fire, police, and other public officials, as well as for the availability of personnel, equipment, tools, and materials needed to respond to an emergency.

LOCAL AGENCIES/ELECTED OFFICIALS

LA3 – Al Bollas, Mayor of New Franklin, OH

Al Bollas, New Franklin, OH.

In 2014, Spectra Energy & DTE Energy proposed to construct the Nexus Pipeline, a 36" high pressure natural gas pipeline from Kensington, Ohio to the Dawn Hub in Ontario, Canada. On its way to Canada, the proposed route for this pipeline travels through Summit County, including the City of New Franklin, Ohio's newest city.

LA3-1 While I fully support the natural gas industry and the positive economic impact it has brought to the state of Ohio, I have serious reservations about this project traversing through the Cities of New Franklin and Green. This proposed route of the gas line will hurt New Franklin for many years to come, especially high populated residential areas.

LA3-2 Furthermore, I am worried about the natural resources and beauty of our lakes and streams.

The Portage Lakes Watershed in New Franklin is where a considerable amount of economic stability and growth comes from. My house is just one of the thousands of homes and businesses on the Portage Lakes. Why in the world would the pipeline company route a pipe through such a beautiful community like this and neighboring Green City to the east. This poses a dangerous threat for future generations. Use a less populated route south of Summit County.

LA3-3 I understand that FERC has indicated that they have not decided between the Nexus proposed route or a route that would bypass Summit County. What makes the decision so difficult? The City of Green's bypass plan certainly would make more sense and would not affect as many residents and the future of our commercial base.

Although I would like to attend the FERC public comment meetings on August 17, 2016 at Wadsworth High School or on August 18, 2016 at Green High School, I will be out of town.

Thank you for your time and for permitting me to comment on this important subject.

Mayor Al Bollas
City of New Franklin, Ohio


LA3-1 Comment noted.

LA3-2 The pipelines and aboveground facilities associated with the NGT Project must be designed, constructed, operated, and maintained in accordance with PHMSA safety standards, including more stringent requirements in increasingly populated areas. Therefore, the pipeline is considered safe, regardless of population density (see section 4.13 of the EIS).

LA3-3 Comment noted. Based on our review, we did not find the City of Green Route Alternative provides a substantial environmental advantage when compared to the corresponding segment of the proposed route and did not recommend that it be incorporated as part of the Projects.

LOCAL AGENCIES/ELECTED OFFICIALS
LA4 – Karen Lovejoy Roe, Charter Township of Ypsilanti Board of Trustees

20160823-5178 FERC PDF (Unofficial) 8/23/2016 3:53:31 PM

<p><i>Supervisor</i> BRENDA L. STUMBO <i>Clerk</i> KAREN LOVEJOY ROE <i>Treasurer</i> LARRY J. DOE <i>Trustees</i> JEAN HALL CURRIE STAN ELDRIDGE MIKE MARTIN SCOTT MARTIN</p>	 <p><i>Charter Township of Ypsilanti</i></p>	<p>Clerk's Office</p> <p>7200 S. Huron River Drive Ypsilanti, MI 48197 Phone: (734) 484-4700 Fax: (734) 484-5156</p>
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August 22, 2016

Federal Energy Regulatory Committee
888 First Street, NE
Washington, DC 20426

Re: Resolution 2016-17, Opposing Nexus Gas Pipeline


Dear Sir/Madam,

At the Regular Meeting held on August 16, 2016, the Charter Township of Ypsilanti Board of Trustees approved Resolution 2016-17, Opposing the Nexus Gas Pipeline. The Township is opposed to the construction of the Nexus Gas Pipeline and is filing the attached Resolution as a formal to comment.

A certified copy of Resolution 2016-17 is attached. Also attached are comments and concerns that were submitted to the Township in support of the resolution.

If you have any questions, please contact my office.

Sincerely,


Karen Lovejoy Roe
Clerk

Irg

Attachment

cc: File

R-34

LOCAL AGENCIES/ELECTED OFFICIALS

LA4 – Karen Lovejoy Roe, Charter Township of Ypsilanti Board of Trustees

R-35

RESOLUTION NO. 2016-17

A resolution opposing the Nexus Gas Transmission (NGT) Pipeline Company in the creation of a new pipeline

20160823-5178
20160823-5178 (1)
WHEREAS the NEXUS Gas Transmission (NGT) project, a partnership of DTE Energy and Spectra Energy is being designed to transport growing supplies of natural gas from the Marcellus and Utica shale fields to receiving points in Ohio and Michigan, Michigan; and

WHEREAS the proposed path will consist of a newly constructed, large diameter greenfield pipeline that will extend approximately 250 miles from receiving points in northeastern Ohio to a connection point in southeastern Michigan with an existing pipeline infrastructure; and

WHEREAS of the 250 miles of new pipeline construction, approximately 50 miles of this will be in Michigan, coming through Lenawee and Monroe Counties, then entering Washtenaw County and traveling through Augusta and Ypsilanti Townships; and

LA4-1 **WHEREAS** the path will utilize both existing and expansion capacity on the DTE Gas transportation system and the Vector Pipeline System to access Michigan markets; and

WHEREAS in November 2013, the Federal Energy Regulatory Commission (FERC) approved the abandonment/sale of Energy Transfer's natural gas trunkline based on the claim that there already existed excess pipeline capacity in the Midwest, including Michigan; and

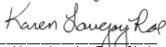
LA4-2 **WHEREAS** in many parts of Michigan, Washtenaw County, Ypsilanti Township and Augusta Township included, recovery in home and property values are just starting to increase from the previous market crash. With four (4) existing pipeline corridors of various commodities already running through Washtenaw County, additional pipelines would only contribute to property values once again declining in the areas impacted; and

LA4-3 **WHEREAS** the proposed pipeline path will be within approximately 1,000 feet of Brick Elementary School, as well as Model Elementary and Early Childhood Center;

LA4-4 **NOW THEREFORE BE IT RESOLVED** that the Charter Township of Ypsilanti Board of Trustees hereby opposes construction of the Nexus Gas Transmission project based on the lack of necessity for Michigan and Washtenaw County due to excess pipeline capacity versus demand as cited in the Federal Energy Regulatory Commission Order Approving Abandonment, Docket No. CP12-491-000 issued on November 7, 2013; and

BE IT FURTHER RESOLVED that the Clerk's Office will file a copy of this resolution as a comment before the Federal Energy Regulatory Commission.

I, Karen Lovejoy Roe, Clerk of the Charter Township of Ypsilanti, County of Washtenaw, State of Michigan hereby certify the above resolution is a true and exact copy of Resolution No. 2016-17 approved by the Charter Township of Ypsilanti, Board of Trustees assembled at a Regular Meeting held on August 16, 2016.


 Karen Lovejoy Roe, Clerk
 Charter Township of Ypsilanti

- LA4-1 Section 1.1 addresses the Purpose and Need of the Project, including a discussion on pipeline system capacity and demand.
- LA4-2 See section 4.10.8 for a discussion of potential impacts to insurance premiums.
- LA4-3 The proposed pipeline's proximity to schools is considered under pipeline safety (section 4.13 of the EIS), as part of the class location designation of the area surrounding the pipeline. See also response to comment LA3-2.
- LA4-4 Section 1.1 addresses the Purpose and Need of the Project, including a discussion on pipeline system capacity and demand.

LOCAL AGENCIES/ELECTED OFFICIALS

LA4 – Karen Lovejoy Roe, Charter Township of Ypsilanti Board of Trustees

20160823-5178 FERC PDF (Unofficial) 8/23/2016 3:53:31 PM



Huron Valley Group

To the Ypsilanti Township Board of Trustees
Regarding the Proposed Nexus Pipeline
From Nancy Shiffler, Chair of the Huron Valley Group of the Sierra Club

August 16, 2016

I am writing to you regarding the resolution on your August 16, 2016, agenda opposing the proposed Nexus natural gas pipeline. The Sierra Club Huron Valley Group represents 2300 Sierra Club members in Washtenaw, Monroe, and Lenawee Counties, through which the Nexus pipeline would pass. The resolution before you would state the Board's opposition to the application for the Nexus pipeline before the Federal Energy Regulatory Commission (FERC). The Sierra Club opposes this pipeline application for a number of reasons related to safety, the environment, and economics. For your consideration, I wish to draw your attention to related applications to two other regulatory bodies which bear on safety and consumer protection.

Along with its application to FERC, the Nexus pipeline has pending petitions to two other regulatory bodies:

- 1) Spectra Energy Partners (which partners with DTE in the Nexus application) submitted a petition to the Pipeline Hazardous Materials Safety Agency (PHMSA -- Docket Number -2016-0009). The petition seeks a waiver of the requirement to odorize gas in pipeline sections passing through densely populated areas when more than 50% of the downstream segments are also densely populated -- in this case, the final 7 miles of the proposed pipeline, with a possibility of extending it to the final 20 miles. Odorization is a safety measure which allows immediate detection of and response to a leak by those actually in proximity to the leak. The company's concern is the cost of blending odorized gas with non-odorized sources at the pipeline terminus. The pipeline segments in question run approximately from Martz Road, past South and North Hydro Parks, alongside of the densely populated areas southwest of Willow Run, and on past the

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LOCAL AGENCIES/ELECTED OFFICIALS

LA4 – Karen Lovejoy Roe, Charter Township of Ypsilanti Board of Trustees

20160823-5178 FERC PDF (Unofficial) 8/23/2016 3:53:31 PM

2670 Woodview
Ypsilanti, MI 48197
3 March 2016

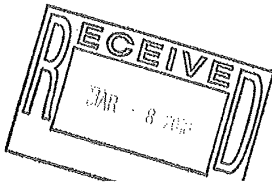
Ypsilanti Township Board
7200 S. Huron River Drive
Ypsilanti MI 48197

To the Ypsilanti Township Board:

We are writing to request that you develop, propose and stand firmly behind, a resolution against the proposed Nexus pipeline. This large line would run very close to schools and residences. It is traveling over a long distance to carry gas which will be exported. The demand for natural gas has fallen. There is no sound reason to place people at risk and to seriously disrupt the environment due to the installation of an unnecessary and potentially extremely dangerous pipeline.

Thank you in advance for your consideration.

Judith Love
[Signature]



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LOCAL AGENCIES/ELECTED OFFICIALS
LA4 – Karen Lovejoy Roe, Charter Township of Ypsilanti Board of Trustees

20160823-5178 FERC PDF (Unofficial) 8/23/2016 3:53:31 PM
8/17/2016 Zimbra

Zimbra

klovejoyroe@ytown.org

township resident Myles/lochmoor

From : Karen Lovejoy Roe
<klovejoyroe@ytown.org>

Tue, Aug 16, 2016 02:36 PM

Subject : township resident Myles/lochmoor

To : Karen Lovejoy Roe
<klovejoyroe@ytown.org>

----- Forwarded Message -----

From: "indianhpyns1" <indianhpyns1@yahoo.com>
To: "Brenda Stumbo" <bstumbo@ytown.org>
Cc: "Karen Lovejoy Roe" <klovejoyroe@ytown.org>, "Larry Doe" <lroe@ytown.org>, "Jean Hall-Currie" <jcurrie@ytown.org>, "seldrid" <seldrid@ytown.org>, "YT-Mike Martin" <mmartin@ytown.org>, "Scott Martin" <smartin@ytown.org>
Sent: Tuesday, March 1, 2016 3:58:27 PM
Subject: Ypsi twp Stand against nexus pipeline

Dear officials I hope the voices of Ypsilanti Township can join other determined voices to reject the Nexus pipeline. Gas prices are low & the public though getting a break on their pocketbook is aware that oil resources are finite & open to a transition to clean energy. We have wiggle room now to make a break from a fuel source that is dirty and unsustainable & the last thing we need is another pipeline. Thank you, & attached is the recent letter I sent to ferc urging their rejection of this pipeline. P deisha Myles 7159 lochmoor ypsi twp

>>

>> I'm a signature gatherer to ban fracking & I don't want fracked gas from the OH Utica shale (1.3 million acres) to come to or through Michigan. For the sake of the planet let's leave it in the ground. Being a tribal member of the Chippewas I'm appalled at the degradation of the land, air and water for the past 200 years. Native people travelled across continents, heat their wigwams and lived for 10,000 years without destroying their children's inheritance. They were and are sophisticated peoples not acting on impulses for the instant gratification of massive

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R-38

LOCAL AGENCIES/ELECTED OFFICIALS

LA4 – Karen Lovejoy Roe, Charter Township of Ypsilanti Board of Trustees

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8/17/2016 Zimbra

profits for shareholders at the expense of lands we live on and we all should be so prudent. Reject this pipeline by Spectra having numerous environmental and safety violations carrying gas produced by Chesapeake Energy who's paying out a \$25 million settlement for racketeering and bid rigging (michigan.gov/ag). Thank you p deisha Myles ypsilanti township resident

>>

>> Sent from my iPhone

>>

>>

>> Sent from my iPhone

Sent from my iPhone

--

Karen Lovejoy Roe
Clerk
Charter Township of Ypsilanti
7200 S. Huron River Dr.
Ypsilanti, MI 48197
734.484.4700
klovejoyroe@ytown.org
For Ypsilanti Township News go to www.ytown.org

R-39

LOCAL AGENCIES/ELECTED OFFICIALS
LA4 – Karen Lovejoy Roe, Charter Township of Ypsilanti Board of Trustees

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8/17/2016 Zimbra

Zimbra

klovejoyroe@ytown.org

Nexus Kantola/outerlane dr.

From : Karen Lovejoy Roe
<klovejoyroe@ytown.org>

Tue, Aug 16, 2016 02:27 PM

Subject : Nexus Kantola/outerlane dr.

To : maggie kantola
<maggie.kantola@gmail.com>

Cc : Karen Lovejoy Roe
<klovejoyroe@ytown.org>

Hello Ms. Kantola,

Your comments will be shared with all the township board members.

I will also include your comments in the public record. I now have maps showing all the pipelines in the township and both Outerlane Drives. either the one off Grove Rd. area or on the north side off Michigan Ave, both areas currently have Natural Gas pipelines in the immediate vicinity of both Outerlane Drives.

If you would like to see those maps they will be available at the meeting this evening and also we are trying to put it on our webiste and I have them in my office if you want to stop by and see the maps. You can also call Joe Lawson at 734.485.3942 or email at jlawson@ytown.org to get more specific information regarding the current pipeline locations and also the future proposed pipeline locations for both the Wolverine and Nexus pipelines.

Thank you for your interest. Karen Lovejoy Roe, Your Clerk

--

Karen Lovejoy Roe
Clerk
Charter Township of Ypsilanti
7200 S. Huron River Dr.
Ypsilanti, MI 48197
734.484.4700
klovejoyroe@ytown.org
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R-40

LOCAL AGENCIES/ELECTED OFFICIALS
LA4 – Karen Lovejoy Roe, Charter Township of Ypsilanti Board of Trustees

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8/17/2016 Zimbra

Zimbra

klovejoyroe@ytown.org

nexus comments augusta / mallonen

From : Karen Lovejoy Roe
<klovejoyroe@ytown.org>

Tue, Aug 16, 2016 03:18 PM

Subject : nexus comments augusta / mallonen

To : Karen Lovejoy Roe
<klovejoyroe@ytown.org>

----- Forwarded Message -----

From: "Lisa Garrett" <l Garrett@ytown.org>
To: "Karen Lovejoy Roe" <klovejoyroe@ytown.org>
Sent: Tuesday, August 16, 2016 1:32:55 PM
Subject: Fwd: No Nexus Pipeline.

fyi

Lisa Garrett

Deputy Clerk

Charter Township of Ypsilanti

(734) 484-4700

From: "Dale-Lin Mallonen" <dalelinmallonen@gmail.com>
To: l Garrett@ytown.org
Sent: Tuesday, August 16, 2016 1:26:12 PM
Subject: No Nexus Pipeline.

I took a tour of the TransCanada Pipeline through Ypsilanti Township. I was shocked. Augusta Charter Township has been used like you have been. Most of our Pipeline routes are still rural or

R-41

LOCAL AGENCIES/ELECTED OFFICIALS

LA4 – Karen Lovejoy Roe, Charter Township of Ypsilanti Board of Trustees

20160823-5178 FERC PDF (Unofficial) 8/23/2016 3:53:31 PM
8/17/2016 Zimbra

in wetlands where they plan to plant more. They are treating our end of the county as if the lives of the property owners & residents are an acceptable risk as well as the future restriction of growth. I brought up the TransCanada because it had an accident over 50 years ago. All the pipelines affect our environment forever, as do all the other community engineering projects. The Nexus pipeline completes a noose around Lincoln schools where we send our children & work & participate in community activities. The residents of Ypsilanti township have as much or more risk as we do. You have more children in the middle of the noose than we do. You have built your new subdivisions and apartments over old pipelines. It runs by our wildlife areas & your recreation areas. I am challenging Ypsilanti to take an even stronger stand than ACT. We passed a timely resolution. You still have a chance to stand up like we did. You should, you have more at risk. I am sending this to you now & will to others because, unfortunately I may not be able to attend tonight.

Sincerely,

Dale-Lin Mallonen

7685 Judd Rd

living in the pipeline shadow.

--

Karen Lovejoy Roe

Clerk

Charter Township of Ypsilanti

7200 S. Huron River Dr.

Ypsilanti, MI 48197

734.484.4700

klovejoyroe@ytown.org

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R-42

LOCAL AGENCIES/ELECTED OFFICIALS
LA4 – Karen Lovejoy Roe, Charter Township of Ypsilanti Board of Trustees

20160823-5178 FERC PDF (Unofficial) 8/23/2016 3:53:31 PM
8/17/2016 zimbra

Zimbra

klovejoyroe@ytown.org

comments nexus..kardos

From : Karen Lovejoy Roe
<klovejoyroe@ytown.org>

Tue, Aug 16, 2016 03:16 PM

Subject : comments nexus..kardos

To : Karen Lovejoy Roe
<klovejoyroe@ytown.org>

----- Forwarded Message -----

From: "Lisa Garrett" <lgarrett@ytown.org>
To: "Karen Lovejoy Roe" <klovejoyroe@ytown.org>
Sent: Tuesday, August 16, 2016 1:32:06 PM
Subject: Fwd: NEXUS resolution

fyi

Lisa Garrett

Deputy Clerk

Charter Township of Ypsilanti

(734) 484-4700

From: "Ronald Kardos" <rmichael5766@sbcglobal.net>
To: lgarrett@ytown.org
Sent: Monday, August 15, 2016 1:05:30 PM
Subject: NEXUS resolution

As a non-resident of Ypsilanti Township I encourage you to please
create a resolution against the NEXUS pipeline.
My family and I know, all to well, the dangers of living near a

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1/2

R-43

LOCAL AGENCIES/ELECTED OFFICIALS

LA4 – Karen Lovejoy Roe, Charter Township of Ypsilanti Board of Trustees

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8/17/2016 Zimbra

major natural gas pipeline operating at high pressure. We have the Vector pipeline crossing our property and within 100 feet of our front door.

The reasons to avoid having a high pressure pipeline are too numerous to mention so we must do everything we can to find alternative energy sources and quit pandering to the multi billion corporations that will stop at nothing to ultimately destroy the environment.

Please create a resolution against the NEXUS pipeline.

Ron Kardos

Waiter to patron...

"Would you like your salmon poached,
smoked, pan fried
OR GENETICALLY MODIFIED"?

--

Karen Lovejoy Roe

Clerk

Charter Township of Ypsilanti

7200 S. Huron River Dr.

Ypsilanti, MI 48197

734.484.4700

klovejoyroe@ytown.org

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R-44

LOCAL AGENCIES/ELECTED OFFICIALS
LA4 – Karen Lovejoy Roe, Charter Township of Ypsilanti Board of Trustees

20160823-5178 FERC PDF (Unofficial) 8/23/2016 3:53:31 PM
8/17/2016 Zimbra

Zimbra

klovejoyroe@ytown.org

nexus whitbeck augusta

From : Karen Lovejoy Roe
<klovejoyroe@ytown.org>

Tue, Aug 16, 2016 03:13 PM

Subject : nexus whitbeck augusta

To : Karen Lovejoy Roe
<klovejoyroe@ytown.org>

----- Forwarded Message -----

From: "Lisa Garrett" <lgarrett@ytown.org>
To: "Karen Lovejoy Roe" <klovejoyroe@ytown.org>
Sent: Tuesday, August 16, 2016 1:46:04 PM
Subject: Fwd: Nexus Resolution / OPPOSE NEXUS

fyi

Lisa Garrett

Deputy Clerk

Charter Township of Ypsilanti

(734) 484-4700

From: "Mark Whitbeck" <mwhitbeck@gmail.com>
To: lgarrett@ytown.org
Sent: Tuesday, August 16, 2016 9:35:58 AM
Subject: Nexus Resolution / OPPOSE NEXUS

Dear Clerk Garrett,
As a concerned resident of Augusta Township, I am asking you and
the township board to pass the Nexus Resolution and submit it to

https://pluto.twp.ypsilanti.mi.us/zimbra/h/printmessage?id=234535&tz=America/New_York

1/2

R-45

LOCAL AGENCIES/ELECTED OFFICIALS

LA4 – Karen Lovejoy Roe, Charter Township of Ypsilanti Board of Trustees

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8/17/2016 zimbra

FERC.

My family and I are OPPOSED to any more pipelines going through our respective townships when there are demonstrably no immediate or future needs for the product. This pipeline also puts our families, friends, and lands in danger without adequate safety measures or liability. There is NO BENEFIT to all who may be affected.

Thank you for your consideration.

Concerned resident,
Mark Whitbeck
Augusta Township

--
Karen Lovejoy Roe
Clerk
Charter Township of Ypsilanti
7200 S. Huron River Dr.
Ypsilanti, MI 48197
734.484.4700
klovejoyroe@ytown.org
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R-46

LOCAL AGENCIES/ELECTED OFFICIALS

LA4 – Karen Lovejoy Roe, Charter Township of Ypsilanti Board of Trustees

20160823-5178 FERC PDF (Unofficial) 8/23/2016 3:53:31 PM
8/10/2016 Zimbra

Zimbra

klovejoyroe@ytown.org

Nexus Pipeline

From : Web Message from YTown.org <webmaster@ytown.org>

Wed, Aug 10, 2016 04:28 PM

Subject : Nexus Pipeline

To : klovejoyroe@ytown.org

You have a new submission.

Subject: Nexus Pipeline

Message: I am writing to you to urge you to please consider voting against the Nexus Pipeline.

While I feel for, and respect the union workers that might be involved, the Nexus Pipeline is not NOT GOOD for our community.

My brother and I have dealt with several Nexus representatives regarding securing an easement across our land, and they have been unscrupulous. They have lied to us repeatedly, been disrespectful, and sneaky. Can we really risk something that is potentially this dangerous, to a company that is severely lacking in integrity? If they are this blatantly corrupt in their preliminary negotiations with the community, when they need us to cooperate, what will happen if they get approval, and they don't have to care about anyone or anything anymore?

Our land is across the road from three of the Lincoln Elementary School buildings, within the INCINERATION ZONE. This is very bad planning a shows a serious lack of concern for our community.

Please, Please, Please vote against the Nexus Pipeline.

Thank you for your consideration.
Rebecca Michaluk

Name: Rebecca Michaluk

Phone Number: 734-320-4279

Email: michaluk4@yahoo.com

IP Address: 172.68.58.231

R-47


LOCAL AGENCIES/ELECTED OFFICIALS

LA4 – Karen Lovejoy Roe, Charter Township of Ypsilanti Board of Trustees

20160823-5178 FERC PDF (Unofficial) 8/23/2016 3:53:31 PM
8/9/2016 Zimbra: Pass and send resolution to FERC

Search Karen Lovejoy Roe

Mail Contacts Calendar Tasks Briefcase Preferences Pass and send r

 **Pass and send resolution to FERC**

From:
To:

You have a new submission.

Subject: Pass and send resolution to FERC

Message: Please pass and send the resolutions to FERC regarding the Nexus Pipeline.
We are landowners in Augusta Township that will be directly affected by the Nexus Pipeline. My family members and I are mult community, our land, our schools and beg you to vote against the pipeline for the health and safety of all residents and all studen

Name: Ronald and Jona Ramey

Phone Number:

Email: rramey820s@yahoo.com

IP Address: 162.158.75.108

<https://pluto.twp.ypsilanti.mi.us/#2> 1/1

R-48

LOCAL AGENCIES/ELECTED OFFICIALS

LA4 – Karen Lovejoy Roe, Charter Township of Ypsilanti Board of Trustees

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8/16/2016 Zimbra: Inbox (31)

Search

Karen Lovejoy Roe

Mail Contacts Calendar Tasks Briefcase Preferences Fwd: Nexus pipe



Fwd: Nexus pipeline-Palmer comments

From: Karen Lovejoy Roe

To: Karen Lovejoy Roe

----- Forwarded Message -----

From: "webmaster" <webmaster@ytown.org>
To: "Karen Lovejoy Roe" <klovejoyroe@ytown.org>
Sent: Monday, August 1, 2016 10:37:41 PM
Subject: Nexus pipeline

You have a new submission.

Subject: Nexus pipeline

Message: Ypsilanti Township Board of Trustees,
I ask you to -

1. Pass the resolution, you wrote, opposing the Nexus Gas Transmission (NGT) project which is
 2. Submit this Resolution to the Federal Energy Regulatory Commission (FERC). File it under Dc
- I feel this project is very dangerous to the community and will decrease home values significantly anyone from buying a home here if this is the kind of place that just sits idly by and lets cc schools without voicing opposition.

When your decision is made regarding these requests I ask that you inform me of your decision.

Thank you,
Janelle Palmer
1956 Outer Lane Dr
Ypsilanti, MI 48198

Name: Janelle Palmer

Phone Number: 313-806-0695

Email: j.a.p.two@gmail.com

IP Address: 162.158.60.59

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R-49

LOCAL AGENCIES/ELECTED OFFICIALS

LA4 – Karen Lovejoy Roe, Charter Township of Ypsilanti Board of Trustees

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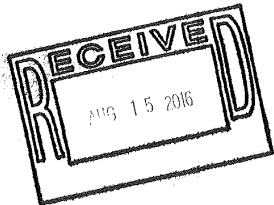
1215 Jay Avenue
Ypsilanti, Michigan
August 11, 2016

Clerk Lovejoy Roe
Charter Township of Ypsilanti
7200 S. Huron Drive
Ypsilanti, Michigan 48197

Attention: Lovejoy Roe

I am asking Ypsilanti Township
to pass Nexus Resolution and
submit it to FERC.

We do not need this gas line
in our community.



Sincerely,
Alvesta Smith

R-50

LOCAL AGENCIES/ELECTED OFFICIALS

LA4 – Karen Lovejoy Roe, Charter Township of Ypsilanti Board of Trustees

20160823-5178 FERC PDF (Unofficial) 8/23/2016 3:53:31 PM

Subject: Opposition to Nexus Pipeline

To: Ypsilanti Township Board

I would like to state my opposition to the Nexus Pipeline and urge you to adopt the "No Pipeline Resolution".

The natural gas originates in shale fields in Pennsylvania and Ohio. It is obtained via fracking which I strongly oppose for environmental reasons. Huge amounts of water are consumed and ruined with highly toxic poisons, and everything is conducted in secrecy even from the regulators. When there is a toxic leak, a homeowner is unable to identify the source of the poisons because of the secrecy. I recently learned that fracking was originally in violation of the Clean Water Act, but was "enabled" during those secret meetings between Dick Cheney and the energy barons at the beginning of G.W. Bush's first term. Of course we are all now treated with false television ads claiming that there have been no adverse consequences of fracking. Many large and competent environmental organizations have collected lots of data to the contrary, the least of which is the increase of earthquakes. IMO, the energy companies are out of control with examples like the Gulf BP fiasco and the natural gas blowout in California last fall, and so many others including more just last week.

Natural Gas is currently abundant in the United States, and this extraction in Pennsylvania is for international export rather than part of a US energy policy or energy needs. This does not benefit the people of the US but only the profits of the mega corporations. Citizens along the pipeline route should not be forced to contribute to these profits via eminent domain taking of their land. The natural gas should now be left in the ground for future generations.

When I attended the Nexus Open House two years ago, I was clearly told that 100% of the gas was going to Nexus in Ontario. I was told that the DTE contracts were very clear about supplying 100%. I encouraged my Nexus host to contact local Planning Commissions regarding issues on their route, such as its location with Lincoln Schools and the ruining of the future commercial properties at Willis and Whittaker. Didn't happen. I guess they just don't care.

Recently I read that Nexus wanted the extra supply of Natural Gas in order to compete with other Natural Gas providers from western Canada. Lovely. Two or more mega Canadian companies warring against each other at the expense of US citizens. I also read that Nexus might distribute some of its excess gas to Upper New York State at an increased dollar rate. Pumping it around in a circle costs money of course!

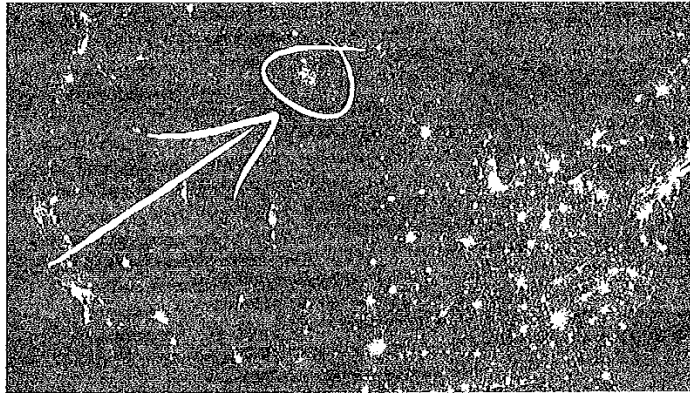
A few weeks ago I read that Nexus was now demanding of DTE a reduced cost for the future natural gas. More evidence that there is a glut and prices are going down. And in a different news report, DTE is now seeking reassurance from the regulators that DTE's customers will be required to pick up the price tab for the pipeline which is not expected to be profitable for 20 years.
<http://www.freep.com/story/news/local/michigan/2016/06/13/critics-dte-pipeline-plan-bad-ratepayers/85608948/>

R-51

LOCAL AGENCIES/ELECTED OFFICIALS

LA4 – Karen Lovejoy Roe, Charter Township of Ypsilanti Board of Trustees

20160823-5178 FERC PDF (Unofficial) 8/23/2016 3:53:31 PM



Images from the FERC PDF

I would prefer that DTE concentrate more upon its core business of providing and delivering energy to its southeast Michigan customers. Over the 38 years that I have lived here, the reliability of DTE home electricity has fallen dramatically with the number and length of power failures. More and more homeowners, including me, have had to go to whole house generators because of the poor reliability. Even DTE's thrust for Smart Meters (which I supported) failed (for me) as my Smart Meter had a cerebral hemorrhage after 6 months (becoming a dumb meter) and DTE is unwilling or unable to fix it.

So in closing, I urge the Ypsilanti Township Board to adopt the Resolution opposing the Nexus pipeline. There are too many issues and costs with zero benefits for SE Michigan residents. I realize that the Resolution will have little consequence other than yet another local government indicating that they were not sold on the merits.

William Tobler, Augusta Township, July 18, 2016

R-52

LOCAL AGENCIES/ELECTED OFFICIALS

LA5 – Wayne County Commissioners



Ann M. Obrecht * Scott S. Wiggam * Sue A. Small

August 23, 2016

Nathaniel J. Davis, Sr., Deputy Secretary
Federal Energy Regulatory Commission
888 First Street NE, Room 1A
Washington, DC 20426

Re: Nexus Gas Transmission and Texas Eastern Appalachia Lease Project
Docket # CP16-22-0000

Dear Mr. Davis:

We are writing with regard to the Nexus Gas Transmission and Texas Eastern Appalachia Lease Project Draft Environmental Impact Study (EIS) that was released on July 27, 2016. The Wayne County Commissioners and Wayne Soil and Water Conservation District have reviewed the Draft Environmental Impact Study, the Erosion and Sediment Control Plan (E&SCP) and the Drain Tile Mitigation Plan. We are concerned that Nexus will not use best management practices for agricultural land during and post construction. We are concerned with the limited time available for comment on the proposed Green Alternate Route. In addition, we believe that the Green Alternate Route will have a greater negative impact than the original proposed northern route.

LA5-1

LA5-2

We would like to submit comments on some of the practices that Nexus is proposing in their EIS, E&SCP and the Drain Tile Mitigation Plan. We expect any and all pipelines to comply with the Ohio Department of Agriculture's (ODA) Ohio Pipeline Standard and Construction Specifications <http://www.agri.ohio.gov/divs/SWC/SWC.aspx>. We would highly recommend that FERC require Nexus follow the Pipeline Standard and Construction Specifications put forth by the Ohio Department of Agriculture. This will ensure the same rules are followed in all of Ohio; and also make it so that State and County agencies in addition to the residents that are dealing with multiple pipelines, are applying the same standards. Agriculture, particularly production agriculture, is a significant part of the Wayne County economy, as well as those of the state of Ohio and our nation. Compliance with the ODA Pipeline Standards can help minimize the impacts. With that in mind, the Nexus Project does not comply with those Standards as follows:

LA5-3

- The E&SCP on pages 11-12, Section 3.5.3.1 a. suggests that they will remove either the topsoil from the whole right-of-way or the ditch and spoil areas. The ODA Standard states to remove the topsoil from the whole right-of-way. Removing topsoil from the full width of the right-of-way will avoid topsoil mixing caused by deep rutting and topsoil compaction. Nexus should be required to remove from the entire right-of-way.

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wccommissioners@wayneohio.org
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LA5-1

To ensure compliance with best management practices and as discussed in section 2.5.2, NEXUS and Texas Eastern have each proposed to employ environmental inspectors on their Projects to ensure that construction complies with the procedures and mitigation measures identified in their respective applications, the FERC Certificates, other environmental permits and approvals, and environmental requirements in landowner easement agreements, including construction and restoration procedures in agricultural land. Additionally, as discussed in section 2.5.4, NEXUS filed information with the Commission on June 12, 2015 indicating it would like to implement a FERC third-party compliance monitoring program on the NGT Project. FERC third-party monitors would conduct periodic field inspections during construction and restoration.

Additionally, prior to construction, NEXUS shall file with the Secretary an *Agricultural Impact Mitigation Plan (AIMP)* detailing construction and restoration measures to be implemented on the NGT Project to address agricultural issues unique to Ohio and Michigan. For construction and restoration measures in Ohio, NEXUS shall consult with the Ohio Department of Agriculture (ODA) on construction procedures to be used in agricultural land in Ohio and shall file with the Secretary any measures that result from coordination with the ODA. Prior to construction, NEXUS shall also file with the Secretary a 5-year post-construction monitoring program to evaluate crop productivity in areas impacted by the construction of the Project. NEXUS shall include in the program a commitment to file with the Secretary quarterly reports for a period of 5 years following construction documenting any crop-related problems and describing any corrective action taken to remedy those problems. The program shall stipulate that if any landowner agrees that revegetation and crop productivity are successful prior to the 5-year requirement, NEXUS shall provide documentation in its quarterly reports indicating which landowners have agreed that monitoring is no longer necessary.

LA5-2

NEXUS will implement their *Erosion and Sediment Control Plan (E&SCP)*, which is based on FERC's *Upland Erosion Control, Revegetation, and Maintenance Plan (Plan)* and *Wetland and Waterbody Construction and Mitigation Procedures (Procedures)*. FERC's *Plan* and *Procedures* are a set of construction and mitigation measures that were developed in collaboration with other federal and state agencies and the natural gas pipeline industry to minimize the potential environmental impacts of the construction of pipeline projects in general.

For construction and restoration measures in Ohio, NEXUS shall consult with the Ohio Department of Agriculture (ODA) on construction procedures to be used in agricultural land in Ohio, including the Pipeline Standards and Construction Specifications, and shall file with the Secretary any measures that result from coordination with the ODA. Any comments received from ODA shall also be filed with the Secretary.

LA5-3

The FERC Plan indicates that either full work area or from the trench plug subsoil applicable to cultivated or rotated croplands and managed pastures,

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LA5 – Wayne County Commissioners

Nathaniel J. Davis, Sr., Deputy Secretary
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- LA5-4 • In the Draft EIS on page 4-30, it states that they plan to maintain a minimum of three foot of cover. The ODA Standard states there should be a minimum depth of five feet in agricultural land. Nexus should be required to maintain a minimum depth of five feet in agricultural land. A minimum depth of five foot of cover will provide additional separation and safety should existing subsurface tiles need to be repaired or should new tiles be installed.
- LA5-5 • The E&SCP on page 12, Section 3.5.3.1 b. states that the topsoil will be segregated to a depth of 12". The ODA Standard states that the topsoil will be stripped to the entire depth of the topsoil, not to exceed 16" in the right-of-ways and staging areas. Nexus should be required to comply with this Standard.
- LA5-6 • The E&SCP on page 12, Section 3.5.3.1 e. states to maintain separation of topsoil and subsoil throughout all construction activities. The ODA Standard states that the substratum which is located below the subsoil will be placed in a third windrow separate from the topsoil and subsoil. Nexus should be required to place substratum in a third windrow, separate from the topsoil and subsoil.
- LA5-7 • The E&SCP on page 27, Section 4.1.1 states that they would determine the extent of damaged tile lines by probing. ODA recommends using a closed-circuit TV camera to determine the condition of the tile the entire width of the right-of-way. Nexus should be required to comply with this recommendation.
- LA5-8 • The Drain Tile and Mitigation Plan on page E-3-9, Section 5.3 states that as-built data will be collected of the restored and replaced drain tile. The ODA Standard states the pipeline shall document the location and known elevations of all subsurface drains that are found and/or repaired and provide a photo description of the repair to the landowner. The description should include a map, drawing or electronic database with the GPS latitude and longitude of the drain lines encountered and repaired. We recommend that Nexus provide the documentation as recommended by ODA. This information should also be provided to the Wayne Soil and Water Conservation District office.
- LA5-9 • There is no mention of how conservation practices crossed by the pipeline will be restored. The ODA Standard states that all conservation practices (such as spring developments and pipelines, terraces, grassed waterways, water and sediment control basins, critical area seedings, etc.) damaged by the pipeline's construction will be restored to their pre-construction condition and approved by the landowner or the local Soil and Water Conservation District. We recommend that Nexus be required to restore all conservation practices crossed or damaged by the pipeline to pre-construction condition and approved by the landowner or Wayne Soil and Water Conservation District.
- LA5-10 • The Draft EIS, including the Drain Tile Mitigation Plan, does not include specifications or details for repairing drain tiles that must be rerouted due to the proposed gas line being installed at the same elevation as the drain tile. Details regarding what should be done in these situations should be included in the Drain Tile Mitigation Plan. Drain tiles that are damaged or rerouted should be restored to pre-construction condition.
- LA5-11 • Section 3.3.3 of the Draft EIS indicates that impacts to agricultural land are considered temporary to short-term, defined as immediate to three-year recovery in Section 4.9.1. However, Section 4.8.4.1 of the Final EIS for the proposed ET Rover pipeline indicated,

LA5-3
(cont'd)

residential areas, hayfields and other areas at the landowner's request. NEXUS addresses topsoil segregation similarly in section 3.5.3.1 of its E&SCP, indicating that ditch plus spoil side or full right-of-way topsoil segregation as illustrated in figure CW-2 will be used. The criteria for the choice of topsoil stripping is not specified. The Ohio Specifications recommend full right-of-way topsoil stripping to maintain soil quality and minimize impacts due to rutting and compaction when the soil is trafficked when wet in Section 3D (p. 5). At NEXUS' discretion, full right-of-way topsoil stripping as discussed and illustrated in its *E&SCP* could apply to prime agricultural cropland that is yearly tilled and in row crops and small grains. The choice between topsoil stripping in actively managed hayland or pasture would depend on the specific situation and the sensitivity of the soils to rutting/compaction when wet.

LA5-4

Although DOT regulations typically require a minimum depth of cover over the pipeline of 30 inches, sections 2.3.1.3 and 4.13. 1 of the EIS explain NEXUS has committed to a minimum depth of cover of 36 inches, and additional depth of cover can be negotiated at a landowner's request with NEXUS.

LA5-5

See section 4.2.2 for a discussion of topsoil stripping depths. It has been FERC's experience that, in general, stripping the full width of topsoil up to 12 inches, storing the topsoil in a reserved windrow maintained separate from the trench subsoil, and returning the topsoil to the surface of the subsoil during the backfill process results in minimal impacts to soil productivity. If landowners have specific information or concerns regarding the need for special soil handling procedures on their property, including the need for additional topsoil segregation to a depth of 16 inches, the applicant would consider the request and make special soil handling techniques a condition of their easement agreement.

LA5-6

It has been FERC's experience that, in general, stripping the full width of topsoil up to 12 inches, storing the topsoil in a reserved windrow maintained separate from the trench subsoil, and returning the topsoil to the surface of the subsoil during the backfill process results in minimal impacts to soil productivity. While there may be special circumstances where segregation of additional soil layers will minimize mixing of subsoil layers with different soil plant growth characteristics, applying three or more lift soil handling techniques to all soils trenched for the pipeline would not justify the increased disturbance to the construction right-of-way needed to separately strip and store individual soil layers. If landowners have specific information or concerns regarding the need for special soil handling procedures on their property, the applicant would consider the request and make special soil handling techniques a condition of their easement agreement. The Applicant should evaluate construction right-of-way width requirements in this specific situation, and request a variance from the FERC to increase the construction right-of-way width as necessary.

Additionally, prior to construction, NEXUS shall file with the Secretary an *Agricultural Impact Mitigation Plan (AIMP)* detailing construction and

LOCAL AGENCIES/ELECTED OFFICIALS

LA5 – Wayne County Commissioners

Nathaniel J. Davis, Sr., Deputy Secretary
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- LA5-11 cont'd | among other things, that agricultural landowners should be compensated for three full years of lost productivity on their land and that the post-construction monitoring program to evaluate crop productivity of land impacted by construction should last five years. The NEXUS EIS should include the same language as Section 4.8.4.1 of Rover's Final EIS. Nexus should be required to provide the same compensation and monitoring that the E T Rover project provides.
- LA5-12 | In addition to compliance with the ODA standards, we would also like to express our concern that although there were many references to the Erosion and Sediment Control Plan in the Environmental Impact Statement, the Erosion and Sediment Control Plan was not included in the document's appendix for review. We would like a copy of the Erosion and Sediment Control Plan including in the EIS.
- LA5-13 | Section 3.0, page 3-1 of the Draft EIS indicates that the Green Alternate Route, a longer route with more greenfield construction, suggests a greater amount of intensity of impacts when comparing alternatives. It continues on page 3-2 that the total mileage of steep slopes and sidehill construction requires substantially more workspace and suggests greater impacts. Per Table 3.3.3-1, the Green Route Alternative is 5.5 miles longer, has 16.2 more miles of greenfield, has 4.6 more miles of steep slopes and has 5.4 more miles of sidehill construction than the proposed route. Therefore, we feel that the Green Route Alternate is not reasonably or environmentally preferable to the shorter, northern proposed route.
- LA5-14 | Section 3.0, page 3-3 of the Draft EIS indicates that the 6 definitive receipt and delivery points must be served by the alternatives. If the Green Alternate Route is approved, we are concerned that a lateral or laterals will have to be installed across Wayne County, at yet undetermined locations, to serve these delivery points. These laterals, which must be taken into consideration, have the potential to impact most of the sixteen townships in Wayne County and cause undue damage to thousands of acres of farmland. Agriculture, particularly production agriculture, is an important part of the Wayne County's economy. The Green Alternate Route will disrupt many acres of land, in particular farmland, and will negatively impact this sector of the Wayne County economy.

 The laterals and delivery points in the northern proposed route will promote economic development to existing commercial and industrial areas. A tap is located near the City of Rittman. The proposed reroute by the City of Green would serve as a significant setback to the Rittman development efforts of a large brownfield within the city as the Green Alternate Route no longer comes within close proximity of the city limits.
- LA5-15 | We are concerned with the limited time available for comment on the proposed Green Alternate Route. Our residents along the Green Route Alternate Route have only had a little over a month to understand the impacts of the alternate route and provide comment on it, while the residents along the northern route have had two years. Lack of time to respond has limited the ability of our county's residents to discuss and to react to a new pipeline proposal. The northern route has had time for a complete review.

- LA5-6 (cont'd) | restoration measures to be implemented on the NGT Project to address agricultural issues unique to Ohio and Michigan. Specifically, the *AIMP* should address plans for segregating topsoil in areas where the depth of topsoil is greater than 12 inches; triple stripping topsoil, subsoil, and substratum; and ensuring that excess spoil removed from the right-of-way during backfilling consists of substratum, and then, if needed, subsoil. For construction and restoration measures in Ohio, NEXUS shall consult with the Ohio Department of Agriculture (ODA) on construction procedures to be used in agricultural land in Ohio and shall file with the Secretary any measures that result from coordination with the ODA. Any comments received from ODA shall also be filed with the Secretary.
- LA5-7 | NEXUS's *Drain Tile Mitigation Plan (DTMP)* includes a provision for examining drains across the entire project right-of-way using but not necessarily using closed circuit TV camera. This requirement does not rise to the level of being necessary given that the passing and spoil side portions of the trench would be much less likely to sustain damage in comparison to the trenching width. NEXUS should be able to discover the extent of any drain tiles damaged when it performs repairs, and thus we do not recommend adopting this ODA provision.
- LA5-8 | NEXUS's *Drain Tile Mitigation Plan (DTMP)* includes a provision to use GPS technology capable of 3-D survey grade accuracy, or other similarly accurate technology, to document drain tile location, alignment, and grade. Elevational information would thus be included on the property drawings, and we do not recommend adoption of this ODA provision.
- LA5-9 | FERC has recommended that NEXUS file with the Secretary, for review and written approval of the Director of OEP, its revised *E&SCPs* to commit to ensuring lands crossed that are under conservation practices, such as CRP lands, would be restored to pre-construction conditions, or in accordance with the landowner's request. See section 4.9.5.3 of the EIS.
- LA5-10 | Impacts on drain tile systems are addressed in section 4.9.5.4 and in NEXUS' *Drain Tile Mitigation Plan* (appendix E-3).
- LA5-11 | Comment noted. Impacts on drain tile systems are addressed in Section 4.9.5.4 and in NEXUS' *Drain Tile Mitigation Plan* (Appendix E-3). Section 4.9.2 states that crops within the construction work areas would be taken out of production for one growing season while construction occurs and landowners would be compensated for the lost crops.
- LA5-12 | NEXUS' environmental plans can be accessed on the FERC eLibrary using the accession numbers provided in the EIS.
- LA5-13 | Comment noted. Based on our review, we did not find the City of Green Route Alternative provides a substantial environmental advantage when compared to the corresponding segment of the proposed route and did not recommend that it be incorporated as part of the Projects.

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LA5 – Wayne County Commissioners

Nathaniel J. Davis, Sr., Deputy Secretary
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LA5-16 In addition to our concerns that the Nexus Green Alternate Route has not had the necessary scrutiny that may occur over the course of two years versus six weeks, we would like you to note that Wayne County is home to many species of plants and animals that are considered rare, threatened or endangered by the Federal Government and the State of Ohio. A good many of those species can be found near the proposed Nexus re-route.

The Wayne County Comprehensive Plan, Tomorrow Together, identifies several natural resources in planning areas involved in the proposed re-route or Alternate Nexus. According to Ohio's Natural Heritage Inventory of species, these resources are considered threatened or endangered by the Federal Government, species endangered in Ohio, and those considered to be rare by the Ohio Biological Survey. Those species identified within approximately 1 mile of the Alternate Route include:

Congress Township: Special Plants: Coral-Root (*Corallorhiza mac*); Matted Spikerush (*Eleocharis intermedia*)

Chester Township: Special Plants: Leggett's Pinweed (*Lechea pulchella*); Butternut (*Juglans cinera*)
 Special Animals: Four-Toed Salamander (*Hemidactylium scutatum*)

Plain Township: Special Animals: Bald Eagle (*Haliaeetus leucocephalus*); Sandhill Crane (*Grus Canadensis*); Sedge Wren (*Cistothorus platensis*); Virginia Rail (*Rallus limicola*)

In addition, Funk Bottoms, a large undeveloped area of which the State of Ohio owns about 830 acres, is within approximately 1 mile of the proposed route. It is a large floodplain area with wetland plants and wildlife. The creeks and permanent marshes on the area support mainly roughfish with small numbers of panfish. Mallard, wood duck, muskrat, raccoon, and cottontail rabbit are the principal game and furbearer species. Deer, pheasant, woodchuck, fox squirrel, Canada goose and other furbearers are common. A great variety of nesting and migrant birds occur on the area. Of particular interest is the spring migration of waterfowl (23 species, including Tundra swans) and shorebirds (28 species). Several species of raptors can be found during migrations and overwintering. Bald eagles have been observed on the wildlife area. Nesting of the state endangered Sandhill Crane (*Grus Canadensis*) on the purchase unit was confirmed in 1988; this was the first recorded Ohio nesting of this species in more than 60 years. Sandhill nests have been confirmed here several times since. Sandhill cranes are a wetland dependent species.

Wooster Township: Special Trees: Washington Hawthorn, White Basswood; Blackhaw, Carolina Silverbell, Pin Cherry, Rock Elm; Umbrella Magnolia

LA5-14
 (cont'd)

Comments noted. Presently, there are no planned lateral pipelines associated with the Projects. In the EIS, we required all alternatives to serve NEXUS' 6 definitive receipt and delivery points. The City of Green Route Alternative would allow these points to be served without additional lateral pipelines. We did not, however, require that the alternatives serve potential future delivery points at NEXUS' 13 tee-tap locations. If service to these locations becomes required, between one and four laterals would be required on the City of Green Route Alternative. See section 1.1.1 and 3.3.3 for additional discussion regarding this issue. However, as previously stated, based on our review, we did not find the City of Green Route Alternative provides a substantial environmental advantage when compared to the corresponding segment of the proposed route and did not recommend that it be incorporated as part of the Projects.

LA5-15 Comment noted.

LA5-16 See section 4.6 for potential impacts to wildlife and section 4.8 for potential impacts to special status species.

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LOCAL AGENCIES/ELECTED OFFICIALS

LA5 – Wayne County Commissioners

Nathaniel J. Davis, Sr., Deputy Secretary
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LA5-17 | A significant archaeological site is also within one mile of the proposed Green Alternate Route. Pee Wee Hollow, a Boy Scout camp, in Congress Township is the location of three mounds dating from 2580 BC through 660 AD. Pee Wee Hollow has been documented by College of Wooster professors Nick Kardulias and Greg Wiles as being used from the Late Archaic through Late Woodland periods for ceremonial or communal activities. Additional information about these mounds is available at this site:
<http://www.wooster.edu/news/releases/2014/february/peeweehollow-mounds/index.php>


LA5-18 | It is our opinion that the original proposed northern route, not the Green Alternate Route, is a more reasonable and more environmentally preferable route. We hope you will take all of these comments into consideration.

Thank you for your consideration of these concerns.

Sincerely,
BOARD OF WAYNE COUNTY COMMISSIONERS


Ann M. Obrecht, President


Scott S. Wiggam


Sue A. Smail

/bac
cms/ferc-re-news-pipeline 8/23/2016

LA5-17 | Comment noted.

LA5-18 | Comment noted. Based on our review, we did not find the City of Green Route Alternative provides a substantial environmental advantage when compared to the corresponding segment of the proposed route and did not recommend that it be incorporated as part of the Projects.

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LOCAL AGENCIES/ELECTED OFFICIALS

LA6 – Paul Jeffers, Montville Township Trustees

Paul Jeffers, Medina, OH.
Kimberly D. Bose, Secretary
Federal Energy Regulatory Commission
888 First Street, NE, Room 1A
Washington, DC 20426

Ms. Bose:

On behalf of Montville Township Trustees, Medina County, Ohio, the following comments are in regards to the NEXUS Pipeline relocation through a portion of Montville Township. As we have stated within a Resolution signed January 13, 2015, the Trustees are not opposed to necessity of gas transportation and the opportunities it may afford to provide gas to the upper U.S Midwest and Ontario, Canada.

LA6-1

The revised transportation line appears to have shifted to the north of the originally proposed line thus placing it further within our township. The area in which this 36"-42" line is proposed travels through or near seven densely populated subdivisions; Hunters Glen, Autumn Ridge, Cobblestone, Arbor Lakes, Whitetail Crossing, Fox Meadows, and Highland Meadows. The subdivisions have approximately 813 single family residences and are surrounded by several other single family lots.

Montville Township has witnessed a tremendous population growth as part of the early 2000 housing boom; 2000 Census – population was 5,410 whereas the 2010 Census – population was 11,185. Due to the proximity to major metropolitan areas such as Cleveland and Akron, Montville Township offers a great appeal in which families can dwell and has awarded us as being the most populated township within Medina County.

In conclusion, we ask that our comments are taken into consideration and that the path of the proposed pipeline be redirected further south to avoid the heavy impact that it will cause in our higher density portion of the township.

Respectfully yours,

Jeff Brandon, Montville Township Trustee, Chair
Ron Bischof, Montville Township Trustee, Vice Chair
Sally Albrecht, Montville Township Trustee

LA6-1

See the response to comment LA3-2. Alternatively, the important consideration in routing natural gas transmission pipelines in residential areas is the impact on land use. These impacts are discussed throughout section 4.9 of the EIS.

LOCAL AGENCIES/ELECTED OFFICIALS

LA7 – Lenny Broome, Chippewa Township Board of Trustees



CHIPPEWA TOWNSHIP

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Doylestown, Ohio 44230-0265

Lenny D. Broome, Trustee
Roberta Gleason, Trustee
Dominic Oliverio, Trustee
Lauretta Busson, Fiscal Officer
E-mail: info@chippewatwp.com

Craig Thoricht, Zoning Inspector
Darlene Smith, Adm. Assistant, Asst. Zoning Insp.
Tel: 330-658-2112
Fax: 330-658-3372
Website: chippewatwp.com

August 15, 2016

Federal Energy Regulatory Commission
888 First Street NE, Room 1A
Washington, DC 20426

Re: Nexus Gas Transmission, LLC
Docket Number CP16-22-000

To Whom It May Concern:

I am Lenny Broome, President of Chippewa Township Board of Trustees, located in Wayne County, Ohio.

I am providing this testimony based on the proposed pipeline scheduled to go through our community. As Trustee, I support the City of Green Route Alternative based on the concerns/questions listed below.

LA7-1

Economic Development – The property that is along the State Route 21 corridor is zoned B-1 Local Business District and M-1 Local Industrial District. The proposed route will run through our business district. The development of this area in the future would be negatively impacted in several ways.

1. With a pipeline, running through that area it would devalue those properties; this could delay the development of our business districts because landowners will reject the prices offer to them.
2. Because of the pipeline, right-of-way that is running through these two districts is completely undevelopable the pipeline will change the size and shape of land plots.
3. Chippewa Township would lose properties taxes along with the tax dollars that would be generated for our schools.
4. There could be an impact on number of jobs and type of jobs that are offered in the future, with these growth opportunities.
5. The property that is zoned B-1 Local Business District the uses are for public parks, schools, restaurants, local retail businesses, hotels, tourist homes, offices for physicians, dentists, and attorneys, etc. These businesses will be hard to find knowing that they will be located so close to a 36" pipeline.

LA7-1

Section 4.9.4.2 describes the impacts on planned and ongoing residential, commercial, and industrial developments.

LOCAL AGENCIES/ELECTED OFFICIALS

LA7 – Lenny Broome, Chippewa Township Board of Trustees

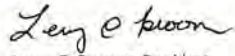
Federal Energy Regulatory Commission

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That pipeline infrastructure will hinder or even harm economic growth in this area.
The City of Green routing of the Nexus Pipeline will allow these properties to be developed as intended and will permit economic growth for our community.

Sincerely,



Lenny D. Broome, President
Chippewa Township Trustee

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LOCAL AGENCIES/ELECTED OFFICIALS

LA8 – Dominic Oliverio, Chippewa Township Board of Trustees



CHIPPEWA TOWNSHIP

14228 Galehouse Road, P.O. Box 265
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Lenny D. Broome, Trustee
Roberta Gleason, Trustee
Dominic Oliverio, Trustee
Lauretta Busson, Fiscal Officer
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Craig Thoricht, Zoning Inspector
Darlene Smith, Adm. Assistant, Asst. Zoning Insp.
Tel: 330-658-2112
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Website: chippewatwp.com

August 15, 2016

Federal Energy Regulatory Commission
888 First Street NE, Room 1A
Washington, DC 20426

Re: Nexus Gas Transmission, LLC
Docket Number CP16-22-000

To Whom It May Concern:

I am Dominic Oliverio, I am a Chippewa Township Trustee, located in Wayne County, Ohio.

I am providing this testimony based on the proposed pipeline scheduled to go through our community. As Chippewa Township Trustee, I support the City of Green Route Alternative based on the concerns/questions detailed below.

- LA8-1 | How will this pipeline affect our residents' water wells and septic systems? The construction of this pipeline is close proximity to our residents' homes could have an effect on the private water wells. Contaminates could travel unnoticed until detected in a drinking water well.
- LA8-2 | Will our residents, business, schools, church's, and our community as a whole receive discounted rates? What is going to be the break for our consumers who are being directly affected by the pipeline coming through our community? Will you provide reasonable rates for our community to run operations i.e. farming operations, household items etc. What type of incentive will you provide our community with that is better than the rest of the general public since we would be directly affected?
- LA8-3 | The City of Green Alternative route would cross 11.8 less acres of wetlands, 1 less WHPA, no state parks/forest lands, 4 fewer county/metro parks, and 35 less homes within 150 feet. Safety to our community in the aspects of residential dwellings, commercial, and proposed future industrial development. Likewise, of our community's safety concern, the proposed route would be directly affecting our Township's M-1 – Light Industrial District in the aspect of future growth potential.

- LA8-1 | Sections 4.3.1.2 and 4.9.4 describes impacts and mitigation for wells, septic systems, and other residential utilities.
- LA8-2 | Socioeconomics are discussed in Section 4.10. Economics and tax revenues are discussed in section 4.10.9.
- LA8-3 | See section 3.3.3 for an updated discussion of the City of Green Route Alternative. Based on our review, we did not find the City of Green Route Alternative provides a substantial environmental advantage when compared to the corresponding segment of the proposed route and did not recommend that it be incorporated as part of the Projects.

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LOCAL AGENCIES/ELECTED OFFICIALS

LA8 – Dominic Oliverio, Chippewa Township Board of Trustees

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Project developers are lacking communication. The only involvement/communication our community has been receiving has been individuals that are outsourced by NGT and are third party contractors. The credibility is lacking in these third party contractors and our community expects more for the unfavorable impact the project will have on our community as a whole, in all the diverse aspects that our community would be affected.

I feel NGT should express and show how they are going to work with our residents, local government, community groups, and businesses to address community concerns. An action plan would need to be set in place on assisting our community as a whole. Actions will need to be shown illuminating the involvement Nexus would have and provide in our community for the lifespan of our relationship.

Sincerely,



Dominic Oliverio, Trustee
Chippewa Township

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LOCAL AGENCIES/ELECTED OFFICIALS

LA9 – Craig Thoricht, Zoning Inspector, Chippewa Township Board of Trustees



CHIPPEWA TOWNSHIP

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August 15, 2016

Federal Energy Regulatory Commission
888 First Street NE, Room 1A
Washington, DC 20426

Re: Nexus Gas Transmission, LLC
Docket Number CP16-22-000

To Whom It May Concern:

I am Craig Thoricht and I am the Zoning Enforcement Officer for Chippewa Township in Wayne County, Ohio.

I am writing this letter to comment on the proposed pipeline slated to go through our community.

I am in favor of the "City of Green" proposal for routing the pipeline for two specific reasons I will outline below:

LA9-1 | 1-The property located at 1498 Eastern Road Rittman, Oh 44270 was slated for development just prior to the announcement of the pipeline route. The announcement of the routing effectively killed the proposed development because the pipeline would go exactly through the middle of the proposed development.

The loss of this development to our community is difficult to measure in terms of dollars and cents, however there is a loss of tax revenue that would have been associated with those properties. Our schools need those dollars for their continued ability to provide services for the students of the school district.

LA9-2 | 2-A farm of 211 acres, located at 14697 N. Mt. Eaton Road Owned by Joseph Stoller is the other property I think is going to be negatively impacted by this pipeline. The farm is a "Certified Organic"

LA9-1 Section 4.9.4.2 describes the impacts on planned and ongoing residential, commercial, and industrial developments.

LA9-2 Section 4.9.5.1 states that NEXUS would coordinate with certified organic farm operators to identify construction and operations practices that are consistent with organic farm certification practices.

LOCAL AGENCIES/ELECTED OFFICIALS

LA9 – Craig Thoricht, Zoning Inspector, Chippewa Township Board of Trustees

Federal Energy Regulatory Commission

page 2

August 15, 2016

LA9-2
cont'd

dairy farm. The work and effort the Stollers put in to achieving that certification is, at the least in jeopardy, and in all honesty, will probably be lost and revoked.

In and of itself, this is a loss to the Stoller family, but also a loss to our community. "Certified Organic" milk and dairy products command a premium in today's market. The Stollers spend as much of their money locally as they can. The pipeline routed through that farm will cause a loss to the Stollers and our community.

The "City of Green" routing of the Nexus Pipeline will allow these two properties to be developed as their owners intend and will allow our community to grow.

Sincerely,



Craig Thoricht
Chippewa Township Zoning Inspector

R-64

LOCAL AGENCIES/ELECTED OFFICIALS
LA10 – Joyce Forrer, Fire Chief, Chippewa Township Board of Trustees



CHIPPEWA TOWNSHIP

14228 Galehouse Road, P.O. Box 265
Doylestown, Ohio 44230-0265

Lenny D. Broome, Trustee
Roberta Gleason, Trustee
Dominic Oliverio, Trustee
Lauretta Busson, Fiscal Officer
E-mail: info@chippewatwp.com

Craig Thoricht, Zoning Inspector
Darlene Smith, Adm. Assistant, Asst. Zoning Insp.
Tel: 330-658-2112
Fax: 330-658-3372
Website: chippewatwp.com

August 15, 2016

Federal Energy Regulatory Commission
888 First Street NE, Room 1A
Washington, DC 20426

Re: Nexus Gas Transmission, LLC
Docket Number CP16-22-000

To Whom It May Concern:

I am Joyce Forrer, I am the Fire Chief for Chippewa Township Fire Department, located in Wayne County, Ohio.

I am providing this testimony based on the proposed pipeline scheduled to go through our community. As Fire Chief, I support the City of Green Route Alternative based on the concerns/questions listed below.

LA10-1

Public safety – as Chippewa Township Fire Department being a combination of full-time, part-time and volunteer, we do not have the capacity of responding to a catastrophic event caused by the pipeline, nor the equipment. Our concern at Chippewa Township Fire Department is needing more to protect our residents, businesses, schools and community. Particularly if a problem with the high-pressure gas line were to arise. In the case of an emergency due to the pipeline, who would you provide to assist our community first responders? What amount of gas would we be dealing with? How long will the response time take from the resources you provide us with? What type of equipment would you provide for Chippewa Township Fire Department and the additional responders? Would there be emergency shut-off valves at both ends of our township? What type of training/training facilities would you provide Chippewa Township Fire Department with? Would this training take place on a monthly, quarterly or annual basis? With the proposed pipeline being co-located with existing utility right-of-ways including; overhead electric lines, other pipelines, railroads overlapping with one another, what are you going to have in place to protect our residents, farms, watersheds, schools, farmlands, and infrastructure?

In addition, what type of cost would be provided for future emergency responder training, concerns with man power (lack of), and equipment to be able to respond to pipeline emergencies. As Chippewa

LA10-1 See the response to comment LA2-6.

R-65

LOCAL AGENCIES/ELECTED OFFICIALS

LA10 – Joyce Forrer, Fire Chief, Chippewa Township Board of Trustees

Federal Energy Regulatory Commission

page 2

August 15, 2016

Township Fire Chief, I need to be prepared, that includes identifying hazardous and pre-planning for pipeline incidents.

If an unlikely event or incident were to occur, local emergency officials will be responsible for managing and protecting our residents (i.e. traffic control, handling injuries, fire, etc.). Our local Police Department has two patrolman on staff and one Wayne County Deputy in the Township. Resources will be extremely thin. We do rely on mutual aid from our surrounding communities, but they, like us, have limited personnel and equipment.

During construction, we do not have any type of off road vehicle in the instance of a contractual employee being injured. Our response time would be delayed, therefore delaying medical treatment.

LA10-2 | Air quality and noise – dust and emissions from construction equipment would impact air quality. How quickly would you move through an area to keep construction emissions localized, intermittent and temporary?

We would need an emergency plan created for Chippewa Township Fire Department, a draft needs to be submitted for us to add specifics to our community. This needs to be both during, and after pipeline construction.

Sincerely,



Joyce Forrer,
Fire Chief
Chippewa Township

LA10-2

Section 4.12.1.3 of the EIS states that the entire project would take 2 years to construct; however, construction at any given location would generally last from 6 to 10 weeks. This section of the EIS also addresses emission from construction, including dust and the development of a *Fugitive Dust Control Plan*.

R-66

LOCAL AGENCIES/ELECTED OFFICIALS

LA11 – Matt Carver, Road Superintendent, Chippewa Township Board of Trustees



CHIPPEWA TOWNSHIP

14228 Galehouse Road, P.O. Box 265
Doylestown, Ohio 44230-0265

Lenny D. Broome, Trustee
Roberta Gleason, Trustee
Dominic Oliverio, Trustee
Lauretta Busson, Fiscal Officer
E-mail: info@chippewatwp.com

Craig Thoricht, Zoning Inspector
Darlene Smith, Adm. Assistant, Asst. Zoning Insp.
Tel: 330-658-2112
Fax: 330-658-3372
Website: chippewatwp.com

August 15, 2016

Federal Energy Regulatory Commission
888 First Street NE, Room 1A
Washington, DC 20426

Re: Nexus Gas Transmission, LLC
Docket Number CP16-22-000

To Whom It May Concern:

I am Matt Carver, I am the Road Superintendent for Chippewa Township, located in Wayne County, Ohio.

I am providing this testimony based on the proposed pipeline scheduled to go through our community. As Chippewa Township Road Superintendent, I support the City of Green Route Alternative based on the concerns/questions listed below.

- LA11-1 We work hard on maintaining and providing safe driving condition roads for our residents in our small community. With the proposed pipeline project, the equipment, vehicles, and work that will be taking place is going to create a significant impact to our aging roads and drainage systems. The safety of our residents is a major concern, our narrow, winding rural roads are not meant to handle this volume of traffic.
- LA11-2 With co-existing utility structures already placed in our community, the additional erosion sediment that will compound in our draining systems will back up our systems. With open cuts to our roads opposed to boring, this will cause substantial costs to the tax payers and continual maintenance for our Road Department. With Chippewa Township being a small community, and our road crew containing limited personnel, what type of equipment would you provide Chippewa Township with in order to complete jobs safely, successfully, in a timely manner? With our Department lacking man power, who would assist Chippewa Township Road Department in tasks that arise due to the desired pipeline project?
- LA11-3 The proposed pipeline project concerns the safety of not only my Road Department personnel, but the entire community of Chippewa Township. What type of safety training will the Road Department receive if an instance were to take place? Will this training take place on a monthly, quarterly, or annual basis?

- LA11-1 Impacts to transportation systems are discussed in section 4.10.7. Drainage systems are discussed in section 4.2.2 and the drain tile mitigation plan.
- LA11-2 See section 4.3.2.2 for discussion on mitigation procedures during construction to minimize or avoid erosion and sedimentation of surface waters. Impacts and mitigation pertaining to flooding and flash floods are addressed in section 4.1.5.7.
- LA11-3 Section 4.10.7 addresses inspection and restoration of road conditions in the Project study area. NEXUS and Texas Eastern would be responsible for restoring roads in accordance with permit conditions and as requested by landowners or agencies. NEXUS and Texas Eastern would periodically inspect roads near crossings and make repair as necessary to damages caused by construction activities.

R-67

LOCAL AGENCIES/ELECTED OFFICIALS

LA11 – Matt Carver, Road Superintendent, Chippewa Township Board of Trustees

Federal Energy Regulatory Commission

page 2

August 15, 2016

- LA11-4 | Chippewa Township has concerns regarding Wildlife Endangered Species including, but not limited to, the Reptile Snake – Eastern Massasauga and the Indiana Bat that our located in our community. Construction to our community could affect the original habitat that are located in our community.
- LA11-5 | Shallow ground water could affect hydrology of small or large wetlands and could dewater them completely.

Construction standards need continual evaluation, and updated on a regular basis. Damage and immediate repair considerations need to be set in place up to Chippewa Township standards. There needs to be a draft that Chippewa Township approves, with the opportunity to change or enhance as time goes on. Permanent and temporary modifications and improvements will be made throughout the pipeline existence and our Township.

Repair and remediation after construction to original or better standards. Planning phases for repair and remediation of construction need to be set in place. All construction specs need to be reviewed, and approved by Chippewa Township. Long term monitoring and remediation contractual standards due to pipeline construction and maintenance will need to be put in place.

Sincerely,



Matt Carver,
Road Superintendent
Chippewa Township

LA11-4 See section 4.6 for potential impacts to wildlife and section 4.8 for potential impacts to special status species.

LA11-5 Wetland impacts and mitigation are discussed in section 4.4.2

R-68

LOCAL AGENCIES/ELECTED OFFICIALS

LA12 – Dave McMillen, Plain Township Trustee, Wayne County

Dear FERC,

I am writing in reference to the alternate route (Green relocation) of the Nexus pipeline that is purposed

LA12-1

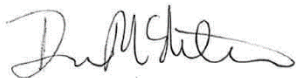
to come across Plain Township, Wayne County, Ohio. In the last year, this is the third pipeline to attempt to enter into agreements with landowners within the township boundaries. ET Rover and Kinder-Morgan Utopia have already come before the Nexus line. In discussion with many of the parties affected we urge to keep your original plan for the pipeline.

In the past year, pipelines have been the center of many conversations, and it's my opinion that the people of Plain Township do not want to deal with another pipeline easement and construction. Our tillable land is the sole livelihood of many of the people affected by these pipelines; we don't want any more disruptions. We believe that we are doing our fair share to support the Rover and Utopia lines already, I urge you to keep the Nexus line to our North.

LA12-2

Another common theme with the Nexus line is the lack of an accurate map. Landowners cannot make an informed decision in the limited FERC window with such little information. If the pipeline is to be rerouted through Plain Township, Wayne County, please allow us time and information to form an educated response. We feel we are being dumped on as a pipeline corridor by FERC.

Thank you for your consideration,



Dave McMillen

Plain Township Trustee / Wayne County

LA12-1

Comment noted. Based on our review, we did not find the City of Green Route Alternative provides a substantial environmental advantage when compared to the corresponding segment of the proposed route and did not recommend that it be incorporated as part of the Projects.

LA12-2

Comment noted.

R-69

LOCAL AGENCIES/ELECTED OFFICIALS

LA13 – Paint Township Trustees

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PAIN TOWNSHIP TRUSTEES

PO Box 178, Mt. Eaton, OH 44659

Wayne County, Ohio

Board of Trustees

Chuck Gatti
Marion Miller
Brad Herman

Fiscal Officer

Karen Raber

August 25, 2016

NATHANIAL J. DAVIS, SR., DEPUTY SECRETARY
FEDERAL ENERGY REGULATORY COMMISSION
888 FIRST STREET NE, ROOM 1A
WASHINGTON, DC, 20426

RE: DOCKET NO. CP16-22-000
NEXUS GAS TRANSMISSION PROJECT AND TEXAS EASTERN APPALACHIA LEASE PROJECT

Dear Mr. Davis:

This letter is in reference to the NEXUS Gas Transmission Project (NGT) and Texas Eastern Appalachia Lease Project (TEAL) Draft Environmental Impact Study (EIS) that was released on July 27, 2016. The Board of Paint Township Trustees have reviewed the EIS. The proposed Green Alternate Route will have a greater negative environmental, cultural, and economic impact than the route originally proposed by NEXUS.

The Board of Trustees of Paint Township, Wayne County would like to submit the following comments with regards to the proposed Green Alternate Route.

- LA13-1 • The Board of Trustees feel that our residents have not been given adequate time to review and comment on the proposed alternate route. Our residents along the Green Alternate Route have only been given 5-6 weeks to review and discuss the impacts of the alternate route and comment on it. People living along the northern route, originally proposed by NEXUS, were given multiple years to research and share important impact information regarding this project.
- LA13-2 • It is also important to point out that Paint Township in Wayne County is facing multiple pipeline projects in the near future. There are three projects facing our residents: Green (NEXUS) Alternate Route, which is a 36-inch gas line; Rover, which will probably begin construction by the end of 2016 and includes two 42-inch gas lines; and finally Utopia, which is a 12-inch ethane line. Not only are these three projects slated to cross almost our entire township, but they are proposed to utilize similar routes.
- LA13-3 • The NEXUS Project does not comply with the standards set forth by the Ohio Department of Agriculture's (ODA) Ohio Pipeline Standard and Construction Specifications. Compliance with the ODA Pipeline Standards can help minimize the negative impact pipelines have to the agricultural landscape of our township, which directly and greatly impacts our economy.

Page 1 of 2

LA13-1 Comment noted.

LA13-2 Comment noted. Based on our review, we did not find the City of Green Route Alternative provides a substantial environmental advantage when compared to the corresponding segment of the proposed route and did not recommend that it be incorporated as part of the Projects.

LA13-3 See the response to comment LA5-2.

R-70

LOCAL AGENCIES/ELECTED OFFICIALS

LA13 – Paint Township Trustees

20160829-5126 FERC PDF (Unofficial) 8/29/2016 9:26:12 AM

LA13-4 Comment noted.

LA13-3
cont'd This is significant because Paint Township residents are heavily reliant on agriculture for their livelihoods.

LA13-4

- Additionally, the overwhelming majority of these Paint Township residents are members of the Plain community (Amish/Mennonite). In fact, Paint Township is home to the largest Plain settlement in Wayne County, as well as one of the largest in Ohio. The potential loss of and direct impact on the agricultural land will put significant strain on the way of life these residents have enjoyed for generations. The financial impact as a result of the disruption to agriculture practices is incalculable for many of Paint Township residents due to their dependence on agriculture as a means of income and sustenance living.

In closing, the key word for this situation is *limited*. Paint Township of Wayne County residents have been given a *limited* timeframe to respond to the proposed Green Alternate Route. The amount of land along the three proposed pipeline routes is also *limited*, considering all three routes follow a similar path. Residents, of the predominately Plain community, have *limited* financial options, which will lead to a significant impact to their way of life. After reviewing the NEXUS Gas Transmission Project (NGT) and Texas Eastern Appalachia Lease Project (TEAL) Draft Environmental Impact Study (EIS), we the trustees of Paint Township in Wayne county see significant flaws in the Green Alternate Route. The proposed Green Alternate Route will have a greater negative environmental, cultural, and economic impact than the route originally proposed by NEXUS.

Sincerely,

THE BOARD OF PAINT TOWNSHIP TRUSTEES, WAYNE COUNTY, OHIO



Marion Miller- President



Chuck Gatti- Vice President



Brad Herman- Trustee



Karen Raber
Fiscal Officer
Paint Township / Wayne County
PO Box 178
Mt. Eaton, OH 44659

LOCAL AGENCIES/ELECTED OFFICIALS

LA14 – Gerard Neugebauer, Mayor, Wayne Wiethe, Director of Planning, City of Green



Mayor's Office

1755 Town Park Boulevard
PO Box 278
Green, OH 44232-0278
PHONE: (330) 896-6602
EMAIL: gneugebauer@cityofgreen.org

Gerard Neugebauer
Mayor

Nathaniel J. Davis, Sr., Deputy Secretary
Federal Energy Regulatory Commission
888 First Street NE, Room 1A
Washington, DC 20426

August 29, 2016

RE: Alternate Route Modifications

Commissioners,

The City of Green Alternate Route was originally created to demonstrate that a route for a 36" high pressure natural gas pipeline could be achieved with significantly fewer environmental and social consequences. The alternate route was originally submitted to the Federal Energy Regulatory Commission (FERC) in March 2015. The City's assessment was successful and proves that this corridor should be fully developed as a viable alternative route. We now offer some minor modifications to our superior route.

- LA14-1 It is our belief that a route can be achieved by using any combination of the modifications that would further reduce the impact to forested land, dwellings and greenfield construction miles. For instance, using the latest route modifications the number of dwellings within 50' of the pipe centerline has dropped to zero, while the number for the proposed Nexus route remains at four. As for the number of greenfield construction miles reported, the segment of the alternate route that parallels the Rover Pipeline should now be calculated as non-greenfield. This is based on the fact that the final Environmental Impact Statement (EIS) for the Rover Pipeline project was released in July 2016. Additionally, Rover has already secured easements and property for their project and continues to do so.
- LA14-2

These modifications are being brought forward because in the Draft EIS, FERC requested this analysis of Nexus. We simply did not believe that Nexus would honor this request with due diligence. As such we have taken it upon ourselves to provide additional data to FERC. After seeing the response with the requested analysis from Nexus that was submitted to FERC on August 26, 2016, our beliefs have been confirmed. The analysis completed by Nexus was minimal and does not satisfy the request of FERC to fully analyze the route. Nexus refuses to devote the appropriate time and resources to fully develop this route as the superior path that it is.

In the cover letter of the August 26 Nexus response, Nexus presents an eloquent assertion that their future business needs and the future market demand (i.e., the speculative tee taps) should be considered as part of the project's purpose and need. If the future of Nexus is allowed to be considered, then the future of the cities of Green and New Franklin must also be considered. It is the duty of the City's administration to safeguard the City's future; a future that includes our residents, our economy,

An Equal Opportunity Employer

www.cityofgreen.org

LA14-1 See section 3.3.3 for an updated discussion of the City of Green Route Alternative.

LA14-2 Comment noted.

R-72

LOCAL AGENCIES/ELECTED OFFICIALS

LA14 – Gerard Neugebauer, Mayor, Wayne Wiethe, Director of Planning, City of Green

R-73

LA14-3

the long term use of our commercial, industrial, residential, and park land, and the future of our wetlands and precious natural resources, including the Singer Lake Preserve and it's delicate ecosystem. This is why this project means so much to our community and the reason we've devoted the significant resources that we have towards re-routing this pipeline. This project would bring harm to our residents, our economy, our future land uses and our natural resources. The Singer Lake Preserve alone could be irreversibly damaged if the shallow ground water table is disturbed.

LA14-4

This project is not yet ready for a final EIS. Nexus has not faithfully evaluated the alternate route and as such the NEPA process has not been followed in order to select a preferred route. There has been a substantial amount of new information presented to FERC since the release of the Draft EIS. With new information presented, and most recently additional route modifications, the public must be given sufficient time to evaluate and provide further comments. We also need some assurance that the public is being heard. We now must respectfully request that before a Final EIS is released, a second draft should be released with another public comment period.

My staff and I are available to discuss the enclosed modifications at any time. We are also available to discuss any aspect of this project as it relates to the City of Green. Please do not hesitate to contact us.

Sincerely,


Gerard Neugebauer, P.E.
Mayor


Wayne Wiethe, AICP
Director of Planning

cc: Sherrod Brown, U.S. Senator
Rob Portman, U.S. Senator
Jim Renacci, Congressman
John Kasich, Governor
Mary Taylor, Lt. Governor
Frank La Rose, Ohio State Senator
Anthony DeVitis, Ohio State Representative
Ilene Shapiro, Summit County Executive
John Sheridan, Director of State Gov Affairs Spectra Energy
Brian Hicks, Hicks Partners
David Slater, Executive Vice President-Gas Storage & Pipeline

LA14-3

See sections 4.5.1 and 4.9.7.4 for discussions of Singer Lake Preserve.

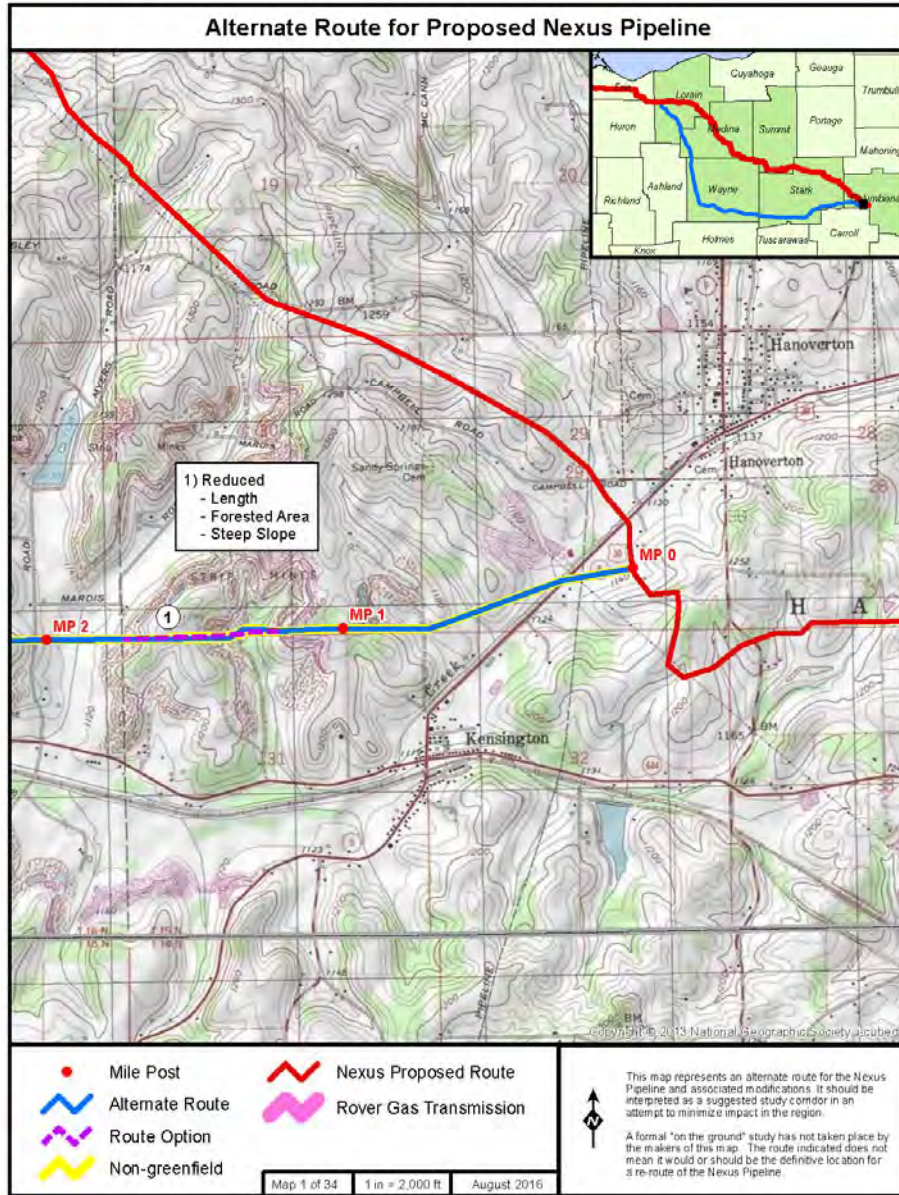
LA14-4

There is no public comment period associated with issuance of a final EIS per NEPA. However, FERC's process allows for comments at all times during pending proceedings as well as opportunity to intervene. We find no need to extend another comment period with issuance of the final EIS.

LOCAL AGENCIES/ELECTED OFFICIALS

LA14 – Gerard Neugebauer, Mayor, Wayne Wiethe, Director of Planning, City of Green

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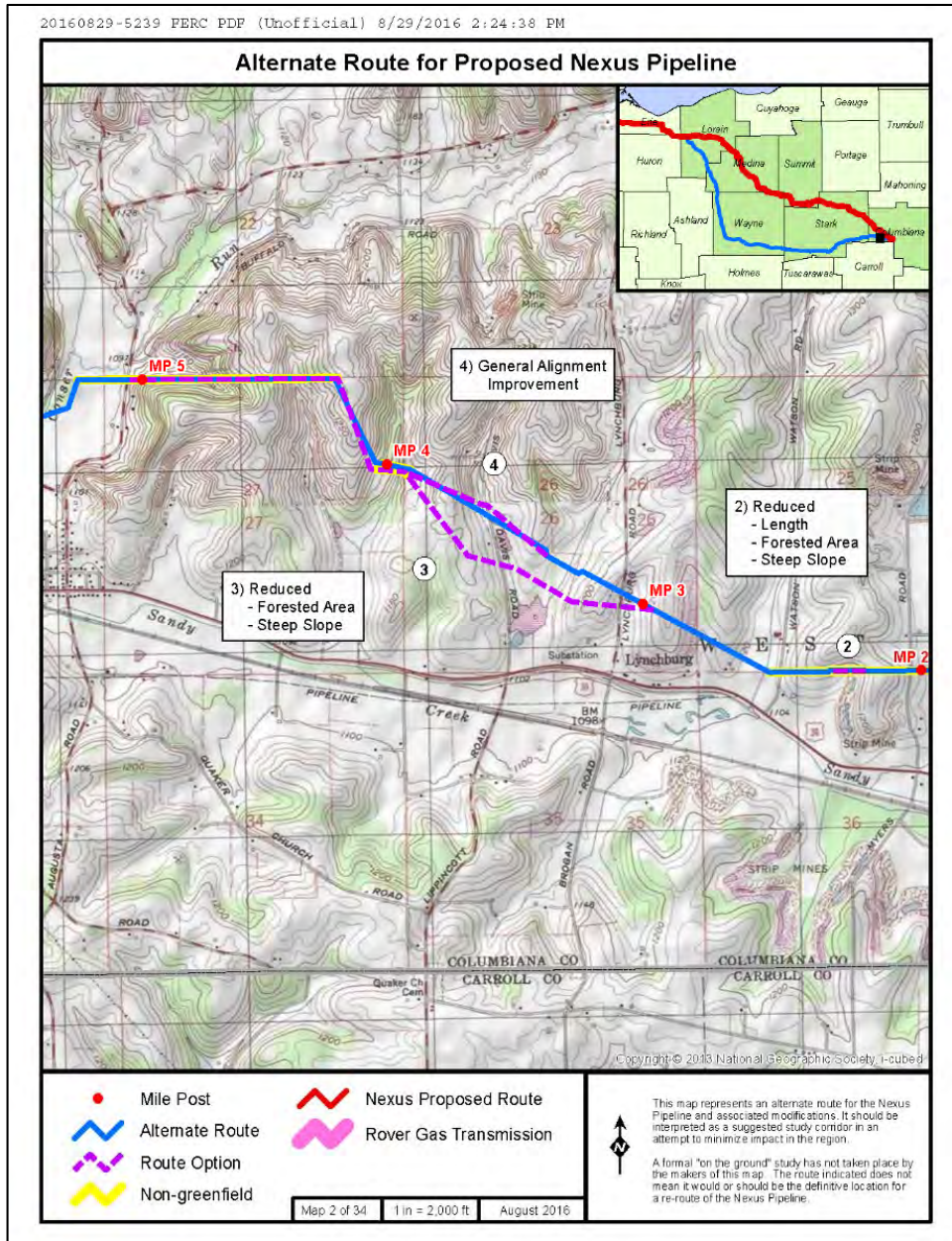
R-74

LOCAL AGENCIES/ELECTED OFFICIALS

LA14 – Gerard Neugebauer, Mayor, Wayne Wiethe, Director of Planning, City of Green

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R-75

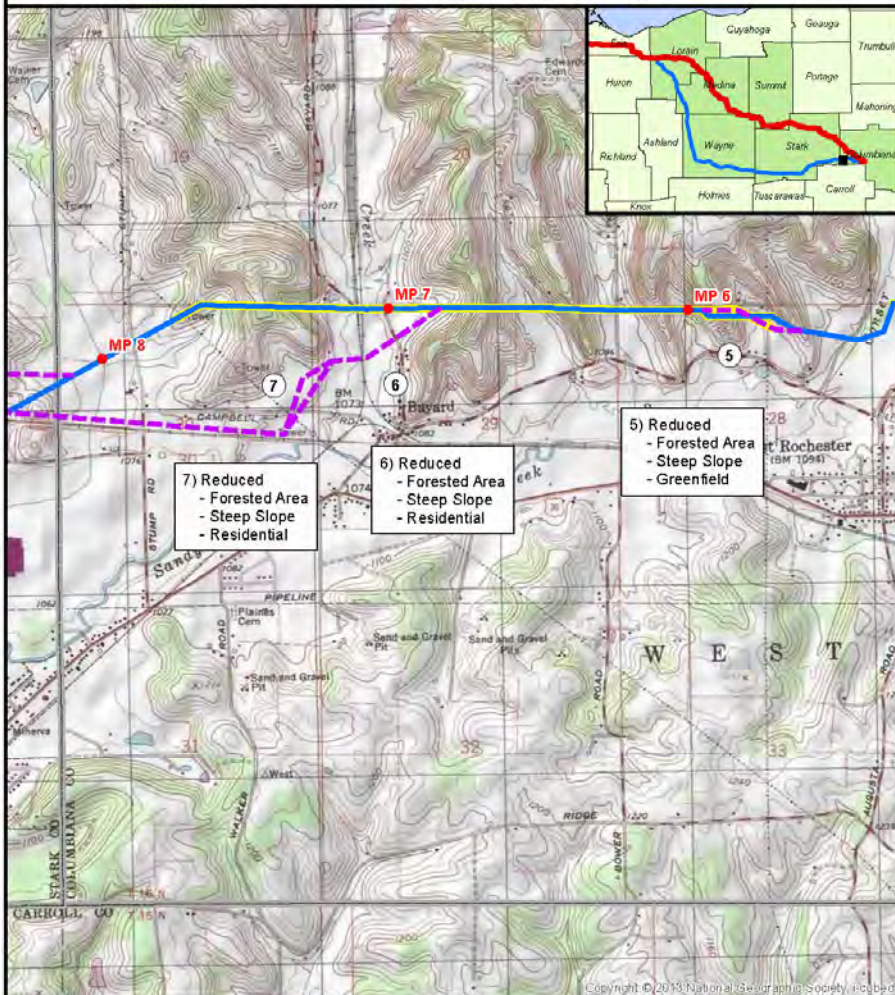


LOCAL AGENCIES/ELECTED OFFICIALS

LA14 – Gerard Neugebauer, Mayor, Wayne Wiethe, Director of Planning, City of Green

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Alternate Route for Proposed Nexus Pipeline



7) Reduced
- Forested Area
- Steep Slope
- Residential

6) Reduced
- Forested Area
- Steep Slope
- Residential

5) Reduced
- Forested Area
- Steep Slope
- Greenfield

- Mile Post
- Alternate Route
- - - Route Option
- Non-greenfield
- Nexus Proposed Route
- Rover Gas Transmission



This map represents an alternate route for the Nexus Pipeline and associated modifications. It should be interpreted as a suggested study corridor in an attempt to minimize impact in the region.

A formal "on the ground" study has not taken place by the makers of this map. The route indicated does not mean it would or should be the definitive location for a re-route of the Nexus Pipeline.

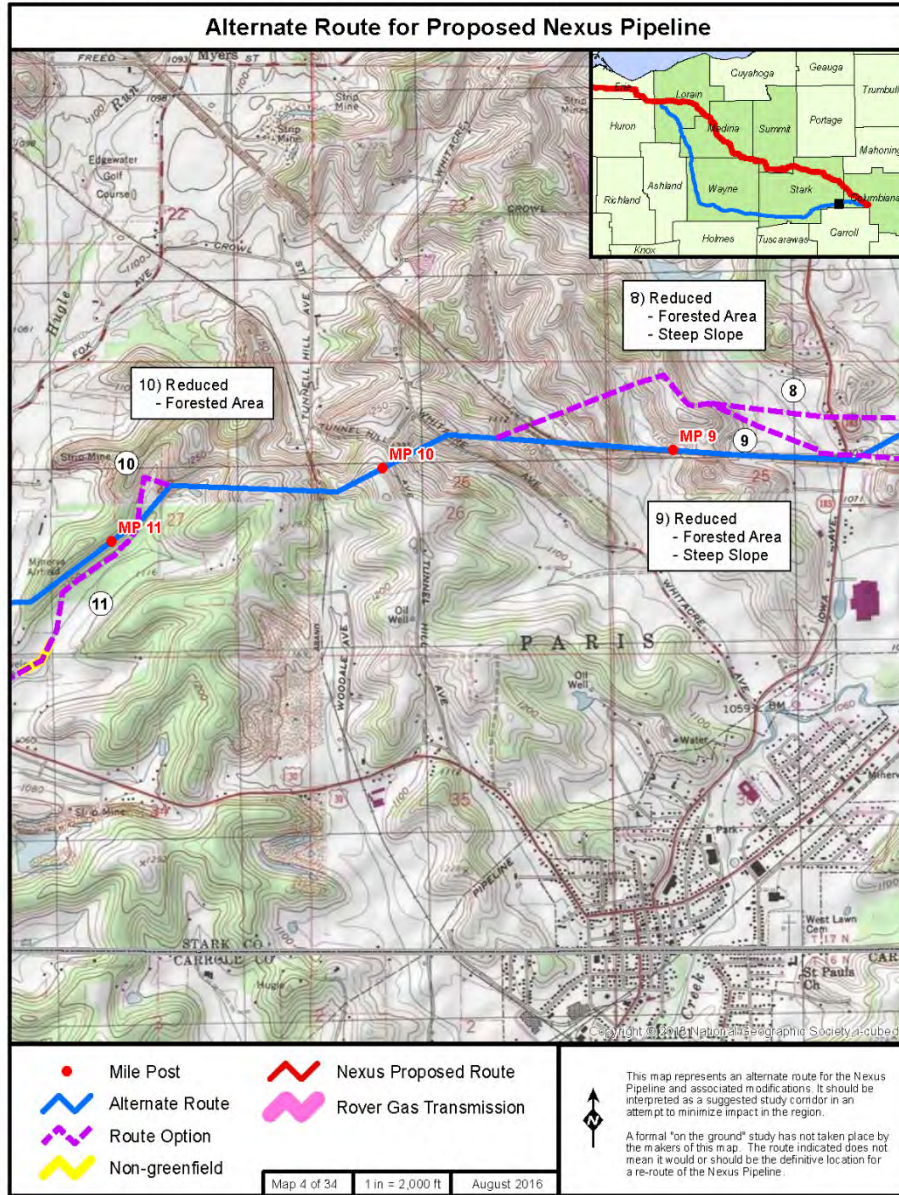
Map 3 of 34 1 in = 2,000 ft August 2016

R-76

LOCAL AGENCIES/ELECTED OFFICIALS

LA14 – Gerard Neugebauer, Mayor, Wayne Wiethe, Director of Planning, City of Green

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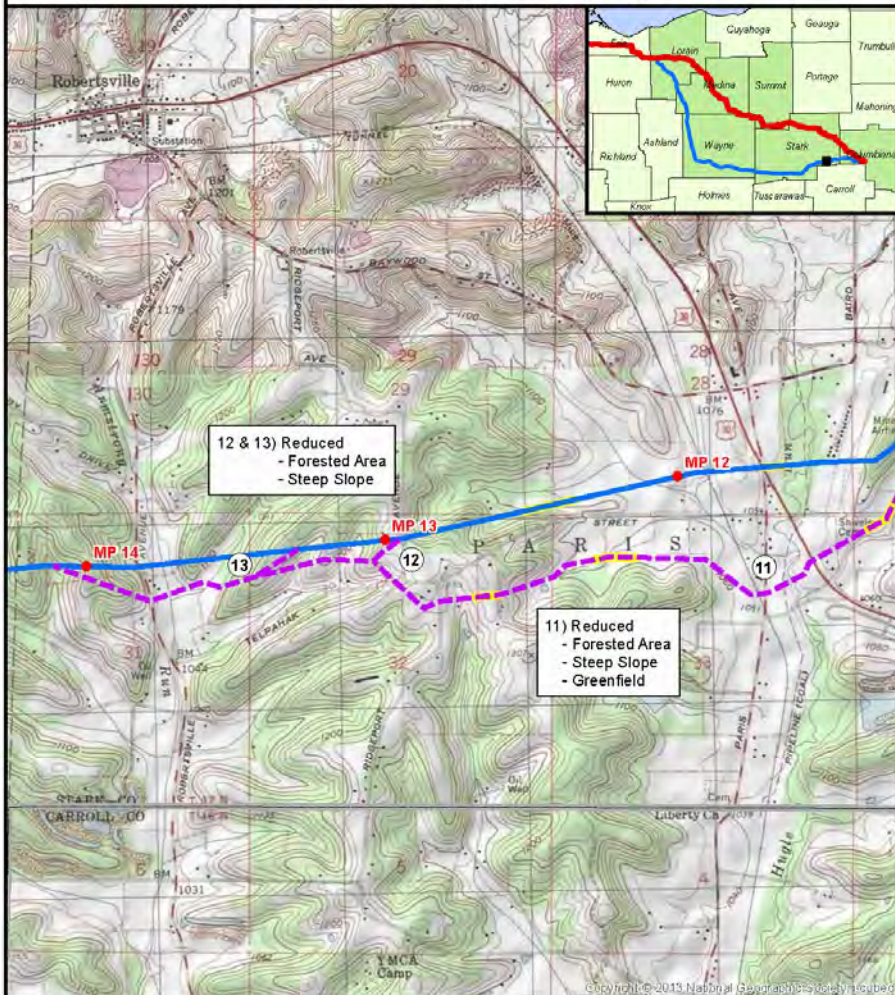
R-77

LOCAL AGENCIES/ELECTED OFFICIALS

LA14 – Gerard Neugebauer, Mayor, Wayne Wiethe, Director of Planning, City of Green

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Alternate Route for Proposed Nexus Pipeline



12 & 13) Reduced
- Forested Area
- Steep Slope

11) Reduced
- Forested Area
- Steep Slope
- Greenfield

Mile Post	Nexus Proposed Route
Alternate Route	Rover Gas Transmission
Route Option	
Non-greenfield	

Map 5 of 34 1 in = 2,000 ft August 2016

This map represents an alternate route for the Nexus Pipeline and associated modifications. It should be interpreted as a suggested study corridor in an attempt to minimize impact in the region.

A formal "on the ground" study has not taken place by the makers of this map. The route indicated does not mean it would or should be the definitive location for a re-route of the Nexus Pipeline.

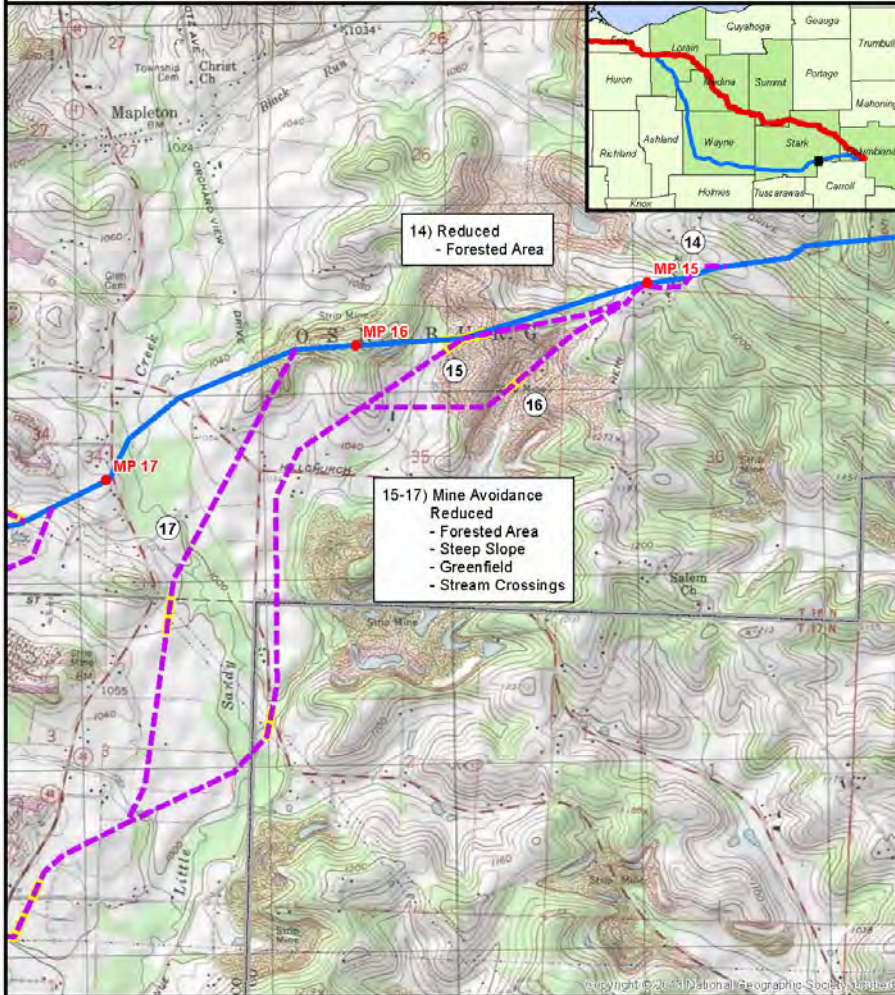
R-78

LOCAL AGENCIES/ELECTED OFFICIALS

LA14 – Gerard Neugebauer, Mayor, Wayne Wiethe, Director of Planning, City of Green

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Alternate Route for Proposed Nexus Pipeline



Mile Post	Nexus Proposed Route
Alternate Route	Rover Gas Transmission
Route Option	
Non-greenfield	

Map 6 of 34 1 in = 2,000 ft August 2016

This map represents an alternate route for the Nexus Pipeline and associated modifications. It should be interpreted as a suggested study corridor in an attempt to minimize impact in the region.

A formal "on the ground" study has not taken place by the makers of this map. The route indicated does not mean it would or should be the definitive location for a re-route of the Nexus Pipeline.

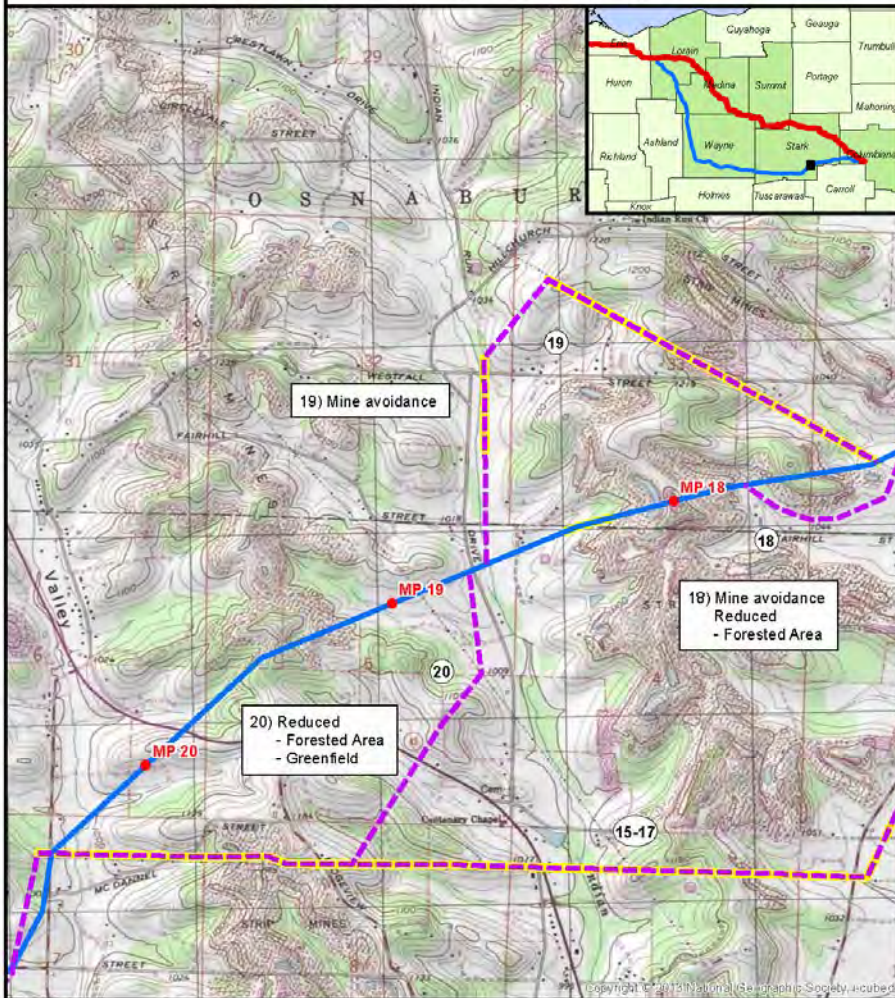
R-79

LOCAL AGENCIES/ELECTED OFFICIALS

LA14 – Gerard Neugebauer, Mayor, Wayne Wiethe, Director of Planning, City of Green

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Alternate Route for Proposed Nexus Pipeline



Mile Post	Nexus Proposed Route
Alternate Route	Rover Gas Transmission
Route Option	
Non-greenfield	

Map 7 of 34 | 1 in = 2,000 ft | August 2016

This map represents an alternate route for the Nexus Pipeline and associated modifications. It should be interpreted as a suggested study corridor in an attempt to minimize impact in the region.

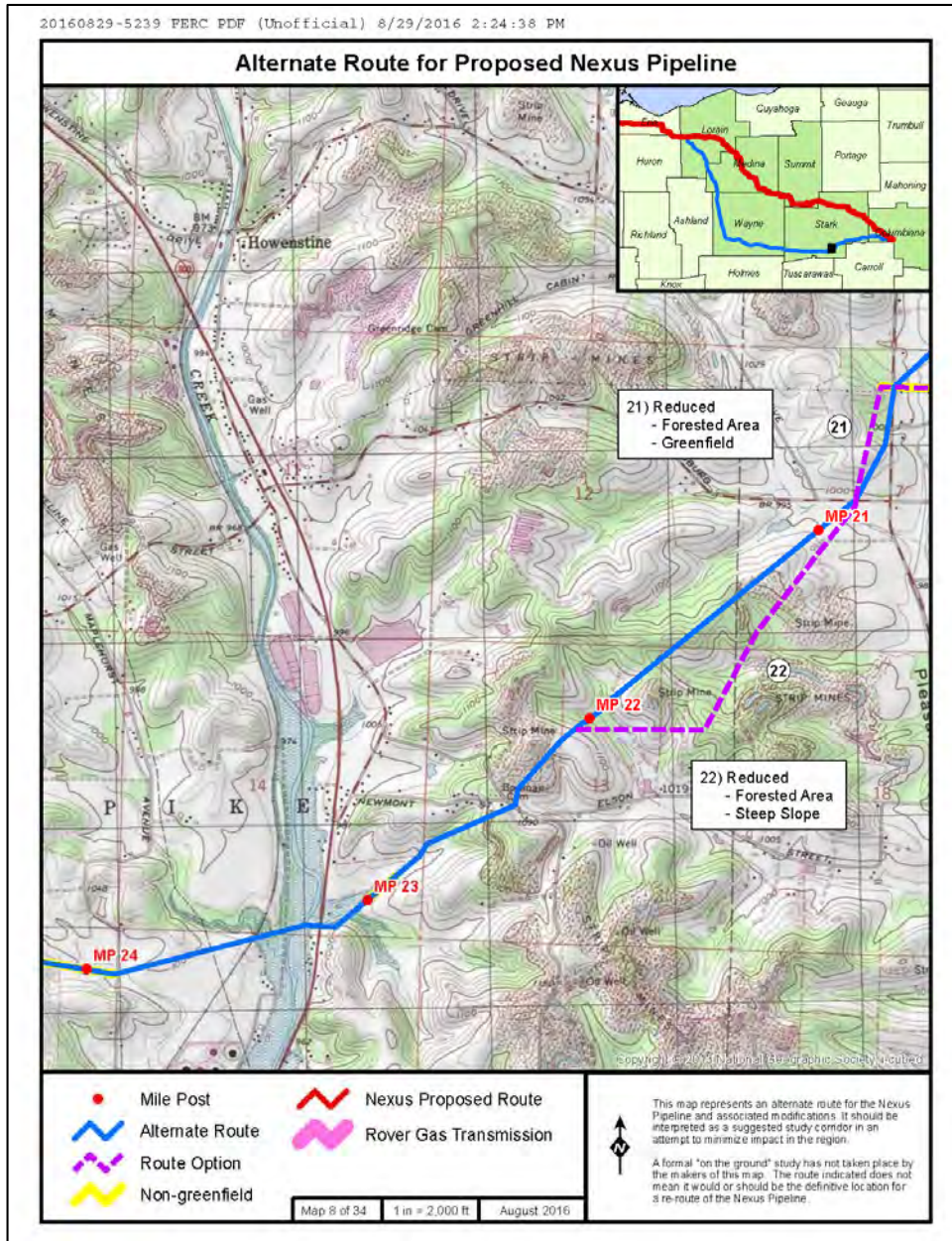
A formal "on the ground" study has not taken place by the makers of this map. The route indicated does not mean it would or should be the definitive location for a re-route of the Nexus Pipeline.

R-80

LOCAL AGENCIES/ELECTED OFFICIALS

LA14 – Gerard Neugebauer, Mayor, Wayne Wiethe, Director of Planning, City of Green

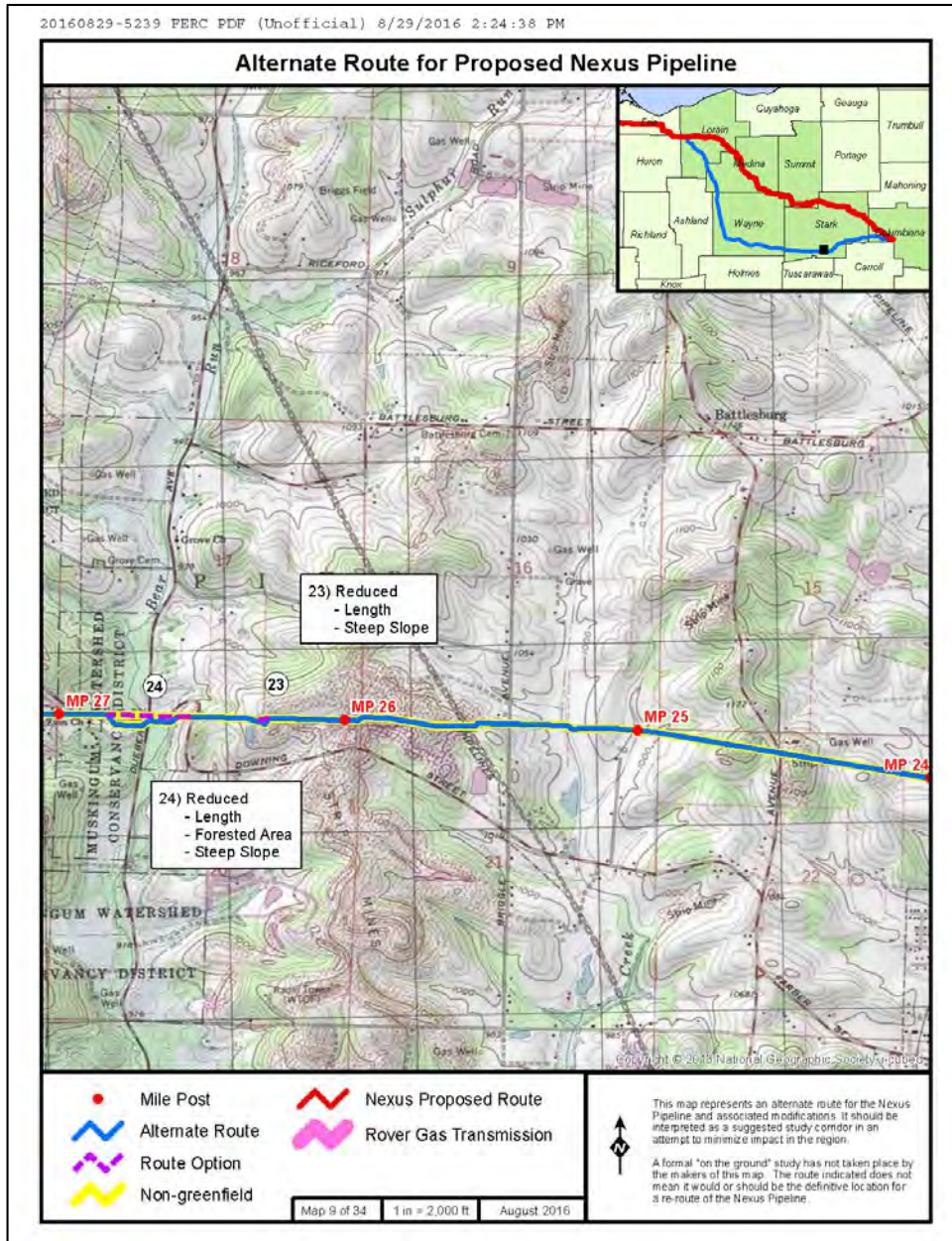
R-81



LOCAL AGENCIES/ELECTED OFFICIALS

LA14 – Gerard Neugebauer, Mayor, Wayne Wiethe, Director of Planning, City of Green

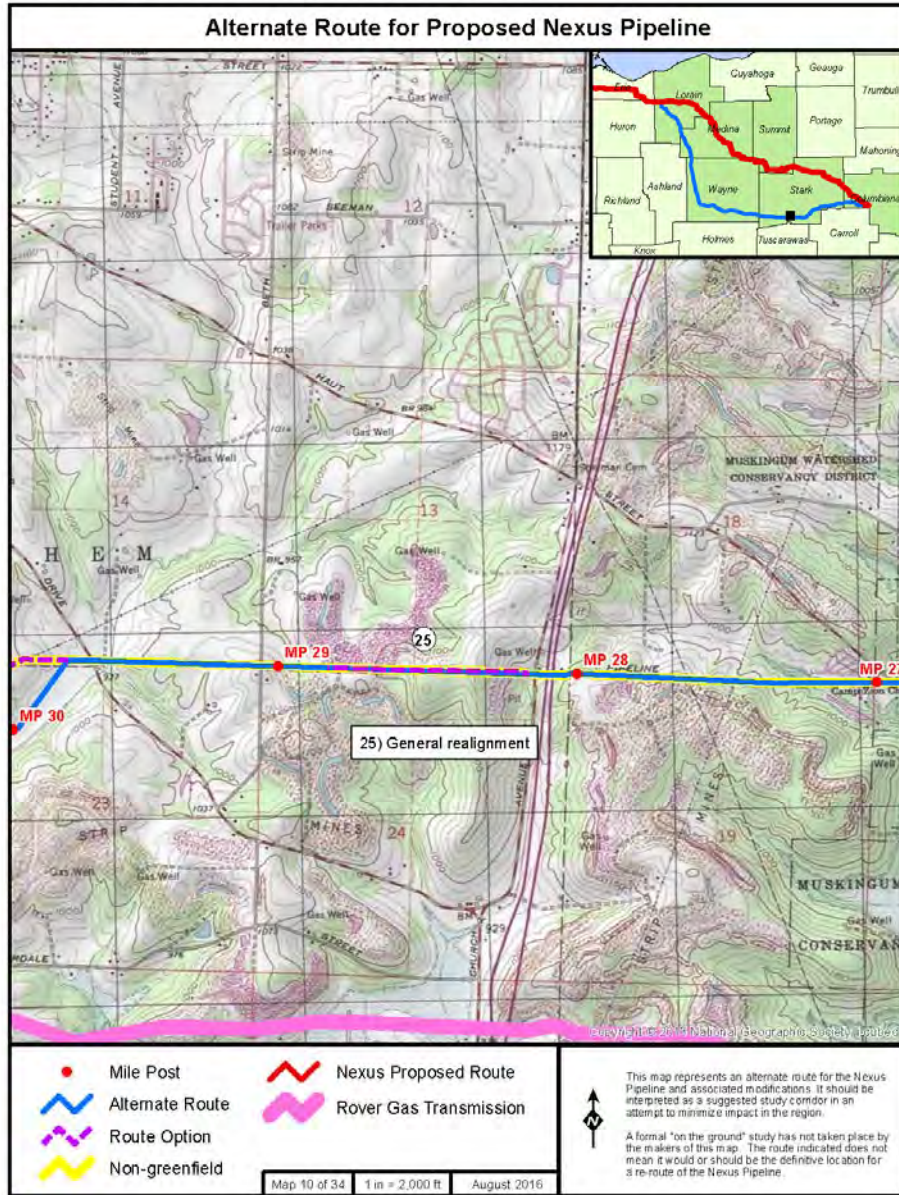
R-82



LOCAL AGENCIES/ELECTED OFFICIALS

LA14 – Gerard Neugebauer, Mayor, Wayne Wiethe, Director of Planning, City of Green

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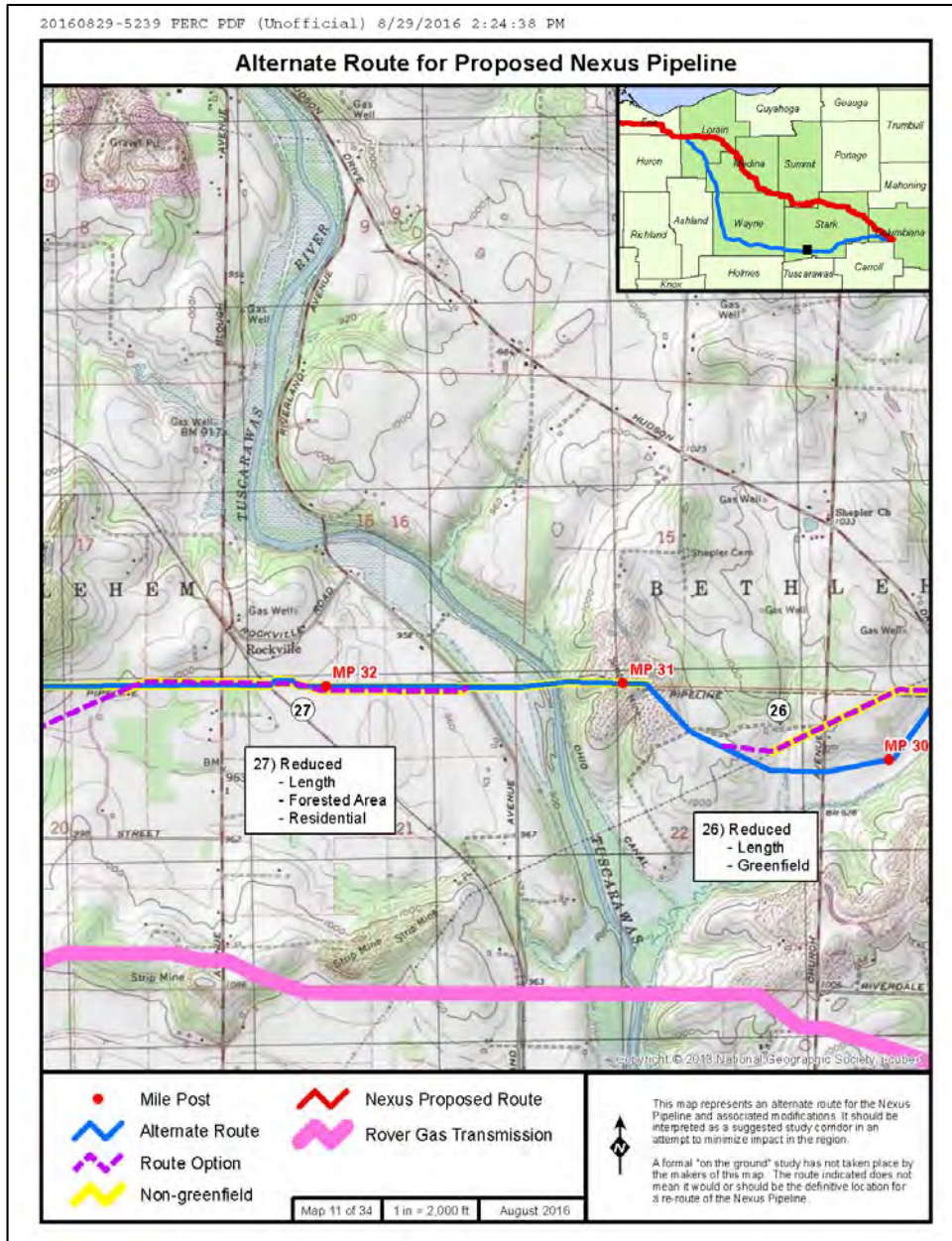


R-83

LOCAL AGENCIES/ELECTED OFFICIALS

LA14 – Gerard Neugebauer, Mayor, Wayne Wiethe, Director of Planning, City of Green

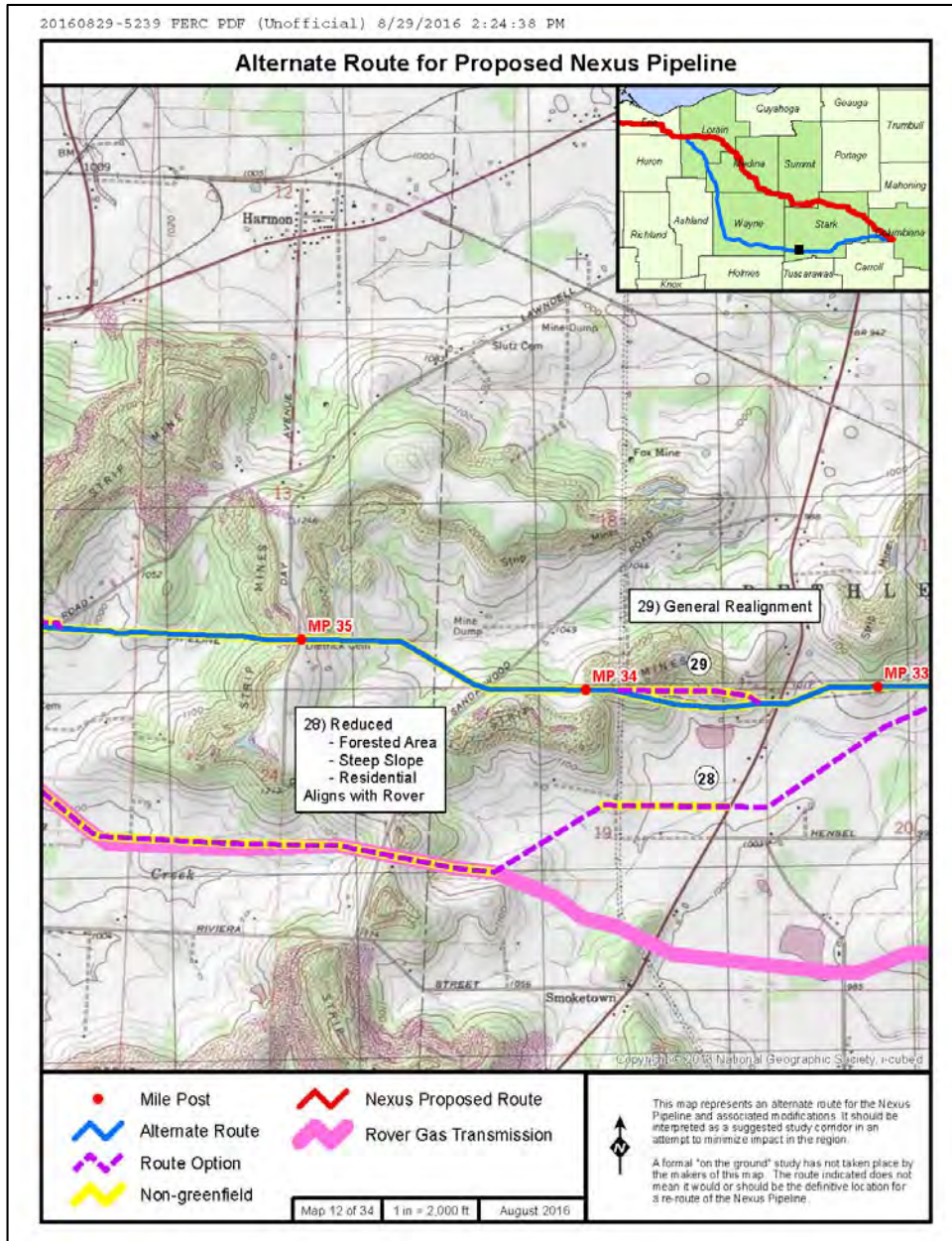
R-84



LOCAL AGENCIES/ELECTED OFFICIALS

LA14 – Gerard Neugebauer, Mayor, Wayne Wiethe, Director of Planning, City of Green

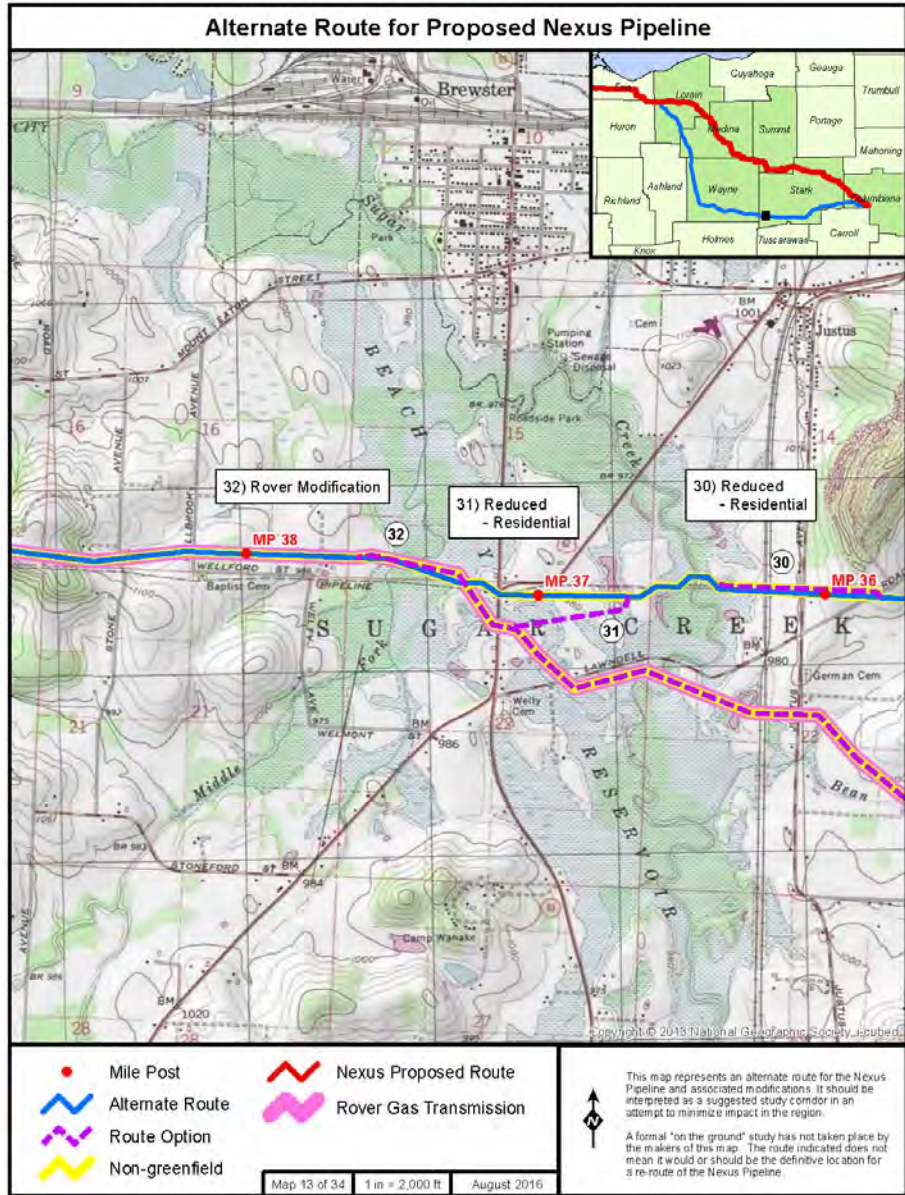
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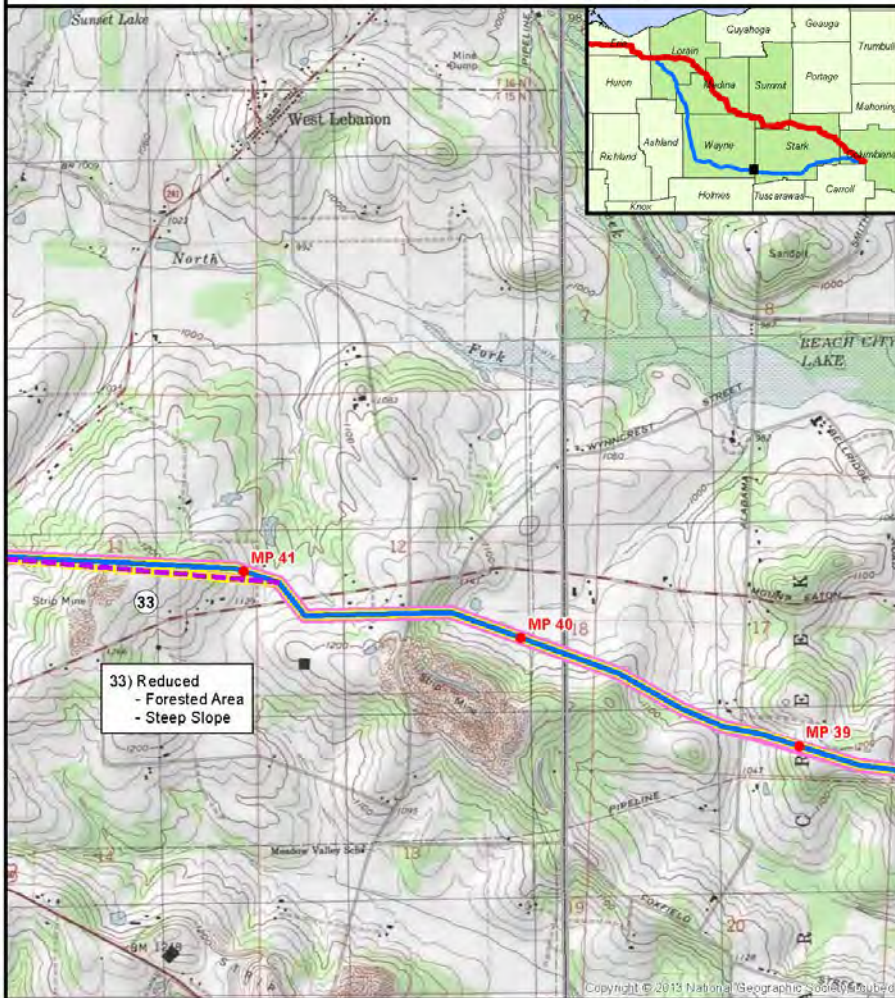
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Alternate Route for Proposed Nexus Pipeline



33) Reduced
- Forested Area
- Steep Slope

- Mile Post
- Alternate Route
- Route Option
- Non-greenfield
- Nexus Proposed Route
- Rover Gas Transmission

Map 14 of 34 1 in = 2,000 ft August 2016

This map represents an alternate route for the Nexus Pipeline and associated modifications. It should be interpreted as a suggested study corridor in an attempt to minimize impact in the region.

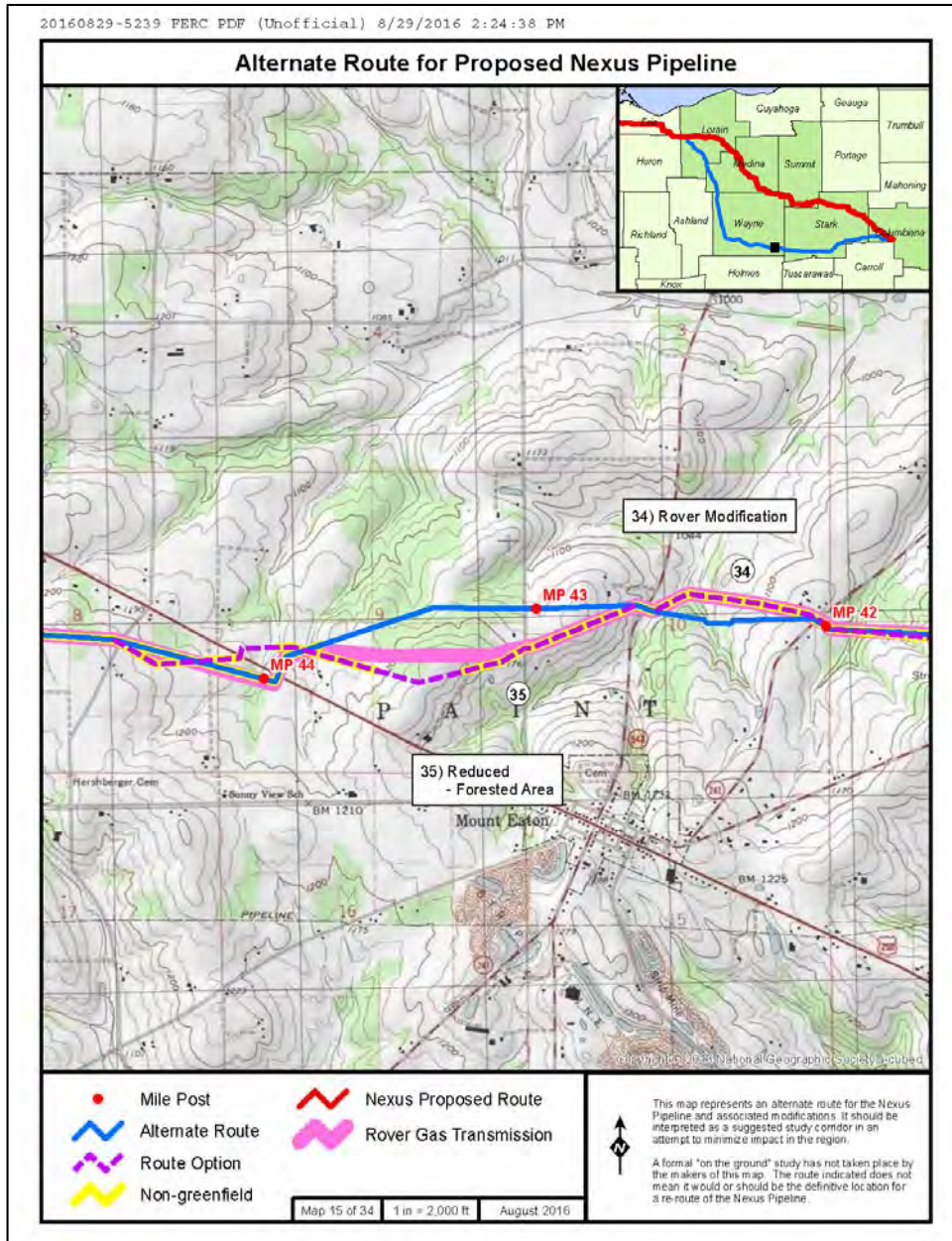
A formal "on the ground" study has not taken place by the makers of this map. The route indicated does not mean it would or should be the definitive location for a re-route of the Nexus Pipeline.

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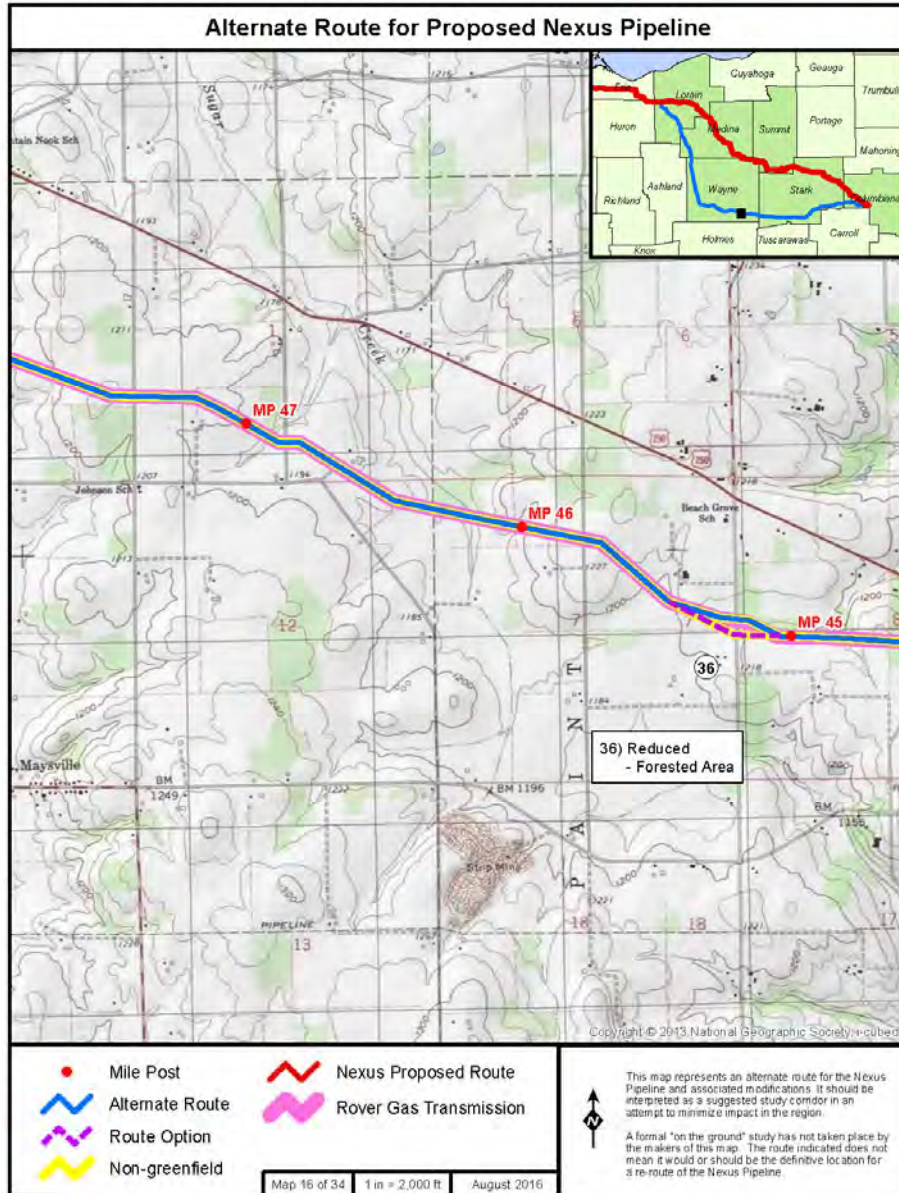
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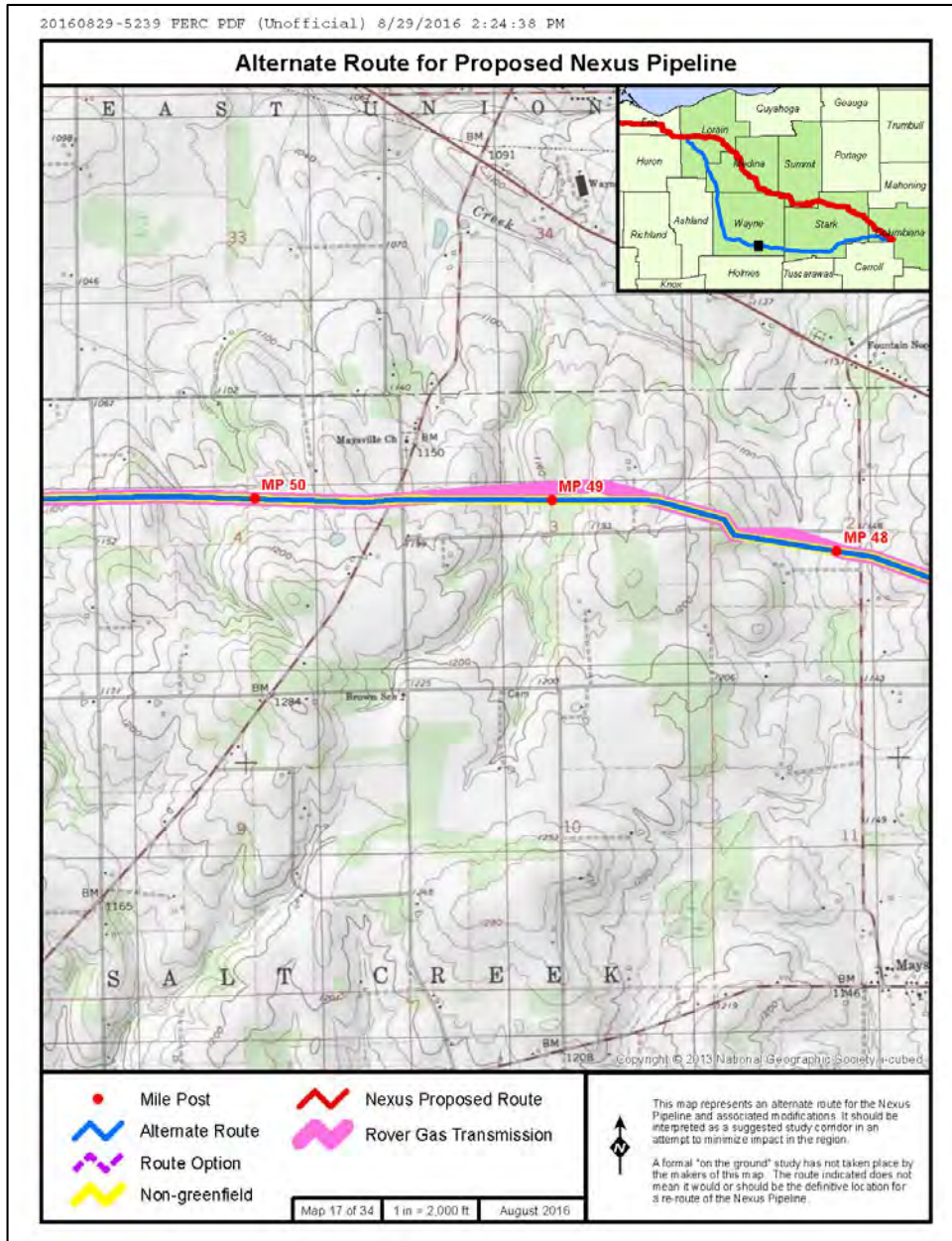


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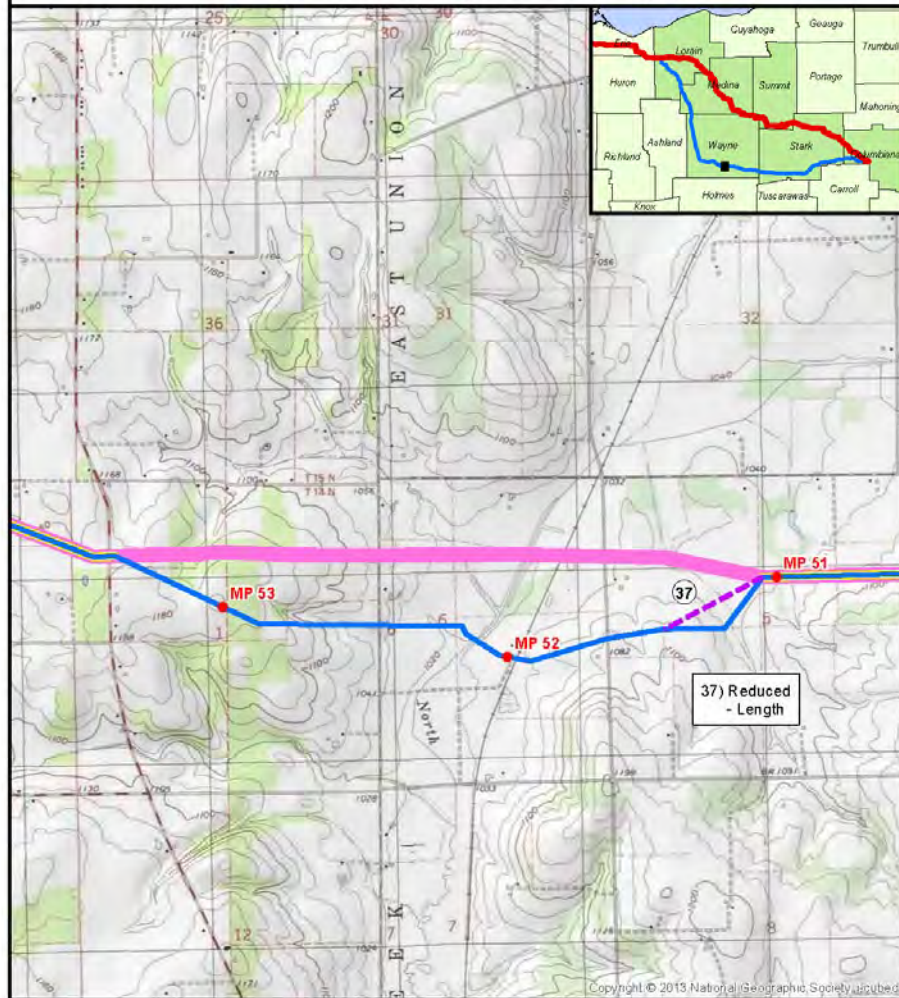


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Alternate Route for Proposed Nexus Pipeline



Mile Post	Nexus Proposed Route
Alternate Route	Rover Gas Transmission
Route Option	
Non-greenfield	

This map represents an alternate route for the Nexus Pipeline and associated modifications. It should be interpreted as a suggested study corridor in an attempt to minimize impact in the region.

A formal "on the ground" study has not taken place by the makers of this map. The route indicated does not mean it would or should be the definitive location for a re-route of the Nexus Pipeline.

Map 18 of 34 1 in = 2,000 ft August 2016

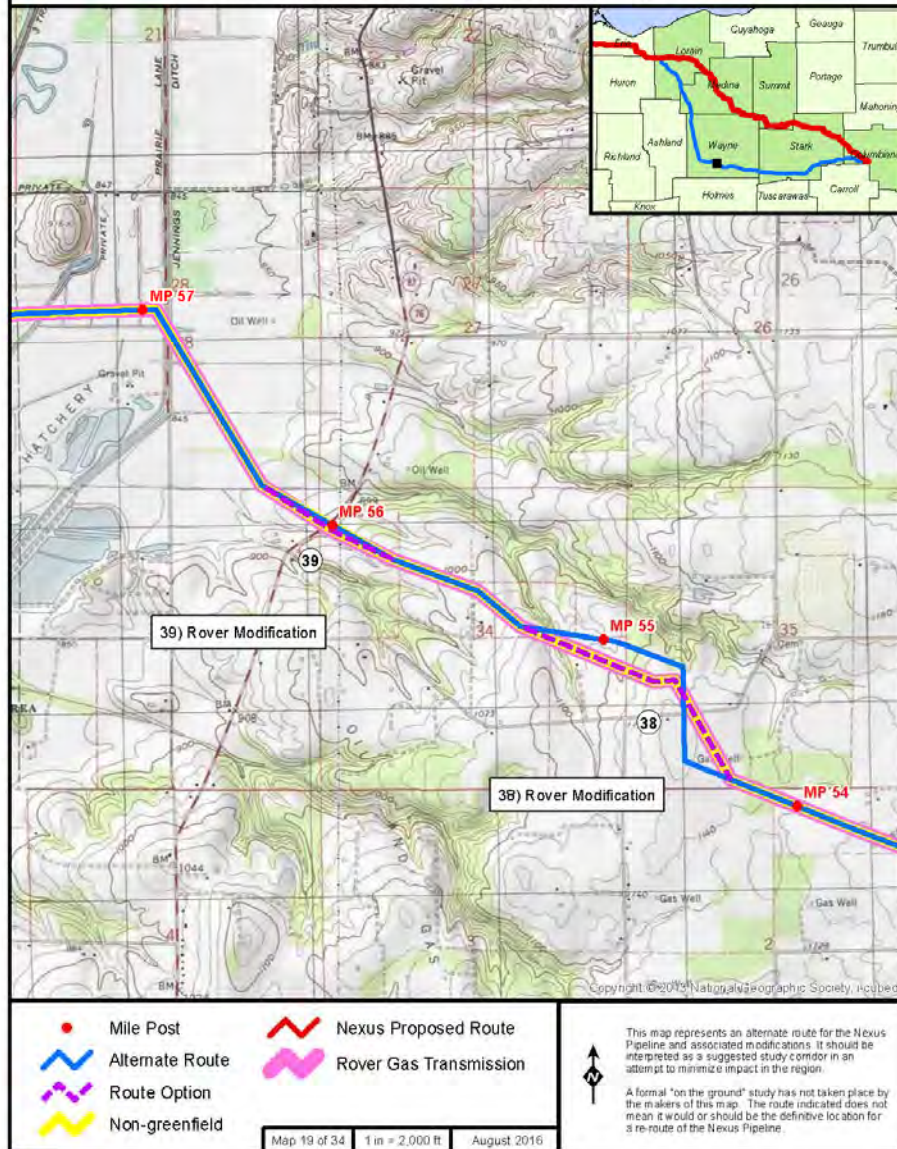
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LOCAL AGENCIES/ELECTED OFFICIALS

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Alternate Route for Proposed Nexus Pipeline

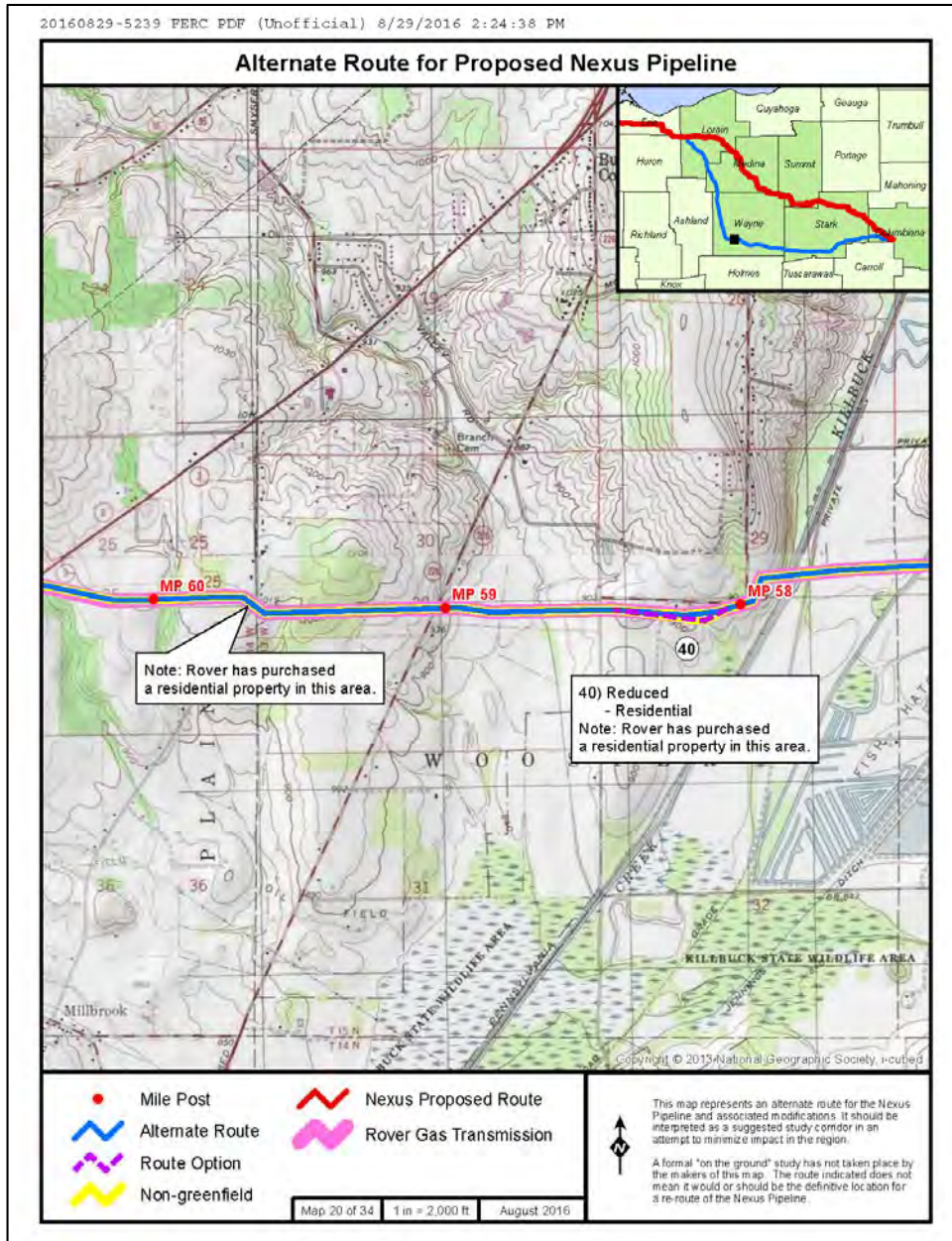


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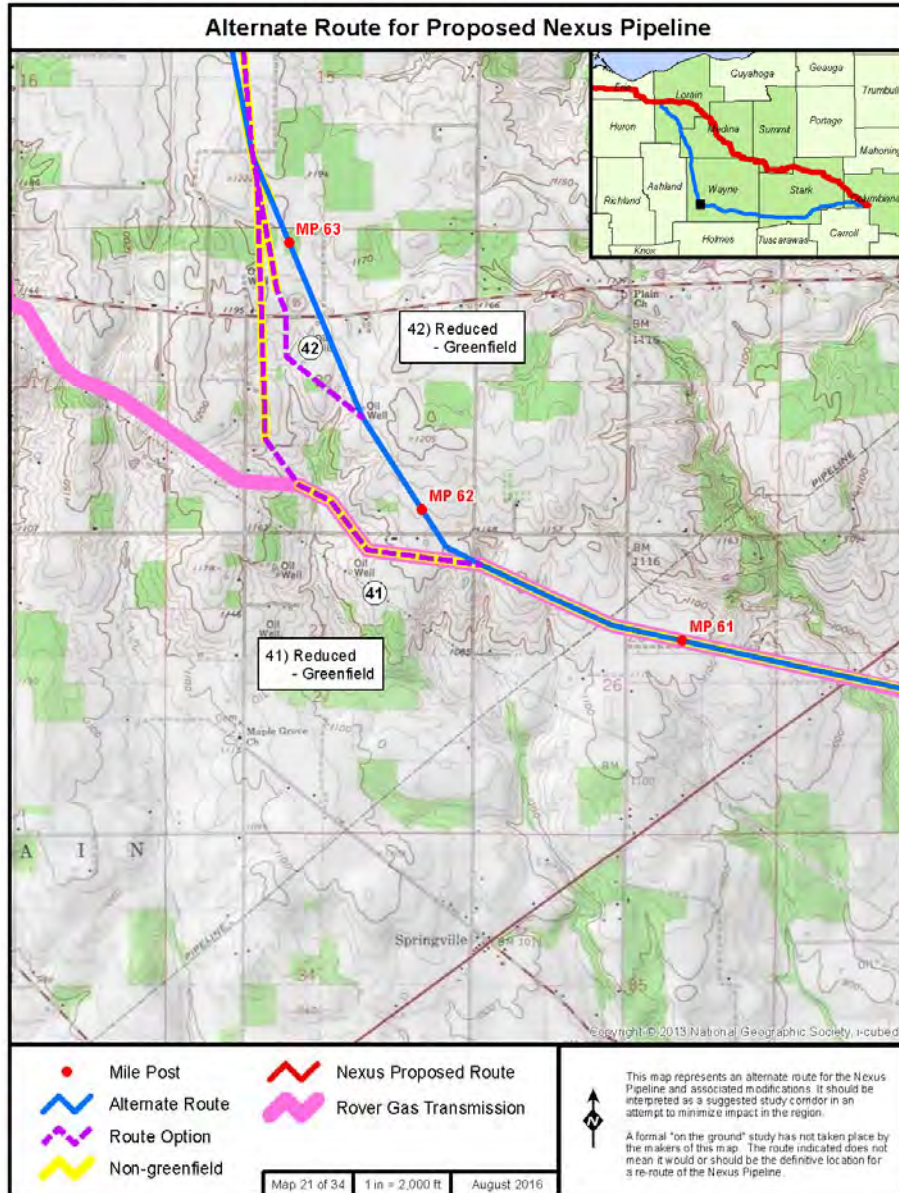
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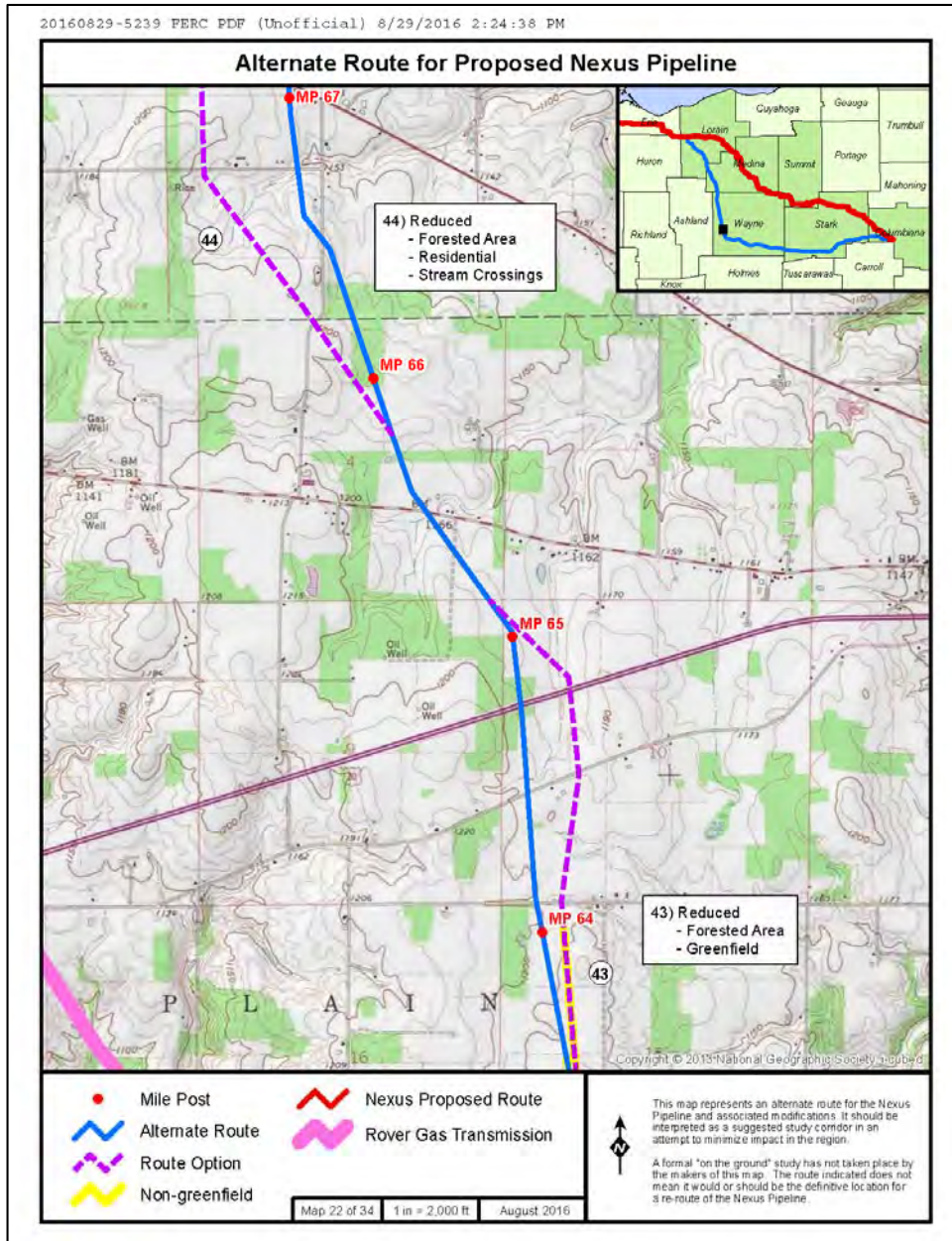


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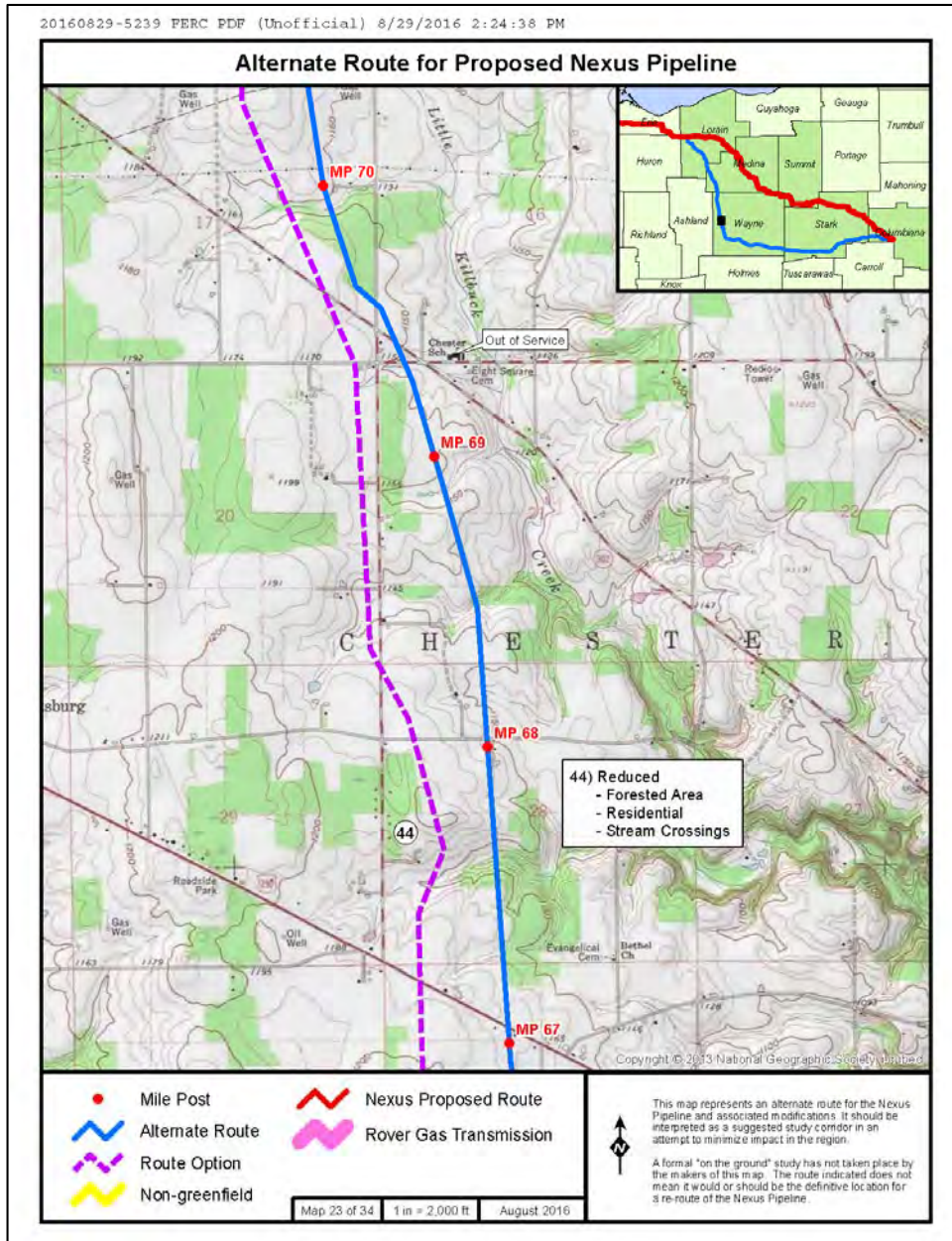
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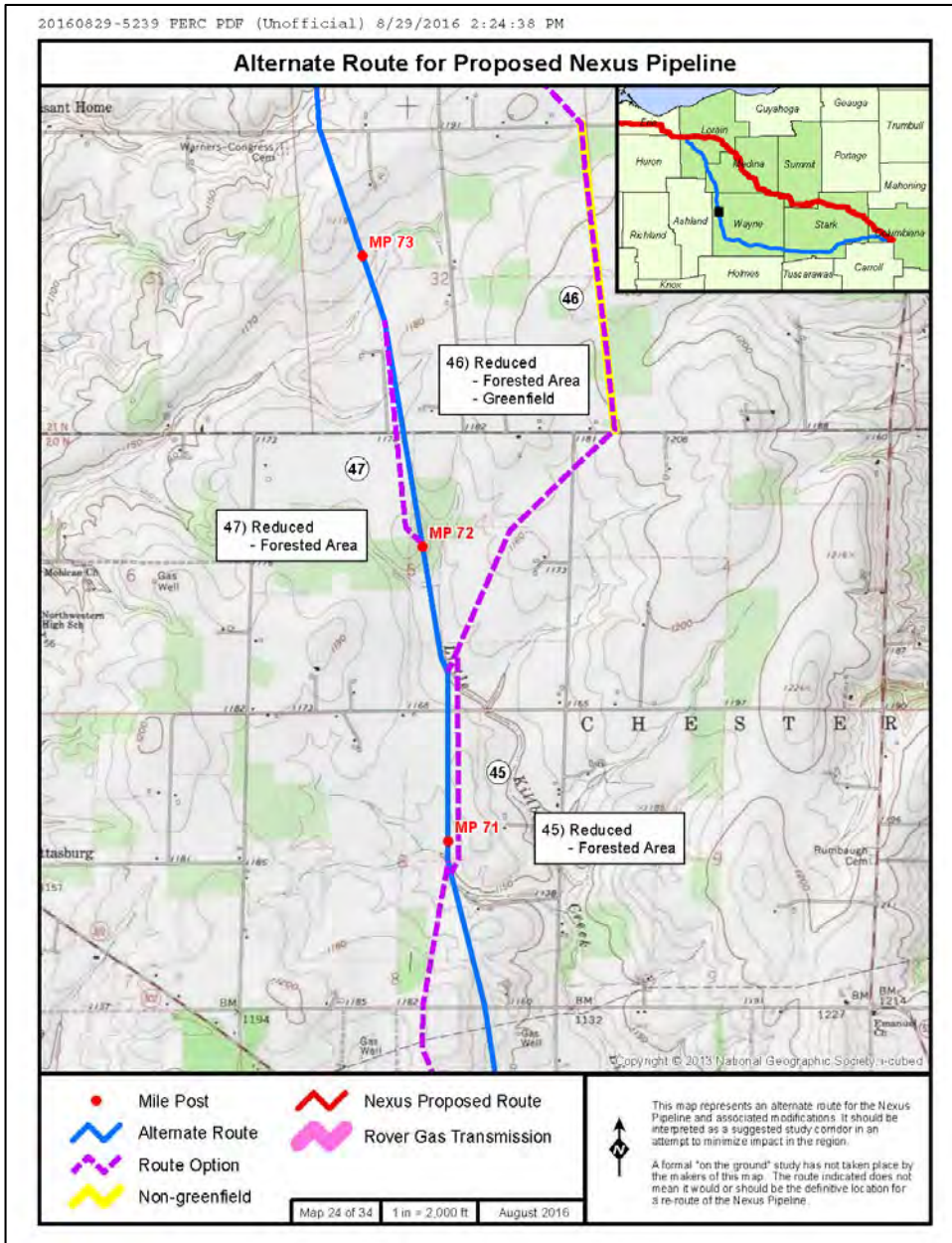
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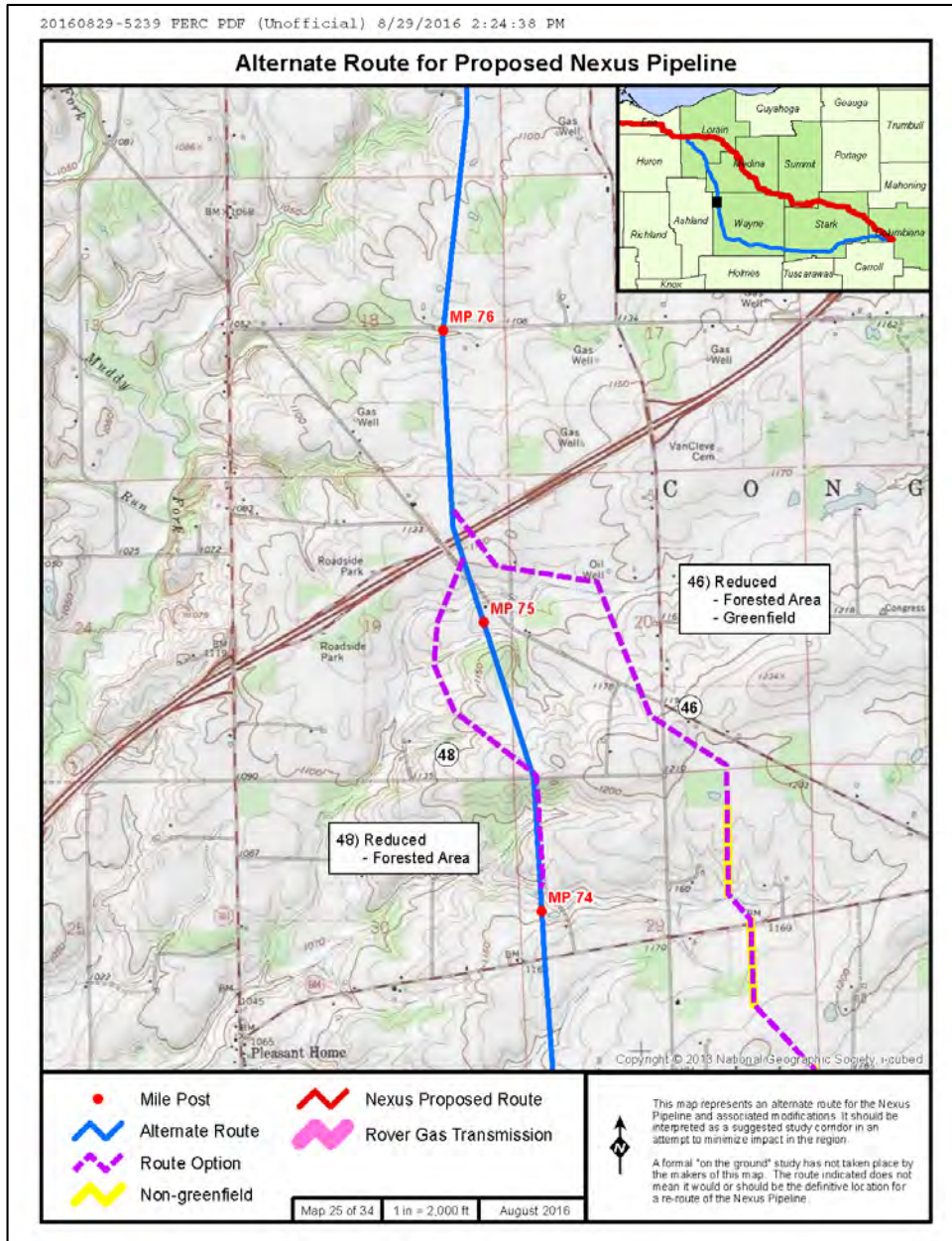
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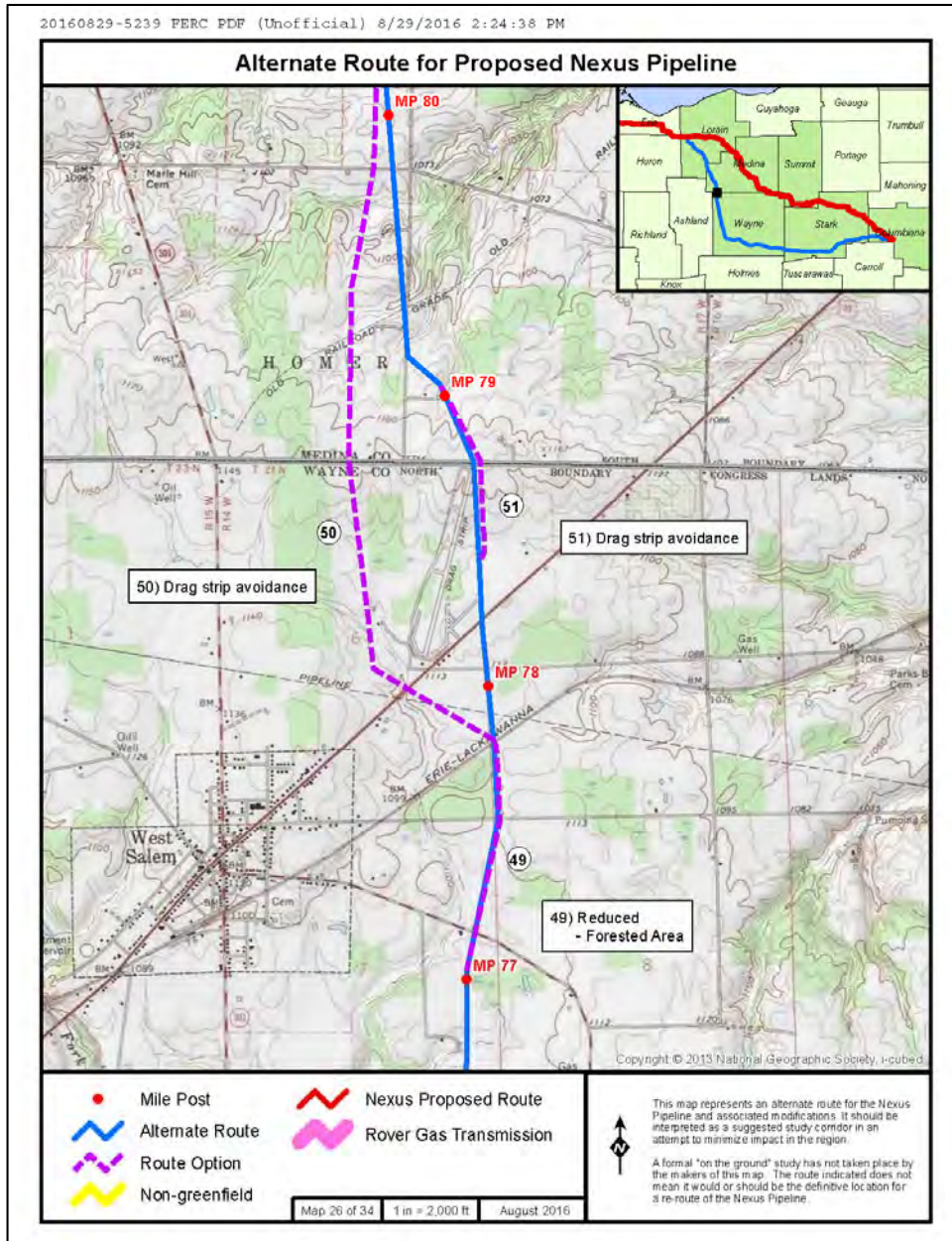
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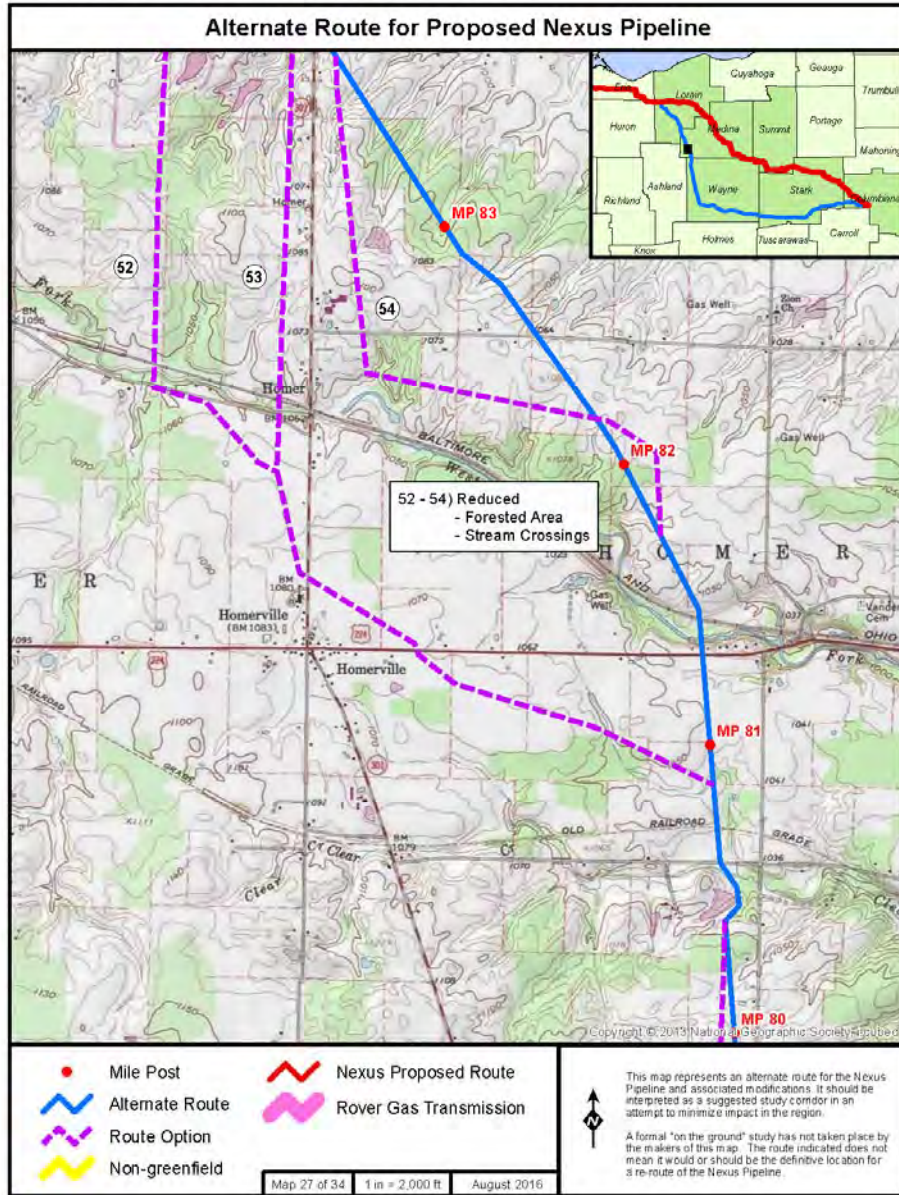
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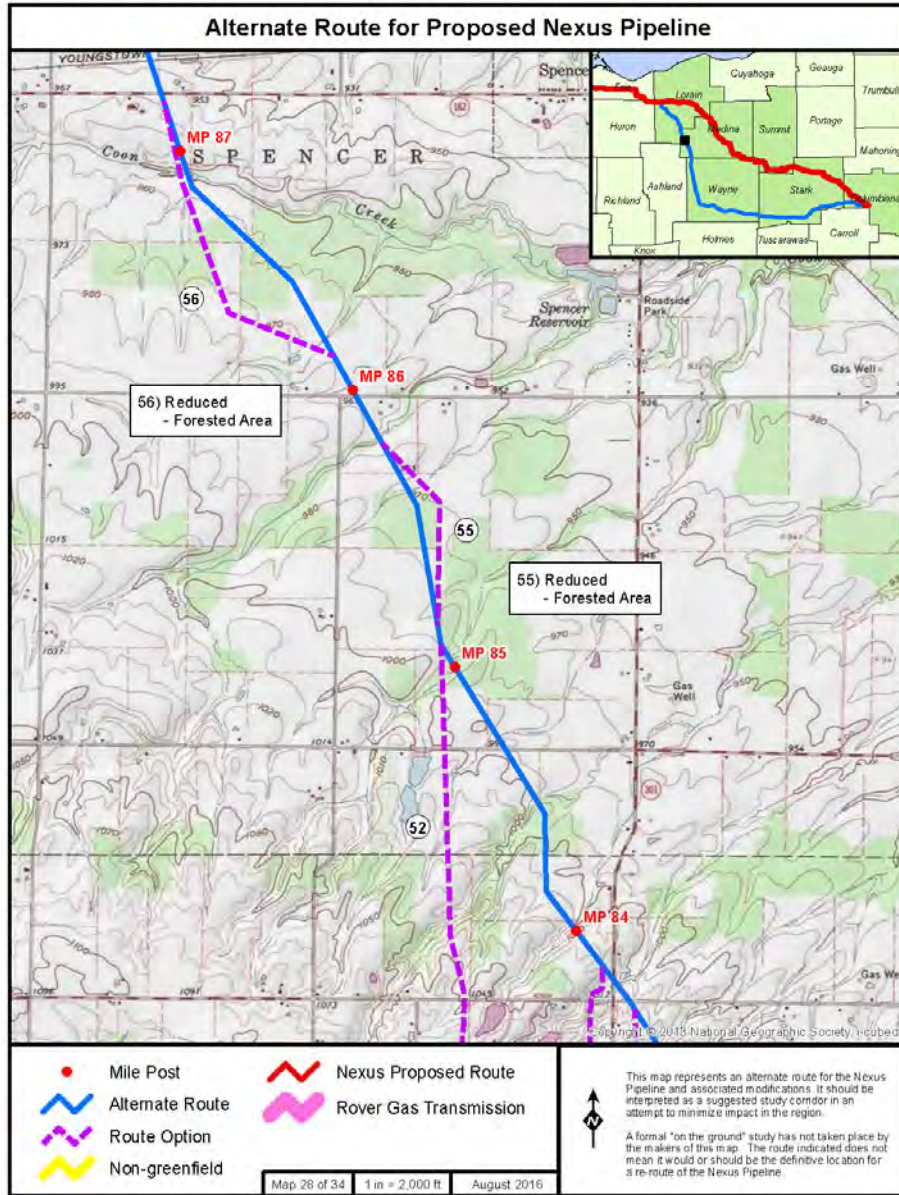


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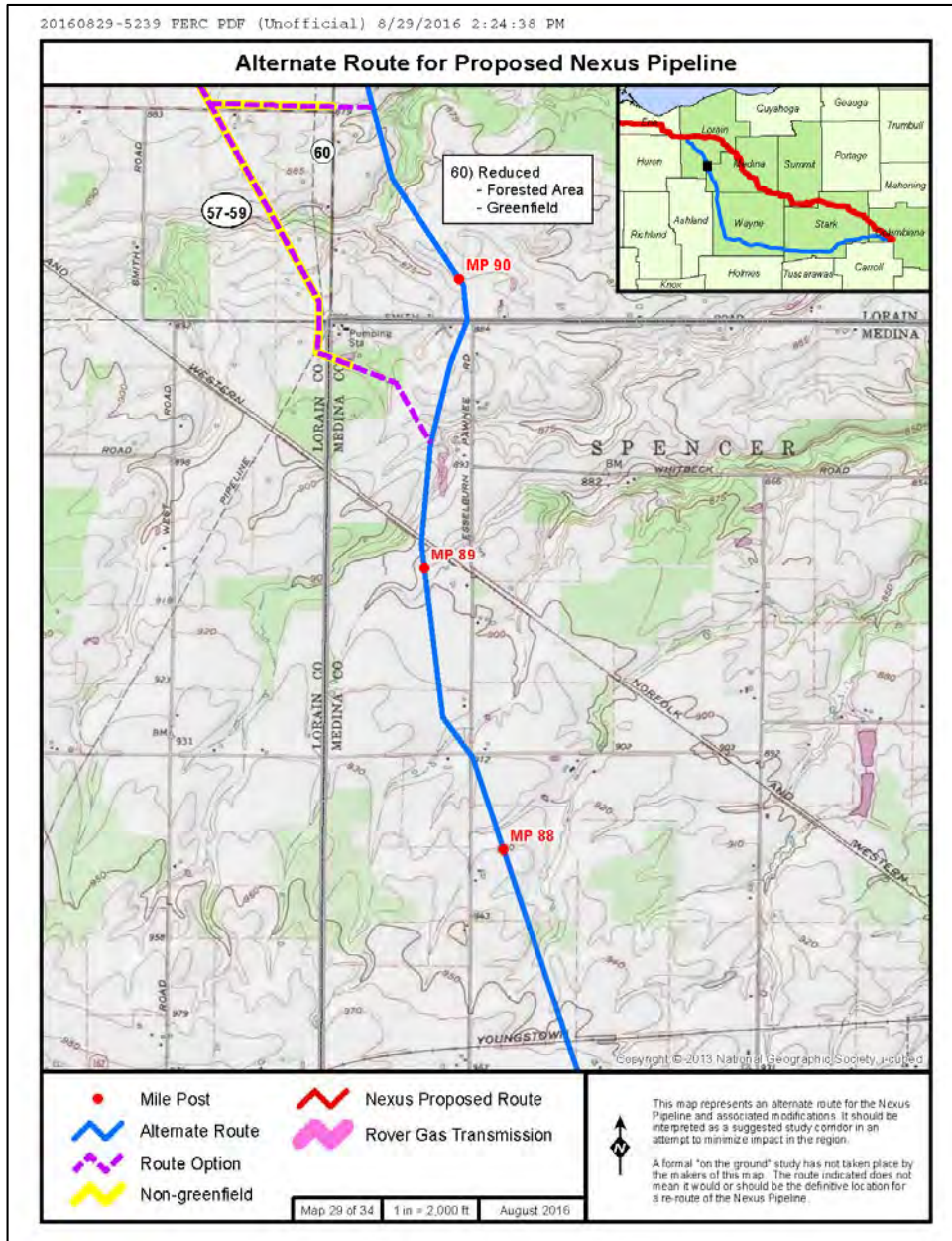
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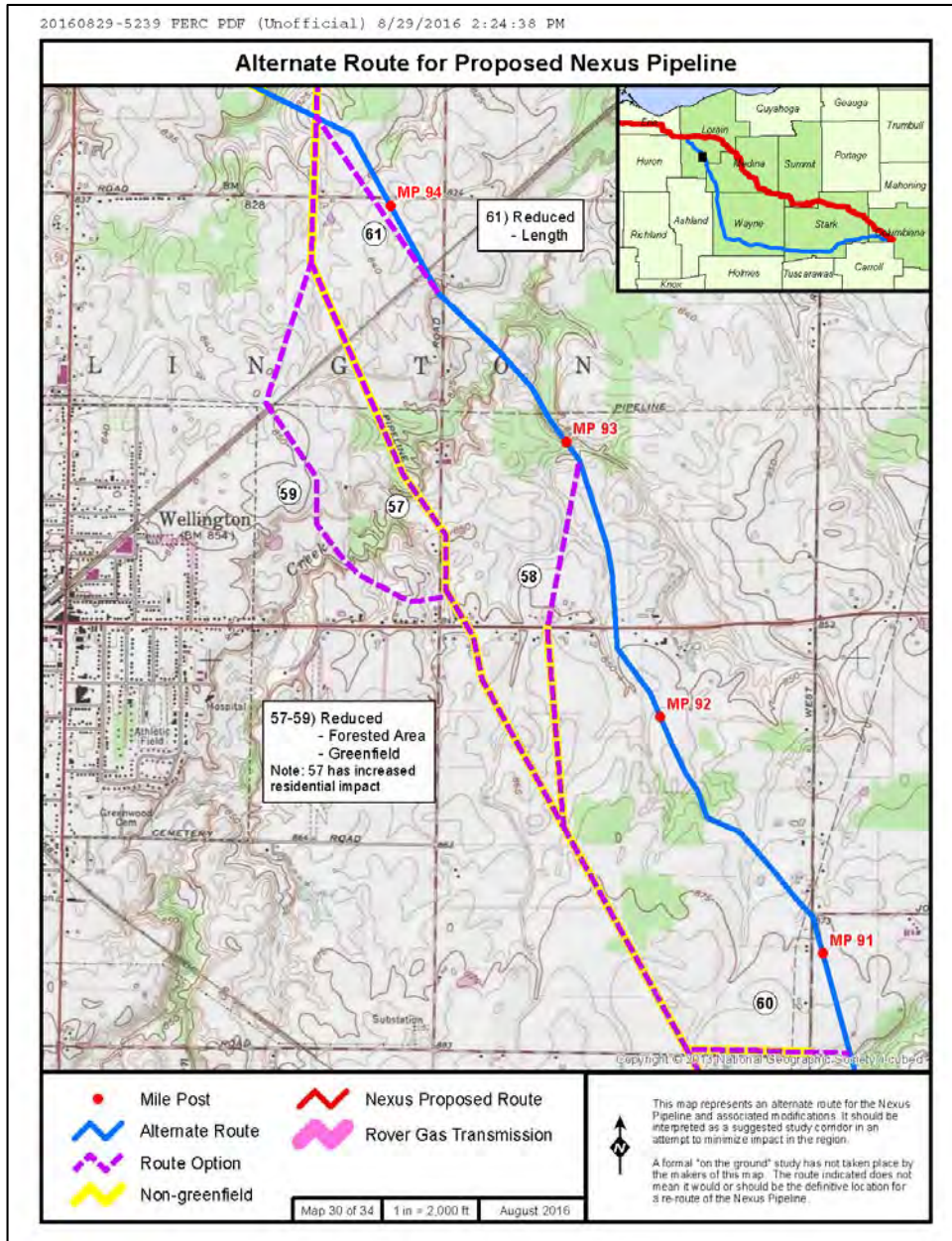


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LA14 – Gerard Neugebauer, Mayor, Wayne Wiethe, Director of Planning, City of Green

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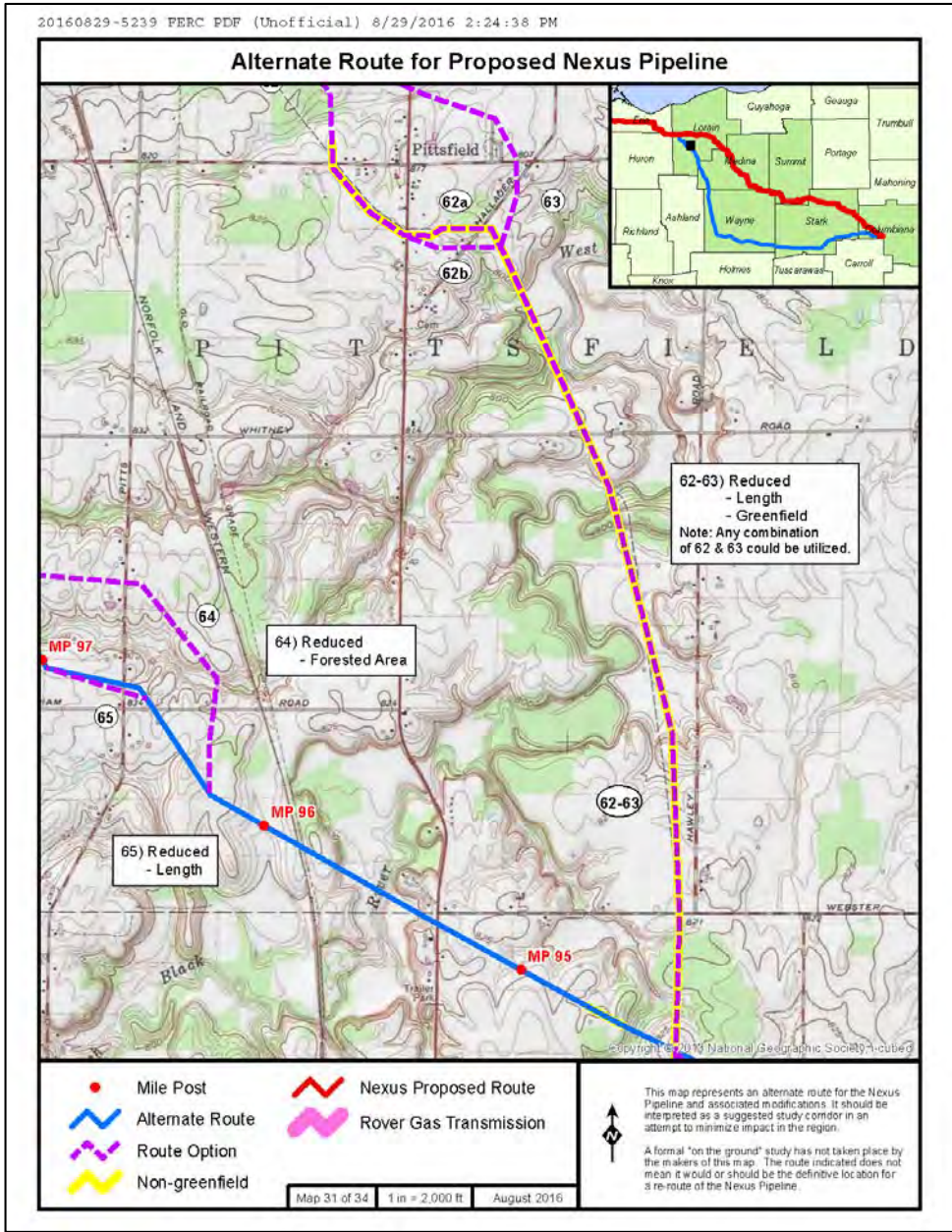


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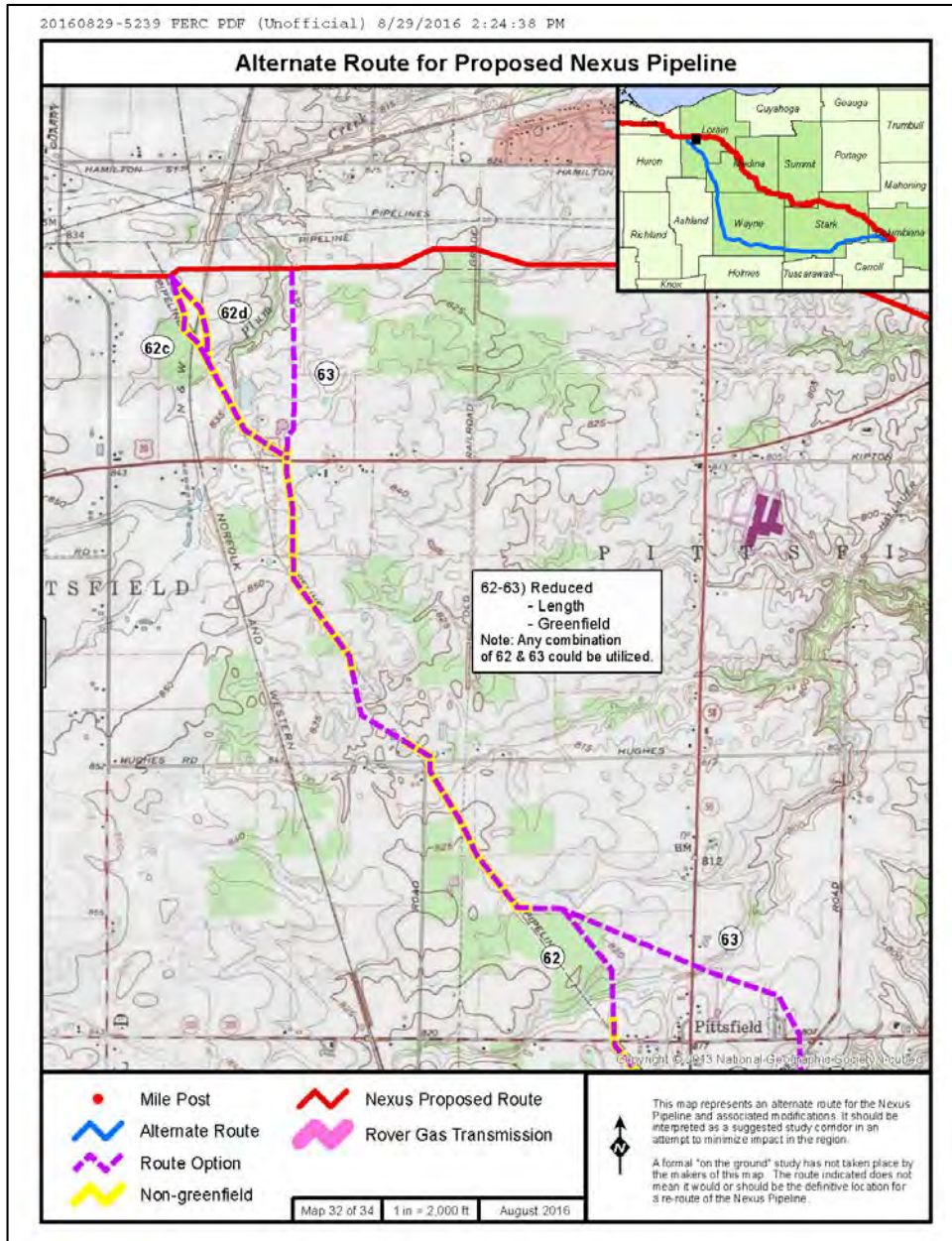
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LOCAL AGENCIES/ELECTED OFFICIALS

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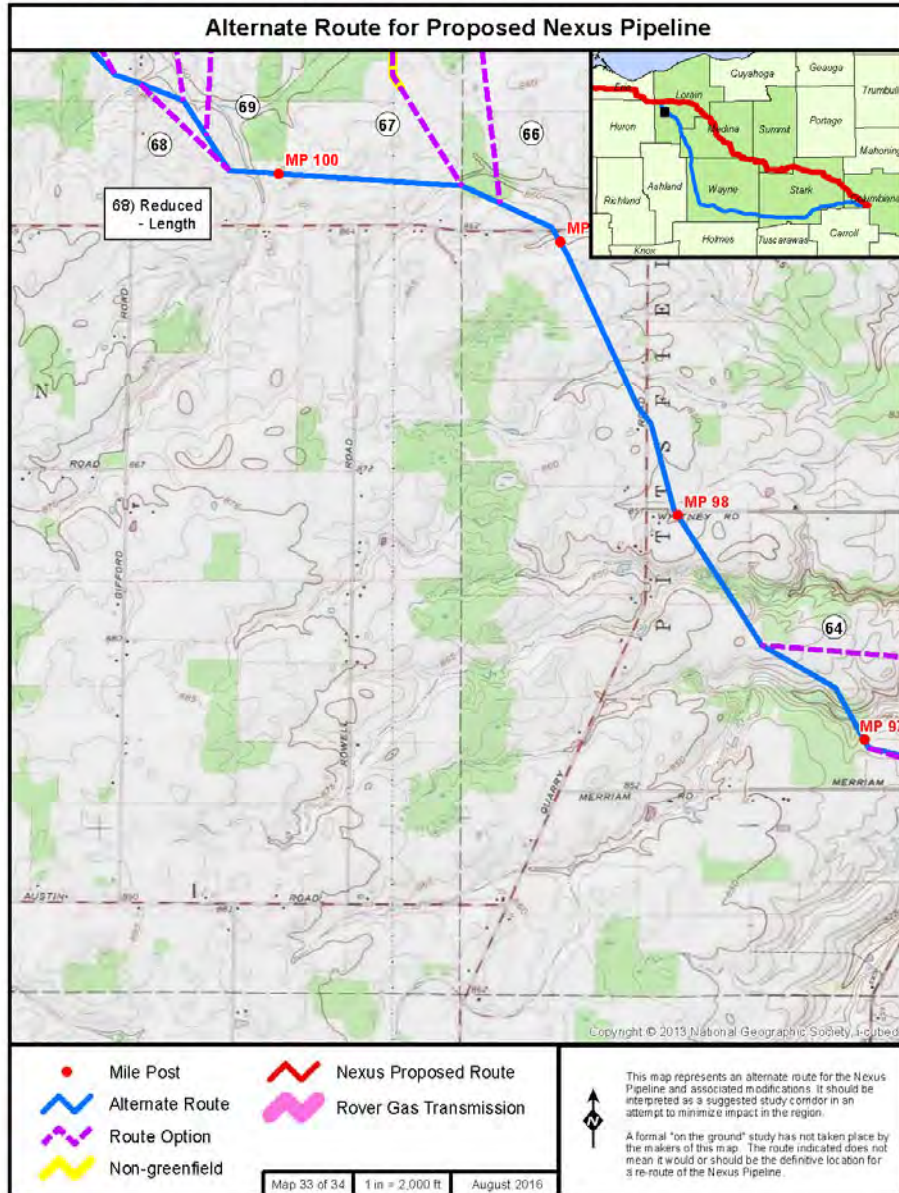
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LOCAL AGENCIES/ELECTED OFFICIALS

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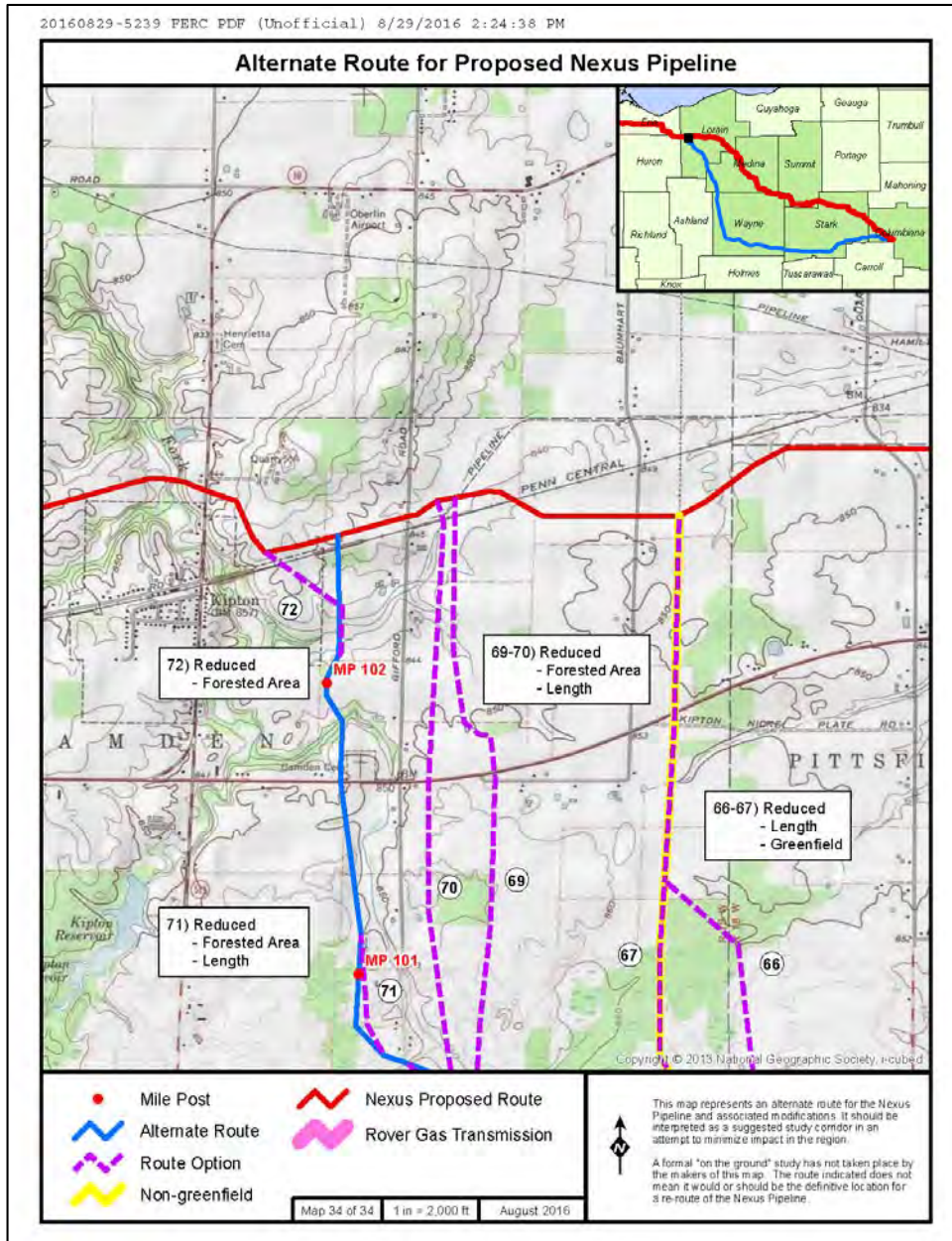


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LOCAL AGENCIES/ELECTED OFFICIALS

LA14 – Gerard Neugebauer, Mayor, Wayne Wiethe, Director of Planning, City of Green

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LOCAL AGENCIES/ELECTED OFFICIALS

LA15 – City of Oberlin

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**BEFORE THE UNITED STATES
FEDERAL ENERGY REGULATORY COMMISSION**

NEXUS Gas Transmission, LLC)	Docket No. CP16-22-000
Texas Eastern Transmission, LP)	Docket No. CP16-23-000
DTE Gas Company)	Docket No. CP16-24-000
Vector Pipeline LLP)	Docket No. CP98-135-000

**COMMENTS OF THE CITY OF OBERLIN, OHIO ON THE DRAFT
ENVIRONMENTAL IMPACT STATEMENT (DEIS) FOR NEXUS PROJECT**

OVERVIEW

On July 8, 2016, the Federal Energy Regulatory Commission (Commission) released for public comment the draft environmental impact statement (DEIS) for the NEXUS Gas Transmission Project, Docket No. CP16-22 and three other related segments, which concludes that the proposed infrastructure project will have less than significant environmental impacts so long as the Applicants' proposed mitigation measures along with staff's recommendations are incorporated as conditions of the certificate.

LA15-1 The City of Oberlin, Ohio disagrees with the DEIS's finding of no significant impact and continues to oppose the NEXUS project. As an initial matter, the DEIS is legally insufficient under the National Environmental Policy Act (NEPA) and the Council on Environmental Quality (CEQ) regulations because it uncritically accepts the Applicants' asserted purpose for the project instead of evaluating whether there is a need for the project, as required by NEPA. The DEIS's assumption that a project need exists biased the DEIS's analysis of project

LA15-1

Although the EIS briefly discusses NEXUS' and Texas Eastern's Project objectives, it does not determine whether the need for the Projects exists. The need for the Project will be determined separately by the Commission when it makes its decision on the Projects (sometime after the final EIS is issued). Additional discussion about the need for the Projects is in section 1.1 of the EIS and is also available in the Commission's Statement of Policy on the Certification of New Interstate Natural Gas Pipeline Facilities, which can be found on the FERC website at <http://www.ferc.gov/legal/maj-ord-reg/PL99-3-000.pdf>. Clarifying statements can be found by replacing "000" in the URL with "001" and "002."

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LOCAL AGENCIES/ELECTED OFFICIALS

LA15 – City of Oberlin (cont'd)

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LA15-1
cont'd alternatives, for example, leading to rejection of the no-action alternative -- which is the only logical alternative in the absence of project need. In addition, the Applicant bears a greater obligation to avoid adverse impacts to landowners under the Certificate Policy Statement¹ when project need is not compelling-- and thus, had the DEIS found minimal project need, it would have no choice but to adopt the City of Green alternative (which avoids populated areas and impacts to landowners) as the overwhelmingly superior option -- rather than merely "comparable." (DEIS at 3-27).

LA15-2 In the event that the Commission approves the project, adopting the City of Green's alternative would also address the substantial safety risks that the NEXUS pipeline poses for the City and its residents. Although the DEIS adopted the Reserve Avenue Route Variation (DEIS at 3-75), which moves the pipeline slightly north and co-locates it with an existing utility, this alternative remains highly problematic from a safety perspective, as discussed in greater detail in these comments. Moreover, even though the NEXUS pipeline is governed by

LA15-3 federal safety guidelines, the DEIS must nevertheless evaluate the project's departure from local regulations -- specifically Section 521.13(b)(3) of the Oberlin

¹ Certification of New Interstate Natural Gas Pipeline Facilities, Statement of Policy, 88 FERC ¶61,227 (Sept. 15, 1999); Order Clarifying Statement of Policy, 90 FERC ¶61,128 (Feb. 9, 2000); Order Further Clarifying Statement of Policy, 92 FERC ¶61,094 (July 28, 2000).

LA15-2 Section 4.13 addresses safety impacts associated with the proposed Project.

LA15-3 The proposed pipeline is not a production or distribution facility, and would likely not be considered a "delivery infrastructure". However, should the township view the Project as delivery infrastructure, we note that FERC encourages cooperation between NEXUS and Texas Eastern and state and local authorities; however, state and local agencies, through the application of state and local laws, may not prohibit or unreasonably delay the construction or operation of facilities approved by FERC. Although a local ordinance may not be followed, the impact on safety of pipeline infrastructure is evaluated in section 4.13 of the EIS, considering the federal standards. Incident data demonstrates that pipelines continue to be a safe and reliable means of transporting natural gas and the Project would not result in significant impacts on safety.

LOCAL AGENCIES/ELECTED OFFICIALS

LA15 – City of Oberlin (cont'd)

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LA15-3
cont'd | Codified Ordinances which prohibit siting of Production and Delivery Infrastructure such as that proposed by NEXUS within City limits.

LA15-4 | Finally, the new DEIS does not rigorously assess the impact of the project on climate change as required by the newly released CEQ guidance,² and instead, This approach, however, no longer passes muster, as the CEQ guidelines instruct federal agencies to quantify greenhouse gas emissions (GHG) associated with all pending projects -- unless the agency can make a showing that there are no scientific tools available to conduct an accurate assessment.³ As such, the DEIS analysis of GHG emissions falls short under the new CEQ guidance, and at a minimum, the final EIS must either include a compliant analysis of GHG emissions or make a showing, supported by substantial evidence, that the tools for doing so are unavailable.

COMMENTS

I. OVERVIEW

² Council on Environmental Quality, "Final Guidance for Federal Departments and Agencies on Consideration of Greenhouse Gas Emissions and the Effects of Climate Change in National Environmental Policy Act Reviews," 81 FR 51866 (Aug. 5, 2016) ("CEQ Final Guidance"), available in full at https://www.whitehouse.gov/sites/whitehouse.gov/files/documents/nepa_final_ghg_guidance.pdf and <https://ceq.doe.gov>.

³ However, the CEQ has compiled a wide variety of such tools for agencies' use. See https://ceq.doe.gov/current_developments/ghg-accounting-tools.html (making a "non-exhaustive compilation of greenhouse gas (GHG) accounting tools, methodologies, and reports available.")

LA15-4 | The CEQ's recently issued final guidance on addressing GHG emissions and climate change was issued after the draft EIS for these Projects was issued. As such, the final document could not address the final CEQ guidance. The final EIS includes the quantified GHG emissions associated with construction and operation of the Project facilities, including leaks and venting of natural gas, and mitigation measures to reduce methane emissions (see section 4.12.1 of the EIS). The EIS also addresses climate change impacts in section 4.14.8.9 of the EIS. See also the response to comment FA2-40.

LOCAL AGENCIES/ELECTED OFFICIALS

LA15 – City of Oberlin (cont'd)

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After NEXUS filed its application on November 22, 2015, the City filed a motion to intervene in opposition to the project, and has submitted two rounds of comments raising additional objections.⁴ The City's filings criticized the project as (a) unnecessary, because the project is not fully subscribed; and (b) unsafe, given its proximity to a residential neighborhood along Reserve Avenue and other public facilities, and questioned whether adequate protection was available to protect water supply wells within the vicinity of the project. Recognizing that the Commission might approve the project over the City's objections, as a fallback position, the City supported the City of Green's route variation as a preferred alternative, in the event that the project was approved.⁵

⁴ City of Oberlin Motion to Intervene (December 28, 2015), FERC Access No. 20151228-5242 (commenting on lack of project need given under-subscription and development of other pipelines in Ohio and emphasizing safety concerns resulting from project proximity to Reserve Avenue, a residential development and seeking adoption of City of Green alternative route); *accord*, City of Oberlin Comments (May 20, 2016), FERC Access No. 20160523 and June 7, 2016, FERC Access No. 2016607.

⁵ In its June 7, 2016 comments (at 4-5), the City challenged NEXUS' requested 14 percent return on equity (ROE) as excessive and inconsistent with the Commission precedent. *See* Comments, June 7, 2016 at 4-5. The City does not repeat these comments here because review of the project's financial structure is outside the scope of environmental review under NEPA. However, the Commission must address the City's objections to the proposed ROE as part of any final decision on the proposed project. In short, the City does not waive this argument simply because it is not addressed here.

LOCAL AGENCIES/ELECTED OFFICIALS

LA15 – City of Oberlin (cont’d)

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Although the DEIS tepidly proposes some changes to the project (most notably, requiring some additional consideration of the City of Green route alternative and a route modification away from Reserve Avenue that NEXUS opposes), overall, the DEIS does not satisfactorily resolve the City’s objections to the project based on lack of need and safety. Nor does the DEIS evaluate GHG emissions, as required by the new CEQ guidance. These objections are discussed in additional detail below.

II. LACK OF PROJECT NEED AND IMPACT ON CONSIDERATION OF ALTERNATIVES

LA15-1

A. Overview of Significance of Establishing Project Need

Under both NEPA and the NGA, an Applicant must establish that there is both a public need for the project and that it is in the present and future public necessity and convenience. The Applicant bears the burden of proof in demonstrating that it satisfies the requirements of Section 7. *See Michigan Consolidated Gas Co. v. Federal Power Comm’n.*, 283 F.2d 204, 214 (D.C. Cir.1960).

With respect to NEPA, project purpose and need are relevant because “the goals of an action delimit the universe of the action’s reasonable alternatives,” and enable agencies to exclude from consideration those alternatives that will not achieve the purpose of the project.⁶ Courts will not abide an agency’s failure

⁶ *See generally, Theodore Roosevelt Conservation P’ship v. Salazar*, 661 F.3d 66, 73 (D.C. Cir. 2011) (finding that BLM did not impermissibly narrow project goals to artificially limit consideration of alternatives); *also Fuel Safe v.*

LA15-1

Although the EIS briefly discusses NEXUS’ and Texas Eastern’s stated purposes, it does not determine whether the need for the Projects exists. The need for the Project will be determined separately by the Commission when it makes its decision on the Projects (sometime after the Final EIS is issued). Additional discussion about the need for the Projects is in section 1.1 of the EIS and is also available in the Commission’s Statement of Policy on the Certification of New Interstate Natural Gas Pipeline Facilities, which can be found on the FERC website at <http://www.ferc.gov/legal/maj-ord-reg/PL99-3-000.pdf>. Clarifying statements can be found by replacing “000” in the URL with “001” and “002.”

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to consider an alternative that is consistent with the project's purpose. See *Western Watersheds Project v. Abbey*, 719 F.3d 1035, 1050 (9th Cir. 2013)(remanding BLM's EIS for failure to consider reduced or no-grazing scenario as viable alternatives consistent with project purpose).

Although agencies have considerable discretion in defining a project's purpose, courts will reverse an agency decision based on an EIS that defines project purpose so narrowly as to foreclose consideration of viable project alternatives. Such was the case in *Simmons v. U.S. Army Corps of Engineers*, 120 F.3d 664 (C.A.7 1997). There, the United States Army Corps of Engineers (Corps) prepared an EIS that evaluated the impacts of a new dam and reservoir to supply the City of Marion, Illinois with water. The Corps defined the project purpose as "creation of a single source to supply the City of Marion and Lake Egypt water districts with water." *Simmons*, 120 F.3d at 669. As a result of its definition of project purpose, the Corps did not explore other alternatives such as interconnecting the City's water-treatment plant with an existing water pipeline nearby - since that approach would not create a new supply source consistent with the project's purpose. The Seventh Circuit found that Corps' project purpose unreasonably restrictive. Concluded the court:

If NEPA mandates anything, it mandates this: a federal agency cannot ram through a project before first weighing the pros and cons of the alternatives. In this case, the officials of the Army Corps

FERC, 389 F.3d 1313 (10th Cir. 2004)(accepting need for pipeline to provide electricity on Vancouver Island and finding purpose was not unduly narrow).

6

LA15-1

Although the EIS briefly discusses NEXUS' and Texas Eastern's stated purposes, it does not determine whether the need for the Projects exists. The need for the Project will be determined separately by the Commission when it makes its decision on the Projects (sometime after the Final EIS is issued). Additional discussion about the need for the Projects is in section 1.1 of the EIS and is also available in the Commission's Statement of Policy on the Certification of New Interstate Natural Gas Pipeline Facilities, which can be found on the FERC website at <http://www.ferc.gov/legal/maj-ord-reg/PL99-3-000.pdf>. Clarifying statements can be found by replacing "000" in the URL with "001" and "002."

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LOCAL AGENCIES/ELECTED OFFICIALS

LA15 – City of Oberlin (cont'd)

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of Engineers executed an end-run around NEPA's core requirement. By focusing on the single-source idea, the Corps never looked at an entire category of reasonable alternatives and thereby ruined its environmental impact statement.

Id. at 670. See also *1000 Friends of Wisconsin v. U.S. Department of Transportation*, Case No. 11–0545, (ED Wis. May 22, 2015) (finding that revised data showed that project purpose was changed, and was no longer needed and therefore, the agency should have considered more benign alternative).

Simply stated, the project purpose and need statement frames the range of alternatives that must be considered and provides the basis for what alternatives can be discarded. If there is no clear purpose and need, or if the project's purpose is too narrowly defined – as in *Simmons* – then any subsequent alternative analysis is foundationally flawed.

Proof of need is equally significant under the NGA which authorizes the Commission to grant certificates only if projects are “required by the present and future public necessity and convenience.” 15 U.S.C. §717f(e). The Commission assigns the applicant the burden of proof to establish that a certificate is in the public necessity and convenience under Section 7 of the Natural Gas Act. See *Sunray Mid-Continent Oil v. FPC*, 364 U.S. 137, 158 (1960) (finding that Commission was reasonable to require applicant to prove need for a limited certificate).

To assess whether a project meets the statutory “public necessity and convenience” standard, the Commission, pursuant to its *Certificate Policy*

LA15-1

Although the EIS briefly discusses NEXUS' and Texas Eastern's stated purposes, it does not determine whether the need for the Projects exists. The need for the Project will be determined separately by the Commission when it makes its decision on the Projects (sometime after the Final EIS is issued). Additional discussion about the need for the Projects is in section 1.1 of the EIS and is also available in the Commission's Statement of Policy on the Certification of New Interstate Natural Gas Pipeline Facilities, which can be found on the FERC website at <http://www.ferc.gov/legal/maj-ord-reg/PL99-3-000.pdf>. Clarifying statements can be found by replacing “000” in the URL with “001” and “002.”

LOCAL AGENCIES/ELECTED OFFICIALS

LA15 – City of Oberlin (cont'd)

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Statement,⁷ balances a project's benefits, such as need against burdens imposed on customers and property owners.⁸ Finally, a showing of "public need" (as opposed to "private need") is constitutionally imperative since the Section 7f(h) of the NGA empowers certificate holders to exercise the power of eminent domain. Absent public need, Section 7f(h) would violate the Fifth Amendment's prohibition on takings of property for private gain.

Finally, accurately assessing project need establishes a context for environmental review – a key factor in determining the significance of a project's impacts.⁹ Evaluating a project under the *Certificate Policy Statement*, the Commission balances public need for the project with harm to the environment¹⁰, landowners and captive ratepayers. The Commission adopts a

⁷ Certification of New Interstate Natural Gas Pipelines, 88 FERC ¶61,227 (1999), clarified, 90 FERC ¶61,227 (1999), further clarified, 92 FERC 61,094 (2000) (Certificate Policy Statement).

⁸ Certificate Policy Statement at 25 ("The amount of evidence necessary to establish the need for a proposed project will depend on the potential adverse effects of the proposed project on the relevant interests.").

⁹ See CEQ Regulations, 40 C.F.R. §1508.26 (defining significant impacts to be determined with respect to context and intensity).

¹⁰ Unlike NEPA, which is primarily procedural in nature, this is a substantive requirement under the NGA and not simply a perfunctory, procedural requirement. This means the Commission has to go beyond taking a hard look at the environmental harms and substantively ensure there has been a balancing of public need and the harms. Considering there has been no demonstration of need, the Commission has not and cannot complete this balancing.

LA15-1

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“sliding scale” assessment – meaning that it may tolerate more significant environmental and landowner impacts associated with a project that meets a crucial need, whereas, these same impacts might not be considered acceptable for a project of only marginal necessity.¹¹ In other words, the need for the project establishes the lens through which environmental impacts are evaluated; absent an assessment of need in the DEIS, the context for measuring the significance of environmental impacts is lost.

B. Instead of Evaluating Project Need, the DEIS Accepts the Applicant’s Stated Purpose At Face Value.

The DEIS adopts the Applicant’s project purpose. The DEIS recites that “the purpose of the project would be to transport 1.5 decatherms/day (Dt/day) of Appalachian Basin shale gas, including Utica and Marcellus shale gas, to markets in northern Ohio, southeastern Michigan and Dawn, Ontario. NEXUS states that the need for the project originates from an increased demand for natural gas in the region for electric generation, industrial use coupled with a decrease in imports.” DEIS, Section 1.1.1.

¹¹ *Turtle Bayou Gas Storage Co., LLC*, 135 FERC ¶ 61233, 62301, P.34 (June 16, 2011) (“The generalized showing made by Turtle Bayou does not outweigh the impact on the landowner . . . needed to develop the proposed project. . . Therefore, we cannot find that Turtle Bayou’s proposed project is required by the public convenience and necessity, and we deny its request for certificate authority to construct and operate its project.”); *Pac. Connector Gas Pipeline, Lp Jordan Cove Energy Project, L.P.*, 139 FERC ¶ 61040, 61174 (Apr. 16, 2012) (vacating Certificate on the grounds that the need for the proposed facility no longer outweighed the impacts)

LA15-1

Although the EIS briefly discusses NEXUS’ and Texas Eastern’s stated purposes, it does not determine whether the need for the Projects exists. The need for the Project will be determined separately by the Commission when it makes its decision on the Projects (sometime after the Final EIS is issued). Additional discussion about the need for the Projects is in section 1.1 of the EIS and is also available in the Commission’s Statement of Policy on the Certification of New Interstate Natural Gas Pipeline Facilities, which can be found on the FERC website at <http://www.ferc.gov/legal/maj-ord-reg/PL99-3-000.pdf>. Clarifying statements can be found by replacing “000” in the URL with “001” and “002.”

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That the Applicants aspire to build a pipeline with a 1.5 dt/day capacity does not make it so. As the DEIS describes, despite several open seasons, only 835,000 dt/day in capacity is under firm contract – just a little more than fifty percent. Moreover, all of the project shippers are confidential, making it impossible to analyze or verify whether contracts have actually been executed¹² or whether the gas is destined for a local utility to serve end users, for sale in open markets or overseas. The anonymity of the shippers is troubling for a second reason: the Commission's Certificate Policy Statement holds that affiliate contracts are less probative of public need than those negotiated at arms' length.¹³ Yet without the names of project shippers, the public cannot figure out whether they are affiliates of, or have other vested interests in the project. The Commission should reject the project on this basis alone.

The DEIS states that the Commission will ultimately assess whether there is a need for the project, and that the purpose of the DEIS is merely to evaluate the Applicant's proposal as presented. DEIS at Section 1.1.1. But the DEIS is internally inconsistent on this point because it then goes on to selectively evaluate certain pieces of the proposed project, finding some mission-critical to the project

¹² Under the Certificate Policy Statement, contracts for the project's full capacity are strong evidence of project need; however, at a minimum, the Commission expects that contracts, if used as proof of need, will be filed with the Commission. Policy Statement, 88 FERC ¶ 61227, 61748 (Sept. 15, 1999).

¹³ Certificate Policy Statement, 88 FERC ¶ 61227, 61748 (discussing affiliate agreements).

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objectives while deeming others non-essential. Thus, the DEIS concluded that the project has 6 “definitive receipt and delivery points” that are essential to the Project objective, while the 13 tee-tap sites are not essential (DEIS at 1-4) – even though NEXUS had originally argued that the tee-tap locations were crucial to enable NEXUS to deliver gas to power plants and other potential customers. Yet, if the DEIS was able to conclude that the tee-taps are not necessary to the project objective of delivering 1.5 million dt/day of gas, why couldn't it likewise conclude that a 255-mile, 36 inch pipeline is also non-essential to the project purpose, when a smaller pipeline or some other alternative could suffice to serve the capacity actually under contract?

Because of the lack of need for the NEXUS project, the project must satisfy a much higher bar for avoiding environmental damage. Yet, the DEIS never takes this into account. Instead, the DEIS gives short shrift to consideration of safety impacts to the City, or the City's ability to develop property if encumbered by a pipeline. Given that the project at best satisfies a marginal need, the potential damage to the safety and welfare of City residents simply cannot be justified.

C. The Erroneous Assessment of Need Skews The DEIS' Alternatives Analysis.

Even assuming for the sake of argument that the DEIS must only consider the project's purpose rather than need, the DEIS still falls short. By defining the project purpose as providing for 1.5 dt/day of gas, the DEIS adopts an overly restrictive view of the purpose as in *Simmons, supra*. Just as in *Simmons*, the

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Seventh Circuit found that the purpose of the Corps' action was to supply water to the City of Marion rather than to create a single-source reservoir, here, the project objective is more appropriately defined as providing for delivery of shale gas from Marcellus and Utica to contract customers, and *not* as the DEIS suggests, providing for delivery of 1.5 dt/day of gas. The DEIS' refusal to recognize the purpose of the project as delivery gas to contract customers and not delivery of 1.5 million dt/day generally need skewed its analysis of project alternatives. For example, the DEIS rejected six potential system alternatives out of hand finding that:

The main constraint limiting the viability of these systems is that none of these existing pipelines have capacity available for transporting the required volumes of natural gas needed by the projects and subsequently would also require expansion of facilities. [DEIS at 3-4 to 3-5]

The problem with the DEIS' conclusion, however, is that it assumes that the other systems must have 1.5 million dt/day of available capacity rather than the 835,000 dt/day that the project will actually supply to contract customers.

The DEIS' failure to determine whether there is a need for a 1.5 million dt/day capacity pipeline also informed its rather tepid conclusion that the City of Green alternative route is "comparable" to the Applicant's preferred alternative. Had the DEIS acknowledged that the project is substantially overbuilt, the City of Green alternative would have emerged as an overwhelmingly superior alternative because it would avoid impacts to populated areas and individual properties that could not

LA15-1

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cont'd otherwise be justified in light of the lack of contractual commitments for the project, which are evidence that it is not needed.

LA15-2
cont'd **III. THE DEIS DOES NOT ADEQUATELY ADDRESS SAFETY CONCERNS OR INCOMPATIBILITY OF THE PROJECT WITH LOCAL SITING RULES TO PROTECT SAFETY**

A. The DEIS does not address safety concerns.

The City's Motion to Intervene and June 7, 2016 comments extensively document the safety concerns raised by the project's proximity to Reserve Avenue and other public facilities. The DEIS does not address any of the City's concerns about safety – either increased risks to residents or potential cost burdens on the City if its Fire Department or law enforcement are called upon as a first responders.

Nevertheless, the DEIS recommends a route modification known as the Reserve Avenue Route Variation which diverges from the mainline at MP 94.6 and rejoins at MP 96, thereby avoiding the residential development. (DEIS at 3-75). The new route was not motivated by safety concerns (as the DEIS takes the position that the pipeline will be safe regardless of population density) but instead to accommodate a landowner concerned about the pipeline's impact on property valuation. Although the new route is slightly farther from the homes along Reserve Avenue, it still does little to abate the danger.

Regardless of whether the pipeline is located along the north boundary of the Reserve Avenue subdivision or whether it were to be located in accordance

LA15-1 Although the EIS briefly discusses NEXUS' and Texas Eastern's stated purposes, it does not determine whether the need for the Projects exists. The need for the Project will be determined separately by the Commission when it makes its decision on the Projects (sometime after the Final EIS is issued). Additional discussion about the need for the Projects is in section 1.1 of the EIS and is also available in the Commission's Statement of Policy on the Certification of New Interstate Natural Gas Pipeline Facilities, which can be found on the FERC website at <http://www.ferc.gov/legal/maj-ord-reg/PL99-3-000.pdf>. Clarifying statements can be found by replacing "000" in the URL with "001" and "002."

LA15-2 Section 4.13 addresses safety impacts associated with the proposed Project.

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with FERC's accommodation of the property owner's request, the threat to safety, health and well-being of the City's inhabitants remains unabated. In either case, there remains within the High Consequence Area and Potential Impact Circle: multiple residential dwellings; a fire station; a recreation complex containing several ballfields; the Splash Zone, a public exercise and swimming facility operated by the Lorain County Metroparks; a dog park; the Welcome Nursing Home; and a rehabilitative residential group home. All of these structures would be significantly affected, if not destroyed outright, in the event of a pipeline breach or explosion. Although the actual siting of the pipeline within City limits is confined to a relatively small area, (still subject to the City's prohibition of the siting of Production and Delivery Infrastructures), the real and palpable threat to the City, its residents, public facilities and first responders are of great concern to the City.

LA15-3

B. The DEIS does not take into account the effect of the project's incompatibility with local regulations on the intensity of the safety impacts.

Even though the pipeline is subject to federal safety guidelines rather than state or local laws, the DEIS must still analyze the effect of ignoring local regulations on the overall intensity of project impacts. The CEQ regulations state that in reviewing the intensity of project impacts, an agency must examine "whether the action threatens a violation of Federal, State, or local law or

LA15-3

See section 1.5 for a discussion of local zoning. FERC encourages cooperation between NEXUS and Texas Eastern and state and local authorities; however, state and local agencies, through the application of state and local laws, may not prohibit or unreasonably delay the construction or operation of facilities approved by FERC.

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requirements imposed for the protection of the environment.” 42 C.F.R. §1508.26(10).¹⁴

The City Code – specifically Section 521.13(b)(3) of the Oberlin Codified Ordinances (Attached as Exh. 1) -- prohibits siting of delivery structure such as that proposed by NEXUS within City limits. The ordinance is intended to protect the health and safety of residents by keeping potentially dangerous or environmentally harmful utility infrastructure outside of the City and as far away as possible from residents. The DEIS does not evaluate the impact of decimating that protective barrier as a result of siting the pipeline in City limits, in contravention of its ordinance. Depriving citizens of this protection afforded by their locality leaves them defenseless against the pipeline’s risk, thereby heightening the intensity of the adverse impacts and making them significant within the meaning of the CEQ regulations.¹⁵ At a minimum, the final EIS must take into account the intensified adverse effects of siting a pipeline where it is otherwise prohibited. Alternatively, the final EIS could avoid addressing these issues by adopting the City of Green alternative route.

¹⁴ In determining whether a project will have “significant” impacts, the CEQ regulations instruct agencies to consider both the context and intensity of the impacts. 42 C.F.R. §1508.26(a).

¹⁵ *National Parks & Conservation Ass’n v. Babbitt*, 241 F. 3d 722 (9th Cir. 2001)(finding EIS required for Park Service’s authorization of tourist boats in Glacier Bay given intensity of impacts in context of unique and fragile environs).

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LA15-4 VI. THE DEIS MUST BE UPDATED TO CONFORM TO THE NEWLY-RELEASED CEQ REGULATIONS ON CLIMATE CHANGE.

A. Background on CEQ Guidance.

On August 2, 2016, CEQ finalized its guidance on how federal agencies should take GHG emissions and climate change impacts into account when conducting their NEPA review.¹⁶ Going forward, agencies must now quantify and analyze the direct and indirect climate change impacts from a given project using GHG emissions as a proxy for climate change impacts. The Guidance directs agencies to look at the life-cycle GHG emissions of a project, including upstream activities, like natural gas extraction and downstream activities such as the foreseeable results of the project such as burning gas after transport. Finally, the Guidance requires agencies to quantify GHG emissions unless they can demonstrate that no tools exist for doing so. The quantification requirement prevents agencies from casually dismissing climate change impacts as overly speculative.

The DEIS preceded issuance of the final guidance and therefore, the Commission did not follow the CEQ guidance in its analysis. Although the guidance is not retroactive to projects with a final EIS in place, agencies are encouraged to apply the Guidance on projects moving forward if the additional

¹⁶ Per the Federal Register Notice of Availability, the CEQ Final Guidance became effective August 5, 2016. 81 FR 51866 (Aug. 5, 2016).

LA15-4 Comment noted.

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cont'd | time and resources would be proportionate to the value of the information included – as is the case here.¹⁷

B. Commission's treatment of climate change impacts

The DEIS summarily disregards the project's climate change impacts, finding that the emissions from the NEXUS and TEAL developments are so small that they have little impact on climate change, and that a lifecycle analysis would be speculative. DEIS at ES-15. Per the CEQ Final Guidance, this is not an appropriate approach.¹⁸ However, the DEIS' analysis is incomplete in any event, as it does not take into account either emissions directly related to non-jurisdictional upstream actions such as extraction from Marcellus Shale.¹⁹

¹⁷ CEQ Final Guidance, at 34 (agencies should apply the Guidance "to projects in the EIS or EA preparation stage if this would inform the consideration of differences between alternatives or address comments raised through the public comment process with sufficient scientific basis that suggest the environmental analysis would be incomplete without application of the guidance, and the additional time and resources needed would be proportionate to the value of the information included.")

¹⁸ CEQ Final Guidance, at II (a statement that emissions from a proposed Federal action represent only a small fraction of global emissions is essentially a statement about the nature of the climate change challenge, and is not an appropriate basis for deciding whether or to what extent to consider climate change impacts under NEPA.)

¹⁹ CEQ Final Guidance, at 16 n.42 ("[W]here the proposed action involves fossil fuel extraction, direct emissions typically include GHGs emitted during the process of exploring for or extracting the fossil fuel. The indirect effects of such an action that are reasonably foreseeable" include the combustion of that fuel.)

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The City's Motion to Intervene made the case that the Commission must consider the effects of induced production at Marcellus Shale given the project's purpose of transporting Marcellus gas to Canada. Motion at 14. The DEIS concedes as much because it acknowledges the cumulative impacts of resulting from Marcellus shale development, particularly on forest fragmentation and air quality. See Cumulative Impacts Discussion, DEIS Section 4.14. However, the DEIS cannot, on one hand, identify Marcellus Shale impacts as "cumulative" (meaning that they are directly related to the project) on the one hand, while failing to quantify the likely-considerable and non-speculative GHG emissions associated with extraction on the other, as required by the new CEQ guidelines.²⁰

Even though the GHG emissions associated with the pipelines alone may be negligible, the emissions levels become far more significant when adding in directly related cumulative actions such as Marcellus Extraction²¹ -- that the DEIS itself evaluated (albeit in cursory fashion) as part of its analysis of impacts on forest and groundwater. Because the DEIS does not attempt to quantify

²⁰ CEQ Final Guidance at 16 ("If the direct and indirect GHG emissions can be quantified based on available information, including reasonable projections and assumptions, agencies should consider and disclose the reasonably foreseeable direct and indirect emissions when analyzing the direct and indirect effects of the proposed action.").

²¹ See, e.g., Office of Fossil Energy, Nat'l Energy Tech. Lab., U.S. Dep't of Energy, *Life Cycle Greenhouse Gas Perspective on Exporting Liquefied Natural Gas from the United States*, Pub. No. DOE/NETL-2014/1649 (2014), available at <http://energy.gov/sites/prod/files/2014/05/f16/Life%20Cycle%20GHG%20Perspective%20Report.pdf>.

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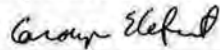
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emissions associated with Marcellus extraction and disregards the effect of GHG emissions as speculative without any explanation, the DEIS is arbitrary, capricious and inconsistent with the new GHG guidance.

CONCLUSION

The City continues to vigorously oppose the NEXUS pipeline. As shown in these comments, the Applicant, which bears the burden of proof, has utterly failed to demonstrate a need for this woefully undersubscribed project that will permanently encumber the City's property with infrastructure guaranteed to be abandoned in short order. At a minimum, should the Commission opt to approve this ill-advised project, notwithstanding the enormous safety consequences and potential impacts on climate change (which required further analysis), it must adopt the City of Green alternative route which would avoid the City and other highly populated areas, thus somewhat minimizing some of the project's most significant impacts.

Respectfully submitted,



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Exhibit 1
City of Oberlin Ordinance

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521.13 OPERATIONS AND BYPRODUCTS OF OIL AND GAS EXTRACTION.

(a) Definitions.

(1) "Chemical Trespass" shall mean the involuntary deposition of toxic or potentially toxic substances within a human body, natural community or ecosystem.

(2) "Corporation" for purposes of this section, shall include any corporation, limited partnership, limited liability partnership, business trust, other business entity, or limited liability company organized under the laws of any state of the United States or under the laws of any country.

(3) "Disposal" shall include, but not be limited to, the depositing, storage, treatment, recycling, injection, or by any other means, the distribution or depositing of brine, produced water, frack water, tailings or any other waste or by-product of corporate gas or oil extraction upon, into, or onto the land, waterways, air or any area within the jurisdiction of the City of Oberlin.

(4) "Ecosystem" shall include, but not be limited to, wetlands, streams, rivers, aquifers, and other water systems, as well as naturally occurring habitats that sustain humans, wildlife, flora and fauna, and soil-dwelling or aquatic organisms.

(5) "Extraction" shall mean the digging or drilling of a well for the purposes of exploring for, developing, or producing gas or oil or other hydrocarbons.

(6) "Extraction, Production and Delivery Infrastructures" shall mean, but not be limited to, pipelines, processing facilities, waste storage structures, compressors, or storage and transportation facilities used to support the corporate extraction, production or distribution of gas or oil. The term shall not apply to the construction, maintenance or repair of infrastructures used for delivery to residential or business retail end-users of gas or oil.

(7) "Gas" shall mean any gaseous substance, either combustible or noncombustible, which is produced in a natural state from the earth and which maintains a gaseous or rarified state at standard temperature or pressure conditions, and/or gaseous components or vapors occurring in, or derived from, petroleum or so-called "natural" gas.

(8) "Natural Communities" shall mean wildlife, flora, fauna, soil-dwelling and aquatic organisms, as well as humans and human communities that have established sustainable interdependencies within a proliferating and diverse matrix of organisms, within an ecosystem.

(9) "Oil" shall mean any petroleum or fossil fuel substance in a liquid, slurry or viscous state found naturally within subterranean geological formations.

(10) "Procurement of fresh water," for purposes of this law, shall include the drawing of fresh water from anywhere within the City of Oberlin or its jurisdiction for the purpose of exploring for, or extraction of, gas and oil.

(11) "Toxic Substances and Potentially Toxic Substances," for purposes of this section, shall include chemicals or chemical compounds, sludge and waste, radioactive ores, mine tailings, millings, waste liquors and radioactive progeny, particulate matter and/or gasses, that have been found to cause adverse effects to animals, humans, or ecosystems, including those chemicals, chemical compounds, sources of radiation, and all other substances deemed to be mutagenic, neurotoxic, carcinogenic, teratogenic, reproductive or developmental toxicants, or any other toxic chemical or hazardous substance identified by the City of Oberlin Council by resolution subject to this section. The phrase shall specifically include, but shall not be limited to, frack water and materials used in, and resulting from, the extraction of gas or oil.

(b) Prohibitions.

(1) It shall be unlawful for any corporation, or any director, officer, owner, or manager of a corporation to use a corporation, to engage in the extraction of gas or oil within the City of Oberlin, with the exception of gas and oil wells installed and operating at the time of enactment of this section, provided that the extraction of gas or oil from those existing wells does not involve any practice or process not

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previously used for the extraction of gas or oil from those wells at the time of the enactment of this section, and provided that those wells are capped securely when production ceases.

(2) It shall be unlawful for any corporation, or any director, officer, owner, or manager of a corporation to use a corporation, to deposit, store or transport waste water, produced water, frack water, brine or other materials, chemicals or by-products used in the exploration for, or extraction of, gas or oil, within, upon or through the land, air or waters of the City of Oberlin.

(3) It shall be unlawful for any corporation, or any director, officer, owner, or manager of a corporation to use a corporation, to engage in the siting of extraction, production and delivery infrastructures within the City of Oberlin.

(4) Corporations, and persons using corporations, to engage in gas or oil extraction in a neighboring municipality, county or state shall be strictly liable for all harms caused to natural water sources, ecosystems, human and natural communities within the City of Oberlin and for the violation of the rights herein secured.

(5) No permit, license, privilege or charter issued by any State or Federal agency, Commission or Board to any person or any corporation operating under a State charter, or any director, officer, owner, or manager of a corporation operating under a State charter, which would violate the prohibitions of this section or deprive any natural person, natural community, or ecosystem within the City of Oberlin of any rights, privileges, or immunities secured by this section, the Ohio Constitution, the United States Constitution, or other laws, shall be deemed valid within the City of Oberlin.

(c) Enforcement.

(1) Any person or corporation that violates any prohibition of this section shall be guilty of a criminal offense and, upon conviction thereof, shall be sentenced to pay the maximum fine allowable under State law for that violation, and shall be imprisoned to the extent allowed by law. A separate offense shall arise for each day or portion thereof in which a violation occurs and for each section of this section found to be violated.

(2) The City of Oberlin may also enforce this section through an action in equity. In such an action, the City of Oberlin shall be entitled to recover, without limitation, all costs of litigation, including, but not limited to, expert and attorney's fees.

(3) Any natural person who is a resident of the City of Oberlin shall have the authority to enforce this section through an action in equity. In such an action, the resident shall be entitled to recover all costs of litigation, including, without limitation, expert and attorney's fees.

(4) Any natural person who brings an action to secure or protect the rights of natural communities or ecosystems within the City of Oberlin shall bring that action in the name of the natural community or ecosystem in a court of competent jurisdiction. Damages shall be measured by the cost of restoring the natural community or ecosystem to its pre-damaged state, and shall be paid to the City of Oberlin or other applicable governmental entity, to be used exclusively for the full and complete restoration of the natural community or ecosystem. Any natural person or group of natural persons shall have standing to bring an action on behalf of affected natural communities or ecosystems, regardless of the lack of a property relationship between those persons and the affected communities or ecosystems.

(5) Corporations in violation of the prohibitions enacted by this section, or seeking to engage in activities prohibited by this section, shall not have the rights of "persons" afforded by the United States and Ohio Constitutions, nor shall those corporations be afforded rights under the 1st or 5th Amendments to the United States Constitution or corresponding sections of the Ohio Constitution, nor shall those corporations be afforded the protections of the commerce or contracts clauses within the United States Constitution or corresponding sections of the Ohio Constitution.

(6) Corporations in violation of the prohibitions enacted by this section, or seeking to engage in activities prohibited by this section, shall not possess the authority or power to enforce State or Federal preemptive law against the people of the City of Oberlin, or to challenge or overturn municipal ordinances

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adopted by the City of Oberlin, when that enforcement or challenge interferes with the rights asserted by this section or interferes with the authority of the Municipality to protect the health, safety, and welfare of the people or environment of the City of Oberlin.

(d) Amendment. Any attempts to use other units and levels of government to preempt, amend, alter, or overturn this section, or parts of this section, shall require the City Council to hold public meetings that explore the adoption of other measures that expand local control and the ability of the people of the City to protect their fundamental and inalienable right to self-government.

(e) Severability. The provisions of this Law are severable. If any court of competent jurisdiction decides that any section, clause, sentence, part, or provision of this section is illegal, invalid, or unconstitutional, such decision shall not affect, impair, or invalidate any of the remaining sections, clauses, sentences, parts, or provisions of the section. The People of Oberlin hereby declare that in the event of such a decision, and the determination that the court's ruling is legitimate, it would have enacted this Law even without the section, clause, sentence, part, or provision that the court decides is illegal, invalid, or unconstitutional.

(Approved by voters 11-5-13.)

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LA16 – Roberta Gleason, Vice President, Chippewa Township Board of Trustees



CHIPPEWA TOWNSHIP

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August 15, 2016

Federal Energy Regulatory Commission
888 First Street NE, Room 1A
Washington, DC 20426

Re: Nexus Gas Transmission, LLC
Docket Number CP16-22-000

To Whom It May Concern:

I am Roberta Gleason, Vice President of Chippewa Township Board of Trustees, located in Wayne County, Ohio.

I am providing this testimony based on the proposed pipeline scheduled to go through our community. As Trustee, I support the City of Green Route Alternative based on the concerns/questions listed below.

LA16-1 Safety to our residents in the aspects of residential dwellings with the pipeline right-of-way so close to their homes.

The dwellings are less in numbers in the alternative route within 150 feet of the pipe centerline than the proposed route.

We need to be concerned with our resident's safety and their property values.

Sincerely,

Roberta Gleason, Vice President
Chippewa Township Trustee

LA16-1 See the response to comment LA3-2.

R-131

LOCAL AGENCIES/ELECTED OFFICIALS

LA17 – Montville Township Trustees

**FEDERAL ENERGY REGULATORY COMMISSION
NEXUS GAS TRANSMISSION PROJECT AND
TEXAS EASTERN APPALACHIAN LEASE PROJECT
DRAFT ENVIRONMENTAL IMPACT STATEMENT COMMENTS**

Comments can be: (1) left with a FERC representative; (2) mailed to the addresses below; or (3) electronically filed.¹

For Official Mail Filing, Send To:

Kimberly D. Bose, Secretary
Federal Energy Regulatory Commission
888 First Street, NE, Room 1A
Washington, DC 20426

As applicable, please indicate the project(s) you are commenting on:

- NEXUS Gas Transmission Project: Docket No. CP16-22
- Texas Eastern Appalachian Lease Project: Docket No. CP16-23
- All of the above

ORIGINAL

FILED
SECRETARY OF THE
COMMISSION
2016 SEP -9 P 4: 01
FEDERAL ENERGY
REGULATORY COMMISSION

COMMENTS: (PLEASE PRINT) *[continue on back of page if necessary]*

Please review attached documents.

Commenter's Name and Mailing Address *(Please Print)*

Montville Township Trustees
Linda Wadsworth Rd.
Medina, OH 44156


¹ The Commission strongly encourages electronic filing of any comments. See instructions on the Commission's web site at <http://www.ferc.gov> under the "e-Filing" link. Before you can file comments you will need to create a free account by clicking on "Login to File" and then "New User Account".

R-132

LOCAL AGENCIES/ELECTED OFFICIALS

LA17 – Montville Township Trustees (cont'd)

R-133



**Montville Township, Medina County
Administration Office**

Trustees
Sally Albrecht
Ron Bischof
Jeff Brandon

Fiscal Officer
Mary Pawlowski

Planning & Zoning Director
Paul Jeffers

Service Director
Chris Kosman

Safety Service Director
Terry Grice, Police Chief

Board of Zoning Appeals
Allen Biehl
Rebecca Molnar
Terry Hughes
Donna Watkins
Ted Lesiak
Mike Rubino
Cheryl Heinly

Zoning Commission
Alan Piatak
John Vujevich
David Wetzell
Elayne Siegfried
Mary Pawlowski
Ron Potter
Justin Carr

August 25, 2016

Kimberly D. Bose, Secretary
Federal Energy Regulatory Commission
888 First Street, NE, Room 1A
Washington, DC 20426

Ms. Bose:


On behalf of Montville Township Trustees, Medina County, Ohio, the following comments are in regards to the NEXUS Pipeline relocation through a portion of Montville Township. As we have stated within a Resolution signed January 13, 2015, the Trustees are not opposed to necessity of gas transportation and the opportunities it may afford to provide gas to the upper U.S Midwest and Ontario, Canada.

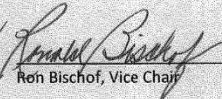
LA17-1 The revised transportation line appears to have shifted to the north of the originally proposed line thus placing it further within our township. The area in which this 36"-42" line is proposed travels through or near seven densely populated subdivisions; Hunters Glen, Autumn Ridge, Cobblestone, Arbor Lakes, Whitetail Crossing, Fox Meadows, and Highland Meadows. The subdivisions have approximately 813 single family residences and are surrounded by several other single family lots.

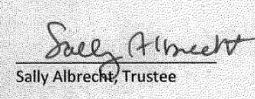
Montville Township has witnessed a tremendous population growth as part of the early 2000 housing boom; 2000 Census – population was 5,410 whereas the 2010 Census – population was 11,185. Due to the proximity to major metropolitan areas such as Cleveland and Akron, Montville Township offers a great appeal in which families can dwell and has awarded us as being the most populated township within Medina County.

LA17-2 In conclusion, we ask that our comments are taken into consideration and that the path of the proposed pipeline be redirected further south to avoid the heavy impact that it will cause in our higher density portion of the township.

Respectfully yours,


 Jeff Brandon, Chair


 Ron Bischof, Vice Chair


 Sally Albrecht, Trustee

6665 Wadsworth Road • Medina, Ohio 44256 • (330) 725-8313 • (330) 722-6716 • MontvilleTwp.org • Zoning@MontvilleTwp.org

- LA17-1 Pipeline safety in the proximity to residential development is a primary concern raised by many stakeholders. DOT safety standards are intended to ensure adequate protection regardless of proximity to development. The pipelines and aboveground facilities associated with the NGT and TEAL Projects must be designed, constructed, operated, and maintained in accordance with these safety standards. See section 4.13 for a discussion of pipeline reliability and safety.
- LA17-2 Comment noted.

LOCAL AGENCIES/ELECTED OFFICIALS

LA17 – Montville Township Trustees (cont'd)

The Montville Township Board of Trustees, Medina County, Ohio met in regular session on January 13, 2015 with the following members present: Trustee Albrecht, Trustee Brandon, Trustee Bischof and Fiscal Officer Mary Pawlowski.

Trustee Brandon moved to adopt the following resolution which was seconded by Trustee Albrecht.

Resolution #011315.01

WHEREAS, DTE Energy Company and Spectra Energy Corporation, the lead developers of the NEXUS Gas Transmission Pipeline Project, have informed the Montville Township Board of Trustees of a proposed interstate natural gas pipeline expansion project and that this pipeline is being constructed to increase energy supplies to the upper U.S. Midwest and Ontario, Canada, and

WHEREAS, a general study corridor through Montville Township is under consideration for the proposed NEXUS Gas Transmission Project; and

WHEREAS, Spectra Energy Corporation has made a goal and commitment to positively impact the communities where they operate and where their employees live; and to environmental stewardship in which their core values include respect for the individual, community investment, open communication and commitment to safety.

AND WHILE the Montville Township Board of Trustees do not oppose the proposed interstate NEXUS Gas Transmission Pipeline Project and all of the opportunities it may afford to provide gas to the upper U.S. Midwest and Ontario, Canada, these Trustees do oppose any proposed particular section of the location of same that runs through, or close to residential neighborhoods or densely populated areas; and so

THEREFORE, the Montville Township Board of Trustees are keenly interested in supporting their citizens in their beliefs that said pipeline would be more appropriately placed in nearby farmland areas of less dense population where there would be little risk of reducing property values or disrupting neighborhoods.

LA17-3 Comment noted. See response to comment LA17-1.

R-134

LA17-3

LOCAL AGENCIES/ELECTED OFFICIALS

LA17 – Montville Township Trustees (cont'd)

Page 2 of 2
Montville Township
Spectra/Nexus Pipeline

LA17-4

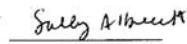
AND FURTHER THEREFORE, the Montville Township Board of Trustees request that the pipeline be routed on a more southern trajectory that avoids the more heavily populated areas of NE Ohio.

BE IT FURTHER RESOLVED, that a copy of this Resolution shall be filed as a statement before the Federal Energy Regulatory Commission, members of the Ohio House of Representatives and the United States Congress, DTE Energy, Mr. Greg Ebel, President & CEO of Spectra Energy Corporation, Governor Ksich, State Representative Dave Hall and Senator Larry Obhof.

Roll Call Vote: Ayes: Trustees Brandon, Albrecht and Bischof.


Trustee Ron Bischof, Chair


Trustee Jeff Brandon


Trustee Sally Albrecht

I, the undersigned, duly qualified Township Fiscal Officer of Montville Township, Medina County, Ohio, do hereby certify the forgoing is a true and complete copy of the proceedings taken by the Montville Township Board of Trustees at a meeting on January 13, 2015.


Mary Pawlowski, Fiscal Officer
Montville Township

LA17-4 Comment noted. See response to comment LA17-1.

R-135

LOCAL AGENCIES/ELECTED OFFICIALS
LA18 – Hanover Township

20160926-0091 FERC PDF (Unofficial) 09/26/2016

HANOVER TOWNSHIP

ORIGINAL

Trustees:

Mancil Ridgeway
Robert Manfull
John Zehentbauer

FILED
SECRETARY OF THE
COMMISSION
2016 SEP 26 P 2:47
FEDERAL ENERGY
REGULATORY COMMISSION

Fiscal Officer:
Debra J. Blazer
Box 88
Hanoverton, Ohio 44423

August 13, 2016

Kimberly D. Bose, Secretary
Federal Energy Regulatory Commission
888 First Street NE
Washington, DC 20426-0001

RE: NEXUS Gas Transmission Pipeline Project; Docket Number CP 16-22-000

Dear Ms. Bose:

LA18-1

The proposed route for the NEXUS Gas Transmission pipeline would provide substantial and tangible benefits to the people of Hanover Township and Columbiana County in Ohio, as well as the rest of the Midwest region. On behalf of the residents of Hanover, we write to ask the Federal Energy Regulatory Commission to approve the project's route.

As the township's trustees, we recognize the need to diversify our municipal revenue base and mitigate the need to rely heavily on residents to shoulder the township's operational costs. Through the first five years of the NEXUS pipeline's operation, Hanover Township would be in position to receive an additional \$3.6 million in cumulative tax revenues. This is a significant sum that would support our township's efforts to provide necessary services to residents.

The proposed path of the NEXUS pipeline through Hanover Township and Columbiana County would serve as an engine for economic activity here and along the rest of the project's 255-mile route. Across Ohio, the project would support 5,325 jobs and \$565 million in wages, which could ripple across our state's economy. Furthermore, the transmission of 1.5 billion cubic feet of natural gas daily through the NEXUS pipeline is essential for meeting the demands of modern industrial employers across northern Ohio and southeastern Michigan, as well as in the Ontario, Canada region.

Natural gas is a clean and affordable fuel, and the U.S. needs additional infrastructure, such as the NEXUS pipeline, to ensure residents and businesses have access to an abundant, domestic energy source. This pipeline will help our regional and national economies, spurring creation of jobs that will help communities like Hanover Township to grow. It also will move us toward energy independence while promoting use of a fuel that is reliable, clean-burning and highly desired by employers. The commission should approve the NEXUS project.

Sincerely,


Bob Manfull
Trustees


Leroy Ridgeway


John Zehentbauer

LA18-1 Comment noted.

R-136

LOCAL AGENCIES/ELECTED OFFICIALS
LA19 – Summit County Council

20161011-0061 FERC PDF (Unofficial) 10/11/2016

SUMMIT COUNTY COUNCIL

COUNTY OF SUMMIT, OHIO

MEMBERS OF COUNCIL

John Bolek
 Daniel Congrove
 Tim Crawford
 Pete Crossland
 Paul Gallagher
 Larry Givens



MEMBERS OF COUNCIL

Michael D. Grimm
 Louise Heydom
 Andrea L. Norris
 Cazzell M. Smith, Sr.
 Kimberly A. Zuz

Scott Goodrich,
 Clerk of Council

July 18, 2016

To: Nathaniel J. Davis Sr.
 Dept. of Sec. FERC
 888 First St. NE Room 1A
 Washington, DC 20426

Re: CP16-22-000
 Nexus Gas

From: Tim S. Crawford
 Summit County Council
 4109 S. Cleve-Mass Rd
 Norton, OH 44203

ORIGINAL

FILED
 SECRETARY OF THE
 COMMISSION
 2016 OCT 11 P 3:09
 FEDERAL ENERGY
 REGULATORY COMMISSION

I would like to protest the current routing of the Nexus Pipeline. There are way too many environmental impacts in the current route. Constructing the pipeline within inches of homes, cutting down old growth trees, and the impact to the wet lands is beyond my comprehension. I know that many people say (NIMBY) that is not in my background. I know other people have proposed alternate routes, but none were good alternates.

LA19-1

Nexus current route is 255 miles, from Kensington to Detroit. Here are some alternate routes.

- 1- From Kensington, Ohio to Detroit, from Kensington follow St. Route 30 west to St. Route 250 to interstate 75 which would be 234 Miles.
- 2- From Kensington follow St. Route 30 west to St. Route 23 then North to St. Route 75 which would be 254 miles.

Both the above routes follow a State route, where 90% of the right of way is owned by the State of Ohio.

- 1- Less environmental impact to the Wet Lands, Steams Crossing, Well Water
- 2- Using option 2 Nexus is one mile shorter.
- 3- Less Proximal to homes & urban areas
- 4- Less Home water well disturbed
- 5- Avoids the Eagle Nesting sites in Summit County.

Sincerely,

Tim S. Crawford

Ohio's First Charter County

175 S. Main Street, 7th Floor, Akron, Ohio 44308-1314
 (330) 643-2725 • FAX (330) 643-2531 Northern Summit County 1-800-582-2699

LA19-1

We did not evaluate the route alternatives suggested in this comment because doing so would route the pipeline through the center of several large urban and suburban communities, including Canton, Wooster, Ashland, Norwalk, Fremont, Findlay, Bowling Green, and/or Toledo, Ohio; and Monroe, Romulus, Dundee, and/or Milan, Michigan. Not only would routing the pipeline through these communities result in greater impacts on home and urban areas, the pipeline would also be required to cross the same streams and wetlands as the highways, lending them unlikely to reduce environmental impacts on those resources.

R-137

LOCAL AGENCIES/ELECTED OFFICIALS

LA20 – Erie County, Ohio Engineer’s Office

R-138

LA20-1 TIM LLOYD, SANDUSKY, OH.
The Erie County, Ohio Engineer’s Office wants to express its concern that the 36” Nexus gas main, as proposed, is to be installed at 5’ (five foot) below the top of pavement at long established county and township right-of-way (R/W). The gas main as proposed will be even shallower at ditches. This will detrimentally impact the county and township for the following reasons:

1. The 5’ (five foot) depth is too shallow and will negatively impact all future public projects within our R/W. At 5’, with a 1’ separation between mains, the top of a 16” water main would be less than 3’ below the center of pavement (shallower outside the pavement where the line would actually be placed). This is too shallow to withstand Ohio winters without the likelihood of freezing.
2. With the gas main at 5’, the area occupied by the main would be from 5’-8’ deep, coupled with a 12” minimum clearance, the gas main envelope would occupy an area from 4’-9’ deep, allowing no room for other facilities as discussed above. The same holds true for storm sewers and sanitary sewers. The storm sewers would be too shallow and thus rendered useless to collect water from subsurface drainage tiles from the farm fields which are so prevalent through the gas main path proposed. If the storm sewer were to be placed under the gas main, the bottom of the storm (or sanitary) sewer would be at least 10’ deep; too deep for a storm sewer to outlet into a receiving stream. Sanitary sewers would require a pump station to transport the effluent from these deep mains. The pump station would be expensive to purchase and maintain.
3. With the gas main at 5’ deep and the bottom of the gas main at 8’, the top of the sewer or water main would need to be 9’ or deeper; it would be impossible to place and use a trench box near the gas main. This is in direct violation of the Occupational Safety and Health Administration (OSHA) requirements. It would be nearly impossible to install a public sewer or water main within our own R/W without violating OSHA regulations and putting workers at risk. Similarly, if there were to be a waterline break in the vicinity, it would be practically impossible to repair for the same reason.
4. Nexus has repeatedly disregarded our request for a minimum 10’ depth of cover at every road R/W crossing, stating that it is not economically feasible. We find this argument hard to believe given the fact they are installing their main 56’ (fifty-six feet) below the Ohio Turnpike and by default Main Road.
5. At this time Erie County is not sure what exact roads are destined for future water/storm/sanitary improvements. Because we are located on Lake Erie, several local communities (City of Bellevue, City of Norwalk) which currently rely on reservoirs, have discussed connecting to the Erie County water system. In addition, Berlin Heights will soon be installing a new, larger water main north and west of the Village to upgrade their water flow. This proposed main will have to cross the Nexus gas main. For these reasons, we are requesting a minimum 10’ depth of cover at all county/township roadway ditches.
6. Currently, a 16” gas transmission owned by TransCanada (formerly Columbia Pipeline Group) that runs through the Erie County Bogart Road R/W needs to be lowered so we can replace an existing storm sewer. They informed us they will need to perform over \$1 million of associated work within their gas easement, outside the county R/W, and want the Erie County taxpayers to pay the bill. We cannot risk this happening with a 36” gas main.

LA20-1 NEXUS would be required to obtain local and state permits to install its pipeline beneath county and township roads and ditches where required by law. These permits may contain special provisions for pipe burial depth consistent with local and state laws. The FERC encourages cooperation between pipeline companies and local and state authorities; however, local and state agencies, through the application of local and state laws, may not prohibit or unreasonably delay the construction or operation of facilities approved by FERC. Any local or state permits issued with respect to jurisdictional pipeline facilities must be consistent with the conditions of any authorization issued by FERC, and any local or state regulation that interferes with the FERC’s regulatory authority of the transportation of natural gas would be preempted.

LOCAL AGENCIES/ELECTED OFFICIALS

LA20 – Erie County, Ohio Engineer’s Office

LA20-1
(cont'd)

7. Lastly, Nexus is providing Erie County no details for crossing county storm sewers and county maintained ditches located within existing drainage easements. At only a 3' depth of cover through fields, the Nexus gas main would be too shallow to allow the county to dip ditches or maintain the preexisting storm drain tiles. The maintenance for these systems is paid for by the property owners who are assessed based upon the amount of drainage they contribute to the watershed. The proposed top of the gas main needs to be a minimum of 5' below these ditches and storm tiles.
In closing, by not placing the proposed 36" Nexus gas main a minimum of 10' below county and township roadway ditches and 5' below county maintained ditches and storm sewers located in drainage easements, Nexus is putting a substantial, unnecessary financial burden on the taxpayers of Erie County and jeopardizing the safety of workers who install and/or repair county/township facilities within their own established R/W.

R-139

COMPANIES/ORGANIZATIONS COMMENTS

CO1 – Ohio Gas Association

20160718-0034_FERC PDF (Unofficial) 07/18/2016



OHIO GAS ASSOCIATION

July 14, 2016

Kimberly D. Bose
Secretary, Federal Energy Regulatory Commission
888 First Street, NE
Washington, DC 20426

**FILED
SECRETARY OF THE
COMMISSION
2016 JUL 18 P 2 41
FEDERAL ENERGY
REGULATORY COMMISSION**

ORIGINAL

NEXUS Gas Transmission Project – Docket: CP16-22-000

Dear Secretary Bose:

The Ohio Gas Association (OGA) is a natural gas trade organization representing more than 30 local distribution companies and cooperatives, other affiliated members and the majority of Intra- and Inter-state gas transmission companies in Ohio. Our members serve more than 3.6 million Ohio customers and safely maintain and manage more than 50,000 miles of distribution and transmission pipeline throughout the state. We believe natural gas is the energy of the future, but our nation currently lacks the infrastructure necessary to take full advantage of the abundant supplies of Utica and Appalachian shale gas.

It is with this belief in mind that the OGA continues to support the NEXUS Project and request that the Federal Energy Regulatory Commission approve NEXUS in a timely manner. As evident in the Draft Environmental Impact Statement, NEXUS has done their due diligence in selecting a route that minimizes environmental impacts while bringing necessary infrastructure to Northern Ohio in order to meet the increased need for natural gas in the region.

Natural gas is plentiful in the U.S., and it is reliable, cleaner-burning and affordable. Businesses and residents demand it, but the nation needs more infrastructure like the NEXUS Project to meet that demand. The proposed route will create good-paying jobs across Ohio and increase tax revenues for communities and school districts where local government budgets are tight. It also will establish a foundation for long-term economic growth across Ohio by attracting new and expanding businesses.

Construction of the NEXUS pipeline project is necessary, and we cannot afford to delay. On behalf of the Ohio Gas Association, I urge the Federal Energy Regulatory Commission to approve the NEXUS project.

Sincerely,



Jimmy Stewart
President
Ohio Gas Association

137 E. State Street • Columbus, Ohio 43215 • P. 614.545.6307 www.ohiogasassoc.org

R-140

CO1-1

CO1-2


CO1-1 Comment noted.

CO1-2 Comment noted.

COMPANIES/ORGANIZATIONS COMMENTS

CO2 – Sandusky County Chamber of Commerce

20160718-0026_FERC PDF (Unofficial) 07/18/2016



Chamber of Commerce
SANDUSKY COUNTY

ORIGINAL

GET NOTICED • BUILD CONNECTIONS • EDUCATIONAL OPPORTUNITIES • INCREDIBLE SAVINGS

July 13, 2016

Ms. Kimberly D. Bose, Secretary
Federal Energy Regulatory Commission
888 First Street NE
Washington, DC 20426-0001

RE: NEXUS Gas Transmission Project (Docket Number: CP16-22-000)

Dear Secretary Bose:

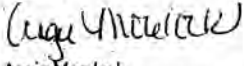
I am writing in support of the NEXUS pipeline project, and I hope that you will take into account the significant economic impact this project will have on our region. The NEXUS pipeline is projected to bring thousands of jobs to our communities and more than \$800 million in total economic activity. This project presents an opportunity our region cannot afford to overlook.

As the CEO & President for the Sandusky County Chamber of Commerce, I am grateful that our region has the opportunity to take advantage of such an important project like the NEXUS pipeline. Sandusky County is expected to draw an estimated \$7.1 million in new tax revenue through the pipeline's presence, and this expansion of the county's tax base will help supplement our local budget and pay for core services.

The additional tax revenue, however, is only part of the story. Natural gas is an abundant and affordable source of energy, and pipelines are the safest, most reliable way to transport it. By building the NEXUS pipeline, communities along the route and beyond will enjoy greater access to a fuel that businesses increasingly demand. This will help us retain existing businesses in the region, as well as attract new companies looking to relocate. Consequently, the pipeline carries tremendous opportunity for significant economic growth, which will help people across the region to prosper.

The NEXUS pipeline will strengthen the economy in Sandusky County and other communities along the projected route, and its effects will ripple through Ohio, Michigan and the rest of the region. On behalf of the businesses and workers of Sandusky County, I respectfully request the FERC approve the NEXUS project.

Sincerely,


Angie Morelock
Sandusky County Chamber of Commerce

FILED
SECRETARY OF THE
COMMISSION
2016 JUL 18 P 2:38
FEDERAL ENERGY
REGULATORY COMMISSION

215 Croghan Street Fremont, Ohio 43420 | Phone: (419) 332-1591 | Fax: (419) 332-8666 | scchamber.org

CO2-1 Comment noted.
CO2-2 Comment noted.

CO2-1

CO2-2

R-141

COMPANIES/ORGANIZATIONS COMMENTS

CO3 – Laborer’s Local 1015, LIUNA

R-142

July 18, 2016

Ms. Kimberly D. Bose
Secretary, Federal Energy Regulatory Commission
888 First Street, NE
Washington, DC 20426

Re: NEXUS Gas Transmission Project, FERC Docket No. CP16-22

Dear Secretary Bose,

Spectra Energy Corporation and DTE Energy’s proposed NEXUS Gas Transmission Project, FERC Docket No. CP16-22, has been touted as a pipeline that would spur local economic development in various forms, specifically, “direct”, “indirect”, and “induced” economic benefits¹. However, the economic impact analysis provided by NEXUS Gas Transmission, LLC, and its subsequent adoption by FERC in its Draft EIS, reasonably lacks merit.

CO3-1 NEXUS has filed the required report on socioeconomic impacts in its Resource Report 5. The socioeconomic analysis assesses the availability of local resources necessary to build a project, direct and indirect local economic development impacts, and, among other factors, budget impacts on local governments.² Recently, FERC released its Draft EIS utilizing the same numbers NEXUS provided in these analyses regarding employment and economic impacts.

However, these analyses were made on assumptions provided by Spectra, one of which includes that 60% of construction labor will be locally sourced. This assumption should be challenged by FERC. Furthermore, the Draft EIS states “local hires and local union halls would supply approximately 50 percent of the workforce” on the construction of the pipeline. We believe this statement to also be inaccurate. On behalf of the hard working pipeline construction workers who call Ohio home, we ask that FERC undertake a closer look at the NEXUS project’s impacts on local communities in Ohio. Specifically, we ask that:

1. FERC require NEXUS to provide evidence, in the form of a public document, detailing how NEXUS will substantiate its claim of employing 60% Ohio residents on the Ohio portions of the pipeline, considering that M.G. Dyess – an out-of-state contractor with a record of not hiring local workers in Ohio – has been awarded one entire pipeline spread.
2. FERC require NEXUS to file a new and accurate Economic Impact Analysis that takes into consideration the shortfall of local employment because of contractor M.G. Dyess, and recalculates the NEXUS project’s economic impact in the 11 Ohio counties affected, including the “direct”, “indirect” and “induced” economic impacts.

¹ See Resource Report 5 – Appendix 5A “Revised Economic Impact Analysis” and FERC/DEIS-270D – Environmental Analysis 4.10.9.1

² <https://www.ferc.gov/industries/gas/enviro/guidelines/report-preparation-volume-1.pdf>

CO3-1

NEXUS’ and Texas Eastern’s estimate of local hiring and payroll is just an estimate. The source of final worker hires would depend on the existing pool of available workers at the time of construction. This will include local labor and trade expertise, including agricultural inspectors and train tile repair professionals to the extent practicable.

COMPANIES/ORGANIZATIONS COMMENTS

CO3 – Laborer’s Local 1015, LIUNA (cont’d)

R-143

CO3-1
(cont’d)

The Ohio portion of the NEXUS project will comprise about 84% of the project’s \$2 billion capital costs. Approximately 200 of the 245 mile pipelines proposed will span 11 counties in Ohio.³ There are three construction spreads in Ohio. Two of three have been awarded to experienced construction contractors who have signed collective bargaining agreements with local construction unions. These agreements require those contractors to deploy at least half of their workforce through local union hiring halls. The third spread, which encompasses 24% of the Ohio portion of the proposed pipeline route located in northeastern Ohio (Columbiana, Stark, and Summit Counties), was awarded to M.G. Dyess, a Mississippi-based pipeline construction contractor. We and our affiliates of the Laborers International Union of North America (LIUNA), which represents thousands of construction professionals in Ohio, report that approximately 90% of M.G. Dyess’ workforce is comprised of out-of-state travelers based on observation of their past projects⁴.

According to reports by the Economic & Policy Resources, Inc., and the Ohio State University Extension, filed as part of the project’s Resource Report 5, construction of the pipeline in Ohio is estimated to include 1,630 construction workers at a cost of \$668 million in payroll. During the pipeline construction phase, the report claims NEXUS will create 3,954 direct, indirect, and induced jobs, generate \$435.3 million in labor income, and add \$537 million in additional economic benefits in Ohio.⁵ The analysis, however, is based on assumptions provided by Spectra that seem inaccurate given the status of construction contract awards. Notably, the local economic benefits are based on the assumption that 60% of construction contractor workers are from the local community, and therefore 60% of total construction payroll is “deemed local.” The 60% local hire rate is significant because it sets the number in which the indirect and induced economic multipliers are applied.⁶

It can be reasonably be said that the actual local hire rate may be as low as 38% given that 24% of the pipeline will be built by M.G. Dyess, an out-of-state contractor that has shown its overwhelming preference for hiring out-of-state travelers. The rates of local hire on the construction of the NEXUS have been grossly exaggerated. Only the pipeline spreads that were awarded to contractors who have signed a collective bargaining agreement with local construction trade unions can guarantee a minimum local hire rate of 50%.⁷ However, those agreements currently only cover 76% of the Ohio portion of project (the first two spreads). In

³ NEXUS Gas Transmission Project, Resource Report 5, Socioeconomics, FERC Docket No. CP16-22-000.

⁴ “Union Protests Company Hiring Non-Locals for Pipeline Rehab”

<http://www.daytondailynews.com/news/news/union-protests-company-hiring-non-locals-for-pipe/nr5fL/>

⁵ P. 3, Economic & Policy Resources, Inc., “Revised Economic Impact Analysis of the NEXUS Gas Transmission Project,” filed by NEXUS Gas Transmission Project, Resource Report 5, Socioeconomics, FERC Docket No. CP16-22-000.

⁶ P. 9, , Economic & Policy Resources, Inc., “Revised Economic Impact Analysis of the NEXUS Gas Transmission Project,” filed by NEXUS Gas Transmission Project, Resource Report 5, Socioeconomics, FERC Docket No. CP16-22-000.

⁷ Collective Bargaining Agreements between Construction Contractors and both the IUOE and LIUNA guarantee that at least half of workers on a pipeline construction job are dispatched locally.

COMPANIES/ORGANIZATIONS COMMENTS

CO3 – Laborer’s Local 1015, LIUNA (cont’d)

CO3-1
(cont’d)

total, that calculates to only 38% of the pipeline work going to Ohio workers. If NEXUS wanted to even get close to its claim of 60% local hire for the entire project, M.G. Dyess would have to hire over 90% locally on the third pipeline spread to make up the difference – an impossible task considering M.G. Dyess is expected to hire almost exclusively from out of state.

NEXUS has used its partial commitment to local construction trades to exaggerate its local hire claims. Even if all of the contractors on the NEXUS pipeline adhered to a collective bargaining agreement with local construction trades, only a minimum of 50% local hire would be achieved. Nevertheless, we do not see any other way NEXUS could realistically reach 60% local hire, and therefore substantiate its claimed economic impacts, without a commitment to the local construction trades on all spreads of the NEXUS construction.

Thank you for your time and consideration of these matters and I look forward to a prompt response.

Sincerely,



Business Manager
Laborers’ Local 1015, LIUNA

JAKE Croston Jr.

R-144

COMPANIES/ORGANIZATIONS COMMENTS

CO4 – Laborers’ Local 809

R-145

July 18, 2016

Ms. Kimberly D. Bose
Secretary, Federal Energy Regulatory Commission
888 First Street, NE
Washington, DC 20426

Re: NEXUS Gas Transmission Project, FERC Docket No. CP16-22

Dear Secretary Bose,

CO4-1 Spectra Energy Corporation and DTE Energy’s proposed NEXUS Gas Transmission Project, FERC Docket No. CP16-22, has been touted as a pipeline that would spur local economic development in various forms, specifically, “direct”, “indirect”, and “induced” economic benefits¹. However, the economic impact analysis provided by NEXUS Gas Transmission, LLC, and its subsequent adoption by FERC in its Draft EIS, reasonably lacks merit.

NEXUS has filed the required report on socioeconomic impacts in its Resource Report 5. The socioeconomic analysis assesses the availability of local resources necessary to build a project, direct and indirect local economic development impacts, and, among other factors, budget impacts on local governments.² Recently, FERC released its Draft EIS utilizing the same numbers NEXUS provided in these analyses regarding employment and economic impacts.

However, these analyses were made on assumptions provided by Spectra, one of which includes that 60% of construction labor will be locally sourced. This assumption should be challenged by FERC. Furthermore, the Draft EIS states “local hires and local union halls would supply approximately 50 percent of the workforce” on the construction of the pipeline. We believe this statement to also be inaccurate. On behalf of the hard working pipeline construction workers who call Ohio home, we ask that FERC undertake a closer look at the NEXUS project’s impacts on local communities in Ohio. Specifically, we ask that:

1. FERC require NEXUS to provide evidence, in the form of a public document, detailing how NEXUS will substantiate its claim of employing 60% Ohio residents on the Ohio portions of the pipeline, considering that M.G. Dyess – an out-of-state contractor with a record of not hiring local workers in Ohio – has been awarded one entire pipeline spread.
2. FERC require NEXUS to file a new and accurate Economic Impact Analysis that takes into consideration the shortfall of local employment because of contractor M.G. Dyess, and recalculates the NEXUS project’s economic impact in the 11 Ohio counties affected, including the “direct”, “indirect” and “induced” economic impacts.

¹ See Resource Report 5 – Appendix 5A “Revised Economic Impact Analysis” and FERC/DEIS-270D – Environmental Analysis 4.10.9.1

² <https://www.ferc.gov/industries/gas/enviro/guidelines/report-preparation-volume-1.pdf>

CO4-1 See response to comment CO3-1.

COMPANIES/ORGANIZATIONS COMMENTS

CO4 – Laborers’ Local 809 (cont’d)

R-146

CO4-1
(cont’d)

The Ohio portion of the NEXUS project will comprise about 84% of the project’s \$2 billion capital costs. Approximately 200 of the 245 mile pipelines proposed will span 11 counties in Ohio.³ There are three construction spreads in Ohio. Two of three have been awarded to experienced construction contractors who have signed collective bargaining agreements with local construction unions. These agreements require those contractors to deploy at least half of their workforce through local union hiring halls. The third spread, which encompasses 24% of the Ohio portion of the proposed pipeline route located in northeastern Ohio (Columbiana, Stark, and Summit Counties), was awarded to M.G. Dyess, a Mississippi-based pipeline construction contractor. We and our affiliates of the Laborers International Union of North America (LIUNA), which represents thousands of construction professionals in Ohio, report that approximately 90% of M.G. Dyess’ workforce is comprised of out-of-state travelers based on observation of their past projects⁴.

According to reports by the Economic & Policy Resources, Inc., and the Ohio State University Extension, filed as part of the project’s Resource Report 5, construction of the pipeline in Ohio is estimated to include 1,630 construction workers at a cost of \$668 million in payroll. During the pipeline construction phase, the report claims NEXUS will create 3,954 direct, indirect, and induced jobs, generate \$435.3 million in labor income, and add \$537 million in additional economic benefits in Ohio.⁵ The analysis, however, is based on assumptions provided by Spectra that seem inaccurate given the status of construction contract awards. Notably, the local economic benefits are based on the assumption that 60% of construction contractor workers are from the local community, and therefore 60% of total construction payroll is “deemed local.” The 60% local hire rate is significant because it is sets the number in which the indirect and induced economic multipliers are applied.⁶

It can be reasonably be said that the actual local hire rate may be as low as 38% given that 24% of the pipeline will be built by M.G. Dyess, an out-of-state contractor that has shown its overwhelming preference for hiring out-of-state travelers. The rates of local hire on the construction of the NEXUS have been grossly exaggerated. Only the pipeline spreads that were awarded to contractors who have signed a collective bargaining agreement with local construction trade unions can guarantee a minimum local hire rate of 50%.⁷ However, those agreements currently only cover 76% of the Ohio portion of project (the first two spreads). In

³ NEXUS Gas Transmission Project, Resource Report 5, Socioeconomics, FERC Docket No. CP16-22-000.

⁴ “Union Protests Company Hiring Non-Locals for Pipeline Rehab”
<http://www.daytondailynews.com/news/news/union-protests-company-hiring-non-locals-for-pipe/nr5tL/>

⁵ P. 3, Economic & Policy Resources, Inc., “Revised Economic Impact Analysis of the NEXUS Gas Transmission Project,” filed by NEXUS Gas Transmission Project, Resource Report 5, Socioeconomics, FERC Docket No. CP16-22-000.

⁶ P. 9, Economic & Policy Resources, Inc., “Revised Economic Impact Analysis of the NEXUS Gas Transmission Project,” filed by NEXUS Gas Transmission Project, Resource Report 5, Socioeconomics, FERC Docket No. CP16-22-000.

⁷ Collective Bargaining Agreements between Construction Contractors and both the IUOE and LIUNA guarantee that at least half of workers on a pipeline construction job are dispatched locally.

COMPANIES/ORGANIZATIONS COMMENTS

CO4 – Laborers’ Local 809 (cont’d)

CO4-1
(cont’d)

total, that calculates to only 38% of the pipeline work going to Ohio workers. If NEXUS wanted to even get close to its claim of 60% local hire for the entire project, M.G. Dyess would have to hire over 90% locally on the third pipeline spread to make up the difference – an impossible task considering M.G. Dyess is expected to hire almost exclusively from out of state.

NEXUS has used its partial commitment to local construction trades to exaggerate its local hire claims. Even if all of the contractors on the NEXUS pipeline adhered to a collective bargaining agreement with local construction trades, only a minimum of 50% local hire would be achieved. Nevertheless, we do not see any other way NEXUS could realistically reach 60% local hire, and therefore substantiate its claimed economic impacts, without a commitment to the local construction trades on all spreads of the NEXUS construction.

Thank you for your time and consideration of these matters and I look forward to a prompt response.

Sincerely,



Clint Powell

Business Manager

Laborers’ Local 809, LIUNA

R-147

COMPANIES/ORGANIZATIONS COMMENTS

CO5 – Laborers’ Local 894, LIUNA

20160720-5035 FERC PDF (Unofficial) 7/20/2016 10:11:08 AM

July 18, 2016

Ms. Kimberly D. Bose
Secretary, Federal Energy Regulatory Commission
888 First Street, NE
Washington, DC 20426

Re: NEXUS Gas Transmission Project, FERC Docket No. CP16-22

Dear Secretary Bose,

Spectra Energy Corporation and DTE Energy’s proposed NEXUS Gas Transmission Project, FERC Docket No. CP16-22, has been touted as a pipeline that would spur local economic development in various forms, specifically, “direct”, “indirect”, and “induced” economic benefits¹. However, the economic impact analysis provided by NEXUS Gas Transmission, LLC, and its subsequent adoption by FERC in its Draft EIS, reasonably lacks merit.

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However, these analyses were made on assumptions provided by Spectra, one of which includes that 60% of construction labor will be locally sourced. This assumption should be challenged by FERC. Furthermore, the Draft EIS states “local hires and local union halls would supply approximately 50 percent of the workforce” on the construction of the pipeline. We believe this statement to also be inaccurate. On behalf of the hard working pipeline construction workers who call Ohio home, we ask that FERC undertake a closer look at the NEXUS project’s impacts on local communities in Ohio. Specifically, we ask that:

1. FERC require NEXUS to provide evidence, in the form of a public document, detailing how NEXUS will substantiate its claim of employing 60% Ohio residents on the Ohio portions of the pipeline, considering that M.G. Dyess – an out-of-state contractor with a record of not hiring local workers in Ohio – has been awarded one entire pipeline spread.
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¹ See Resource Report 5 – Appendix 5A “Revised Economic Impact Analysis” and FERC/DEIS-270D – Environmental Analysis 4.10.9.1

² <https://www.ferc.gov/industries/gas/enviro/guidelines/report-preparation-volume-1.pdf>

CO5-1 See response to comment CO3-1.

CO5-1

R-148

COMPANIES/ORGANIZATIONS COMMENTS

CO5 – Laborers’ Local 894, LIUNA (cont’d)

20160720-5035 FERC PDF (Unofficial) 7/20/2016 10:11:08 AM

CO5-1
(cont’d)

The Ohio portion of the NEXUS project will comprise about 84% of the project’s \$2 billion capital costs. Approximately 200 of the 245 mile pipelines proposed will span 11 counties in Ohio.³ There are three construction spreads in Ohio. Two of three have been awarded to experienced construction contractors who have signed collective bargaining agreements with local construction unions. These agreements require those contractors to deploy at least half of their workforce through local union hiring halls. The third spread, which encompasses 24% of the Ohio portion of the proposed pipeline route located in northeastern Ohio (Columbiana, Stark, and Summit Counties), was awarded to M.G. Dyess, a Mississippi-based pipeline construction contractor. We and our affiliates of the Laborers International Union of North America (LIUNA), which represents thousands of construction professionals in Ohio, report that approximately 90% of M.G. Dyess’ workforce is comprised of out-of-state travelers based on observation of their past projects⁴.

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³ NEXUS Gas Transmission Project, Resource Report 5, Socioeconomics, FERC Docket No. CP16-22-000.

⁴ “Union Protests Company Hiring Non-Locals for Pipeline Rehab”

<http://www.daytondailynews.com/news/news/union-protests-company-hiring-non-locals-for-pipeline-rehab/>

⁵ P. 3, Economic & Policy Resources, Inc., “Revised Economic Impact Analysis of the NEXUS Gas Transmission Project,” filed by NEXUS Gas Transmission Project, Resource Report 5, Socioeconomics, FERC Docket No. CP16-22-000.

⁶ P. 9, Economic & Policy Resources, Inc., “Revised Economic Impact Analysis of the NEXUS Gas Transmission Project,” filed by NEXUS Gas Transmission Project, Resource Report 5, Socioeconomics, FERC Docket No. CP16-22-000.

⁷ Collective Bargaining Agreements between Construction Contractors and both the IUOE and LIUNA guarantee that at least half of workers on a pipeline construction job are dispatched locally.

R-149

COMPANIES/ORGANIZATIONS COMMENTS

CO5 – Laborers’ Local 894, LIUNA (cont’d)

20160720-5035 FERC PDF (Unofficial) 7/20/2016 10:11:08 AM

CO5-1
(cont’d)

total, that calculates to only 38% of the pipeline work going to Ohio workers. If NEXUS wanted to even get close to its claim of 60% local hire for the entire project, M.G. Dyess would have to hire over 90% locally on the third pipeline spread to make up the difference – an impossible task considering M.G. Dyess is expected to hire almost exclusively from out of state.

NEXUS has used its partial commitment to local construction trades to exaggerate its local hire claims. Even if all of the contractors on the NEXUS pipeline adhered to a collective bargaining agreement with local construction trades, only a minimum of 50% local hire would be achieved. Nevertheless, we do not see any other way NEXUS could realistically reach 60% local hire, and therefore substantiate its claimed economic impacts, without a commitment to the local construction trades on all spreads of the NEXUS construction.

Thank you for your time and consideration of these matters and I look forward to a prompt response.

Sincerely,



Bill Orr
Business Manager
Laborers’ Local 894, LIUNA

R-150

COMPANIES/ORGANIZATIONS COMMENTS

CO6 – Appalachian Partnership for Economic Growth

Mike Jacoby, Nelsonville, OH
July 29, 2016

Ms. Kimberly Bose, Secretary
Federal Energy Regulatory Commission
888 First Street, NE
Washington, DC 20426

Subject: Docket No. CP16-22-000 (NEXUS Gas Transmission Pipeline Project)

Dear Secretary Bose:

Please accept this letter in support of the NEXUS gas transmission pipeline. The Appalachian Partnership for Economic Growth (APEG) is a non-profit economic development organization created over four years ago by the foundation for Appalachian Ohio. Its mission is to promote economic development across 25 counties in Appalachian Ohio, roughly one-third of Ohio's land mass.

With federal oversight and responsible company stewardship, NEXUS will allow natural gas from our region to reach markets that need the gas in the safest, most efficient manner possible. Our region and our country needs additional transmission pipeline capacity. As you know, natural gas is now the biggest fuel source of for electric generation in the country, having recently passed coal.

Shale gas has been a bright spot for APEG's economically distressed region of Ohio. As our region loses good-paying coal jobs, the long-term transformative opportunity for natural gas used as a fuel for electricity and a feedstock for manufacturing is critical to our future. Several gas fired power plants currently operate in our region. One is under construction. As many as four more are proposed. APEG is working to develop petrochemical manufacturing jobs based on abundant natural gas and natural gas liquids. These projects supply needed tax base, jobs, and clean power.

Spectra Energy estimated NEXUS will require a \$2-billion investment and require 1,500 direct construction jobs in Ohio. Once completed, Spectra estimates Ohio's tax on public utility tangible personal property will generate about \$390 million for local governments in the first five years. These are significant benefits to Ohio. On behalf of APEG, I ask you to please approve this important project.

Sincerely,
Mike Jacoby
Vice President – Business Development

CO6-1 Comment noted.

CO6-2 Comment noted.

R-151

CO6-1

CO6-2

COMPANIES/ORGANIZATIONS COMMENTS

CO7 – Michigan Chamber of Commerce

R-152

Jason Geer, Lansing, MI.
July 21, 2016

Ms. Kimberley D. Bose, Secretary
Federal Energy Regulatory Commission
888 First Street NE, Room 1A
Washington, DC 20426-0001

Subject: CP16-22-000 (NEXUS Gas Transmission Pipeline Project)

Dear Secretary Bose:

The Michigan Chamber of Commerce, on behalf of our over 6700 members, supports the NEXUS Gas Pipeline project and urge the FERC's timely approval of the project (Docket Number CP16-22-000).

CO7-1 | NEXUS pipeline is vital infrastructure for ensuring that adequate supplies of natural gas are delivered to Michigan to support electricity production that powers our economy, lights and heats our homes, businesses, schools and hospitals.

CO7-2 | This project has the potential to lower overall energy costs for all energy users in our state which will help our economy grow and create more jobs.

We strongly encourage FERC to approve this project to ensure Michigan continues to have reliable and affordable electricity.

Sincerely,

Jason Geer
Director of Energy & Environmental Policy

Cc: MPSC Docket Nos: 2015/2016 GCR Plan year: U-17691; 2016/2017 GCR Plan year; U-17941; 2016 PSCR Plan year: U-17920

CO7-1 Comment noted.
CO7-2 Comment noted.

COMPANIES/ORGANIZATIONS COMMENTS

CO8 – Food & Water Watch

20160804-5053 FERC PDF (Unofficial) 8/4/2016 11:03:40 AM

Food & Water Watch • 1616 P St. NW, Suite 300 • Washington, DC 20036
T +202.683.2500 • F +202.683.2501 • www.foodandwaterwatch.org



Kimberly D. Bose
Secretary Federal Energy Regulatory Commission
888 1st Street, N.E. Washington, D.C. 20426
RE: Docket No. CP16-22-000

August 10, 2016

Re: Comments on the Draft Environmental Impact Statement re the NEXUS Gas Transmission Project (Docket No. CP16-22-000)

On behalf of Food & Water Watch (FWW), a national non-profit public interest organization that champions clean water for all, I submit these comments, urging the Federal Energy Regulatory Commission (FERC) to reject the NEXUS pipeline proposal.

The proposed 255-mile NEXUS pipeline would allow Spectra Energy, and its partner on the project, DTE Energy, to transmit up to 1.5 bcf/d of Utica and Marcellus Shale gas, ultimately to Enbridge's Vector pipeline in Michigan and carry natural gas from outside of Chicago across the state to greater Detroit and on to a hub in Ontario, Canada.¹ NEXUS would cut over 200 miles across (or within 10 miles) of sixteen Ohio counties (Columbiana, Stark, Summit, Wayne, Medina, Lorain, Erie, Sandusky, Wood, Lucas, Henry, Fulton, Portage, Cuyahoga, Seneca, and Ottawa) before passing through Michigan's Lenawee, Washtenaw and Monroe Counties.² If everything is approved according to Spectra Energy's and DTE Energy's plans, they will begin construction on NEXUS in the first three months of 2017, and have the pipeline in use by November that year.³

The NEXUS pipeline proposal should be rejected. It threatens property rights of landowners, poses public health and safety issues upon rupture, explosion, or leakage, and would proliferate fracking by expanding markets for shale gas.

Pipelines Are Inherently Risky and Benefit Pipelines Companies - Not The Public

CO8-1 | Allowing the build out of the NEXUS pipeline and permitting eminent domain for the pipeline supports corporate gain, not public use.⁴ Traditionally, "public use" referred to public projects like roads, civic buildings, parks and other facilities that could be directly used by all.⁵ But in the last century, case law has broadened what constitutes a "public use" to include economic development.⁶ Now, pipeline and oil and gas companies can more easily pursue land grabs by claiming that eminent domain for the construction of pipelines for shale gas and oil development will foster economic development and is therefore a "public use."⁷

CO8-1

As stated in section 4.9.3 of the EIS, if an easement cannot be negotiated with a landowner and the Projects have been certificated by FERC, then NEXUS and Texas Eastern may use the right of eminent domain granted to it under Section 7(h) of the NGA and the procedure set forth under the Federal Rules of Civil Procedure (Rule 71A) to obtain the areas needed for construction and operation.

R-153

COMPANIES/ORGANIZATIONS COMMENTS

CO8 – Food & Water Watch (cont'd)

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Approving of the NEXUS pipeline and allowing eminent domain would only benefit Spectra Energy and DTE Energy and not the estimated 605,745 people living in the Michigan counties along the proposed path, and nearly 4 million living in the potentially affected Ohio counties.⁸

CO8-2 | In general, pipelines pose a huge risk of leaks. When leaks go undetected, from inadequate detection systems or monitoring personnel's failure to identify a rupture, a leak could go for hours or even days.⁹ Once a pipeline is built the unlucky landowners along its path or beside a compressor station have no choice but to accept living with the constant risk of accidents, leaks and explosions. Several recent pipeline failures have led to massive destruction and even loss of life.¹⁰

CO8-3 | The proposed NEXUS pipeline poses a host of environmental, public health and safety risks. For one, portions of the pipeline travel within 1,500 feet of a sensitive karst geologic formation known as the Bellevue-Castalia Karst Plain¹¹ — an area that Ohio's Department of Natural Resources believes contains more sinkholes than other karst terrains in Ohio.¹² Construction would also cause noise pollution,¹³ and could potentially cause issues associated with sedimentation, erosion, and flooding.¹⁴

CO8-4 | Spectra Energy knows that their operations are risky to the environment, public health and safety. On page 29 of its most recent 10-K filing, the company said:

CO8-5 | *"There are a variety of hazards and operating risks inherent in natural gas gathering and processing, transmission, storage, and distribution activities, and crude oil transportation and storage, such as leaks, explosions, mechanical problems, activities of third parties and damage to pipelines, facilities and equipment caused by hurricanes, tornadoes, floods, fires and other natural disasters, that could cause substantial financial losses. In addition, these risks could result in significant injury, loss of life, significant damage to property, environmental pollution and impairment of operations, any of which could result in substantial losses. For pipeline and storage assets located near populated areas, including residential areas, commercial business centers, industrial sites and other public gathering areas, the level of damage resulting from these risks could be greater."*¹⁵

Impacts to Agriculture and Land: The NEXUS pipeline project would temporarily impact over 5,000 thousands of acres of land, permanently impact almost 2,000 acres, and cross over 368 acres that have "poor revegetation potential."¹⁶ Furthermore, **over three-fourths of the soil that NEXUS would cross is classified as "prime farmland" with another 423 acres classified as "local or unique farmland."**¹⁷ According to the Draft EIS, "Permanent access roads, cathodic protection sites, and aboveground facilities would permanently impact 112.0 acres of soils classified as prime farmland and 2.4 acres of soils classified as local or unique farmland."¹⁸

- CO8-2 Section 4.13.1 of the EIS identifies the multiple methods that NEXUS would employ to inspect for leakage, including ground patrol, fly-over inspections, and annual leak surveys. Section 4.12.1.3 of the EIS has been update to address EPA's new standards for leak detection and repair. Sections 4.13.2 and 4.13.3 of the EIS address the historic incident data for natural gas transmission pipelines, including injuries and fatalities. The EIS explains that incident statistics for distribution pipelines are inappropriate to compare with natural gas transmission pipelines, and as such we find that studies, reports, and articles that include this information are not compelling. The data, as presented in the EIS, demonstrates that natural gas transmission pipelines continue to be a safe, reliable means of energy transportation.
- CO8-3 Sections 4.1.3.4 and 4.1.5.4 address the concerns surrounding karst geology. Project routing has avoided all visible karst features and applicant is conducting geophysical surveys to detect hidden karst features.
- CO8-4 The EIS is a disclosure document. As identified by the commenter, section 4.12.2.1 of the EIS identifies the construction noise impacts and mitigation for the Project, concluding that due to the temporary, transitory nature of pipeline construction, construction noise would not have a significant impact on nearby landowners.
- CO8-5 See section 4.3.2.2 for discussion on mitigation procedures during construction to minimize or avoid erosion and sedimentation of surface waters. Impacts and mitigation pertaining to flooding and flash floods are addressed in section 4.1.5.7.
- CO8-6 Sections 4.13.2 and 4.13.3 detail pipeline incident data and risks associated with pipelines.

R-154

COMPANIES/ORGANIZATIONS COMMENTS

CO8 – Food & Water Watch (cont'd)

20160804-5053 FERC PDF (Unofficial) 8/4/2016 11:03:40 AM

R-155

- CO8-7 Heavy construction equipment used to build the pipeline will compact the soil, and could affect the ability of trees or crops to grow for years.¹⁹ But even after construction is completed, risks remain: **in the U.S., more than 12,000 pipeline incidents have occurred from 1994 to 2015. The incidents have caused over 400 fatalities, 1,560 injuries and have stacked up \$7.1 billion in property damage.**²⁰ Water that agricultural users rely on could also be impacted. In Ohio, within 150 feet of the NEXUS pipeline project's mainline construction workspace, sits 156 water wells and 3 springs. The springs are believed to serve agricultural purposes.²¹ Contamination of these resources could negatively impact farmers who rely on healthy soil and clean water.
- CO8-8
- CO8-9
- CO8-10 According to a Lenawee County, Michigan resident, "A number of farmers I know are concerned about tiling, irrigation and drainage. There is a limited amount of economic benefit to the county."²² Three of the counties in the path of NEXUS — Washtenaw, Lenawee and Monroe — make up a five-county region that account for over 10 percent of Michigan's farms.²³ Moreover, the southeastern region of the state, which includes these three counties, has some of the highest agricultural land values: averaging \$4,489 per acre of tilled field cropland.²⁴ Likewise, the Ohio Ecological Food and Farm Association has come out against the NEXUS pipeline, and the Ohio Farmers Union has passed a resolution in opposition of it.²⁵
- CO8-11 Natural gas leaks can contaminate soil and water resources that farmers rely on to grow healthy, sustainable crops and explosions can desecrate farmland. In April 2007, a gas transmission pipeline failure near Pawnee, Illinois caused a major fire, requiring people to evacuate their homes and the death of several farm animals.²⁶ In September 2014, in Michigan's Berrien County a pipeline rupture caused over 500 people to be evacuated from their homes, and one farmer was advised not to harvest his potatoes due to potential contamination.²⁷
- In April 2016, in Salem Township, Pennsylvania a Spectra Energy pipeline exploded, shooting a fireball into the air that ultimately destroyed a home, scorched 40 acres of farmland, and injured several people, leaving one man with widespread third-degree burns on 75 percent of his body.²⁸ The aforementioned pipeline was built in 1981 and corrosion led to the explosion.²⁹ **However, pipelines that are currently being constructed pose greater risks. Data shows pipelines built since 2010 are five times as 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.³⁰ For example, in 2015 the National Transportation Safety Board determined that a poorly constructed pipeline, built in 2011, led to a 2014 gas explosion that destroyed two buildings in New York City, injuring 50 people and resulting in eight deaths.³¹
- CO8-12
- CO8-13 Furthermore, there is not much comfort in the oversight of pipelines. **There are only 400 federal and state inspectors charged with monitoring our country's 2.5 million miles of pipelines and ensuring their safety.**³²

- CO8-7 See sections 4.2.1.4 and 4.2.2 for a discussion of compaction prone soils and proposed mitigation measures.
- Prior to construction, NEXUS shall file with the Secretary an *Agricultural Impact Mitigation Plan (AIMP)* detailing construction and restoration measures to be implemented on the NGT Project to address agricultural issues unique to Ohio and Michigan. Prior to construction, NEXUS shall file with the Secretary a 5-year post-construction monitoring program to evaluate crop productivity in areas impacted by the construction of the Project.
- CO8-8 The commenter appears to cite incident statistics that include natural gas distribution and hazardous liquid pipelines, vastly overstating incident statistics applicable to the natural gas transmission sector. The regulations for these facilities differ from those for natural gas transmission pipelines. Further, section 4.13.3 of the EIS clearly explains that the majority of incidents and fatalities from natural gas pipelines are associated with local distribution pipelines because these lines are smaller diameter pipelines and/or plastic pipes and are more susceptible to damage. The EIS provides the correct incident statistic data for natural gas transmission pipelines, showing that there have been 1,312 significant incidents nationwide on natural gas transmission pipelines from 1996 through 2015. The EIS also explains that operation of the over 300,000 miles of natural gas transmission pipeline in the United States results in an average of 2 fatalities per year. This rate equates to about 0.002 fatalities per 250 miles of pipeline per year, indicating the risk is low for an incident at any given location.
- CO8-9 See Section 4.3.1.2 for discussion on mitigation procedures during construction to minimize impacts to water wells and springs. Similar to water wells, the applicants would offer to conduct pre- and post-construction testing of water quality and yield in all springs within 150 feet of the construction workspace, and would compensate the spring owner if the water quality or yield are negatively impacted.
- Prior to construction, NEXUS shall file with the Secretary an *Agricultural Impact Mitigation Plan (AIMP)* detailing construction and restoration measures to be implemented on the NGT Project to address agricultural issues unique to Ohio and Michigan.
- CO8-10 Drain tile is installed in agricultural areas to help improve drainage in soils with high groundwater and/or poor drainage. NEXUS developed a *Drain Tile Mitigation Plan*, which is provided in appendix E-3. Project-specific impacts on and proposed mitigation measures related to drain tile systems can be found in section 4.9.3.5 of the EIS.
- Prior to construction, NEXUS shall file with the Secretary an *Agricultural Impact Mitigation Plan (AIMP)* detailing construction and restoration measures to be implemented on the NGT Project to address agricultural issues unique to Ohio and Michigan. For construction and restoration measures in Ohio, NEXUS shall consult with the Ohio Department of Agriculture (ODA) on construction procedures to be used in agricultural land in Ohio and shall

COMPANIES/ORGANIZATIONS COMMENTS

CO8 – Food & Water Watch (cont'd)

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CO8-14

Threats to Water Resources: Alarming, the NEXUS pipeline project could potentially impact several freshwater sources – including a total of 245 wells and 6 springs that would be within 150 feet. **NEXUS pipeline would also cross 15 wellhead protection areas** – which federal law defines as “the surface and subsurface area surrounding a water well or wellfield, supplying a public water system, through which contaminants are reasonably likely to move toward and reach such water well or wellfield.” Twelve of the 15 wellhead protection areas are for community wells, at 25 different locations in Ohio, and one wellhead protection area in Monroe and Washtenaw Counties in Michigan.³³ **If a wellhead protection area becomes contaminated, the contaminants could travel unnoticed until detected in a drinking water well.**

While methane (CH₄) itself may not be toxic, its presence in aquifers indicates the presence of other hydrocarbons that are toxic.³⁴ When a mix of hydrocarbon gas enters unventilated spaces through contaminated water wells, it can cause suffocation and even result in explosions.³⁵ CH₄ that contaminates aquifers may also, through geochemical reactions or other mechanisms, increase levels of arsenic and other harmful toxins in water brought to the surface.³⁶

CO8-15

Air Pollutants and Climate Impacts: A report released in July 2016 found that if 19 pending natural gas pipelines—one of which includes the NEXUS pipeline—are built across the eastern U.S., then our country will miss the emission-reduction targets established under the Paris Climate Agreement.³⁷

Shale gas is 90 percent methane (CH₄) – a potent greenhouse gas³⁸ that is leaking more than regulators seem willing to admit. **Fugitive CH₄ emissions from oil and gas industry operations, including pipeline transmission, are the leading anthropogenic source of CH₄ pollution in the country.** Pound-for-pound, each puff of CH₄ from the industry is over 86 times more potent than carbon dioxide (CO₂) at trapping heat over 20 years, and over 34 times more potent than CO₂ at trapping heat over 100 years.³⁹

The NEXUS pipeline is designed to reinforce and capitalize on the fracking boom, and would help lock in more demand for fracking and decades more of climate pollution.

Natural gas is leaking from every stage of the natural gas system — from well sites to processing plants and compressor stations to beneath city streets. When it comes to the relative impacts on our climate, these leaks of CH₄ are why natural gas is about as bad as coal when used for generating electricity, and why natural gas is about as bad as oil when used to fuel cars, trucks, industrial boilers and residential furnaces.⁴⁰

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CO8-10
(cont'd)

file with the Secretary any measures that result from coordination with the ODA. Any comments received from ODA shall also be filed with the Secretary.

Prior to construction, NEXUS shall file with the Secretary a 5-year post-construction monitoring program to evaluate crop productivity in areas impacted by the construction of the Project.

CO8-11

See the response to comment CO8-2 regarding natural gas leaks and incident statistics.

CO8-12

There is no evidence to support this claim. Nationwide natural gas transmission pipeline incident statistics show that there are about 3.57 incidents per 10,000 miles of pipeline (almost half the rate reported in the article). Pipeline safety regulations continue to evolve to ensure public safety. The DOT is currently undergoing a proposed rulemaking to increase pipeline safety. The referenced 2014 natural gas explosion in New York City involved local distribution pipelines, which in this case are smaller diameter, plastic pipes, and not comparable to natural transmission pipelines as discussed in response to comment CO8-8. Sections 4.13.1 and 4.13.2 of the EIS address the causes for natural gas transmission pipeline incidents.

CO8-13

The DOT is the federal agency charged with oversight of the operation of natural gas pipelines. The FERC review process is not the appropriate forum to resolve pipeline operational oversight concerns.

CO8-14

See section 4.3.1 for a discussion of groundwater resources including water supply wells, springs, and wellhead protection areas.

CO8-15

Section 4.14.8.9 of the EIS addresses climate change impacts and includes a discussion of the Projects' consistency with local or regional goals, based on the published information from the USGCRP reports. The report identified by the commenter lists 19 natural gas transmission projects and capacities, but does not correct for the potential double counting of capacity (where gas may flow from one transmission pipeline to another before reaching its end use, or where a project makes use of existing capacity). The report also counts capacity that would be consumed (i.e. end-use burned) destined for Canada (e.g., from the NEXUS Project, Rover Pipeline Project, Northern Access 2016 Project, and Empire Project) as ultimately preventing the United States from meeting its climate reduction goals. Further, the maximum daily capacity of each project is unlikely to be consumed 365 days per year. Many projects in front of the Commission are designed for peak use. As such, it is unlikely that this total amount of capacity would occur yearly, and emissions would significantly less. Most importantly, the report relies on the emissions primarily associated with upstream production or downstream end-use combustion as the cause of an inconsistency with national goals. We continue to find production and end-use combustion emissions to not be causally connected to the project. Therefore, we do not find the report cited by the commenter to be persuasive, and continue to rely on the discussion of consistency with the USGCRP report in addressing regional goals.

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CO8-16 | It has become clear that from production to distribution, **the oil and gas industry emits larger amounts of air and climate pollutants than officials estimate.**⁴¹ The air and climate pollutants that oil and gas companies bring to the surface include: **CH₄** and other volatile organic compounds (VOCs), such as benzene, toluene, ethylbenzene and xylenes (BTEX) and other "aromatic" hydrocarbons, including polycyclic aromatic hydrocarbons (PAHs); hydrogen sulfide; **radon** derived from radium present in targeted rock formations; and **any chemicals from fracking suspended in the air as vapor or aerosol**, such as glutaraldehyde, ethylene glycol and methanol.⁴²

One key 2014 study explains that the "episodic and fluctuating" nature of the toxic plumes of pollutants from industry sites have thwarted understanding of the specific public health impacts from the gas industry's air pollution.⁴³ The study explains that standard air quality measures — which average over a region, and average over stretches of time — can miss the "intensity, frequency or durations of the actual human exposures to the mixtures of toxic materials released regularly at [unconventional natural gas development] sites."⁴⁴

CO8-17 | **Pollution from Compressor Stations:** Additionally, the NEXUS pipeline project proposes four new compressor stations in Columbiana, Medina, Sandusky and Lucas Counties, Ohio.⁴⁵ Compressor station emissions are an even more constant source of emissions than most other industry sites, although the levels of actual emissions vary widely from site to site.⁴⁶

Each year, each compressor stations emit 12-50 tons of VOCs, 51 to 99 tons of nitrogen oxides (NO_x), 1.5 to 6.1 tons of particulate matter and up to 1.9 tons of sulfur dioxides (SO_x).⁴⁷ **Health problems associated with exposure to these chemicals include "respiratory, neurologic, and dermal responses as well as vascular bleeding, abdominal pain, nausea, and vomiting."**⁴⁸

CO8-18 | The cumulative effects of climate pollution are severe, and they are already visible: violent storms, drought, floods, acidifying oceans and altered growing seasons.⁴⁹ Moving forward, scientists warn that we must keep almost all fossil fuels in the ground, or else our children will experience far worse, with fundamental impacts on food and water supplies.⁵⁰

CO8-19 | **The Potential for Seismicity:** The Draft EIS claims that a possibility of an earthquake event is small because the NEXUS pipeline will be in a relatively, seismically inactive area.⁵¹ But it also acknowledges that earthquakes associated with the injection of oil and gas waste has caused an increase of earthquakes in Ohio.⁵² Indeed, seismic activity *is* on the uptick in Ohio⁵³ from the disposal of toxic fracking waste through underground injection control wells.⁵⁴ It has been linked to induced seismicity. Or, in other words, human-caused earthquake activity.⁵⁵

- CO8-16 | Estimated emissions specific to the NGT and TEAL Projects are provided in section 4.12.1.3.
- CO8-17 | Section 4.12.1.3 of the EIS discloses to the potential emissions of all pollutants from operation of each compressor station demonstrate that all compressor stations associated with the proposed Projects and uses air dispersion modeling to demonstrate that each facility would comply with the NAAQS, which were established to protect human health, including sensitive populations such as children, the elderly, and those with chronic respiratory problems.
- CO8-18 | See the response to comment FA2-34.
- CO8-19 | Section 4.1.3.1 takes into account the potential for induced seismicity. USGS has provided a one-year estimate, which will be updated annually, that there is less than a 1 percent chance for an earthquake of significant magnitude to cause property damage to occur within a year. Further, the pipeline will be constructed in accordance with federal standards (49 CFR 192) which are the same regulations followed by natural gas pipeline construction and operation projects in more seismically active regions of the U.S.

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CO8-19 (cont'd) | Notably, ten of the sixteen Ohio counties that NEXUS would cut through or within ten miles of,⁵⁶ have at least one Class II Underground Injection Control (UIC) well. Portage County has a whopping 17 and Stark closely follows with 16. Wayne County has three, Seneca County has two, and then Wood, Summit, Medina, Lorain, Henry and Erie Counties have just one.⁵⁷

Induced seismicity occurs when human activity triggers a dormant fault by adding or reducing stress and/or increasing pore pressure.⁵⁸ When fluid is injected underground—as is done to fracture shale rock and for the disposal of fracking wastewater—it can lubricate fault zones. As fluid moves into a fault zone, pore pressure increases, which can cause the fault to slip and result in an earthquake.⁵⁹

CO8-20 | It's important to note that induced seismic events may not always strike soon after the injection activity begins, it may take a long time for an earthquake to trigger, and sometimes not until after the injection activity has ended.⁶⁰ Although Ohio now prohibits drilling injection wells in Precambrian bedrock where it is believed dormant faults may be located,⁶¹ it does not mean that injected fluids won't reach the bedrock. Fluid pressure from high-rate disposal wells can migrate, so even if an injection well is not very close to a fault line or one susceptible to earthquakes, the fluid pressure can migrate long distances to reach a fault more susceptible.⁶²

It is possible that the current, dormant fault lines near or within a several mile radius of the NEXUS pipeline project could be awakened by injection well activity, and if large enough, could potentially damage the pipeline and cause leaks and ruptures.

Endangered and Threatened Species: According to the Draft EIS, there are 11 federally listed or proposed species in the project area and the NEXUS pipeline project is "likely to adversely affect the northern long-eared bat."⁶³

On April 1, 2015 the U.S. Fish & Wildlife Service (FWS) announced that the northern long-eared bat would be protected under the Endangered Species Act (ESA) as a threatened species.⁶⁴ Bats play a critical role in maintaining biodiversity, by cross-pollinating flowering plants and scattering the seeds of native plants.⁶⁵ Bats also help control insect pests. A little brown bat, for example, can consume 3,000 insects in a single night, including insects that damage crops.⁶⁶

CO8-21 | Pipeline construction can cause sedimentation in waters affecting aquatic insects that are a part of many bats' diets,⁶⁷ while noise pollution interferes with bat navigation, making it difficult for them to locate insects.⁶⁸

CO8-22 | Furthermore, legal agreements between landowners and pipeline companies sometimes require that landowners continue to keep the area cleared, causing sustained forest fragmentation.⁶⁹ This results in less forest cover for wildlife habitats, leaving wildlife more vulnerable,⁷⁰ and potentially fewer trees for bats to

CO8-20 | The USGS states that seismicity can be induced at distances between 6 and 10 miles from and at depths up to 2.5 miles deeper than the injection point. It is commonly accepted that structural damage to modern engineered structures only occurs in earthquakes larger than magnitude 5.0. Injection-induced earthquakes in the central U.S. are mostly smaller than magnitude 5.0, and in Ohio, less than magnitude 4.0, and few cases are known where injection-induced earthquakes have caused structural damage.

CO8-21 | See section 4.8.1.1 for a discussion of sedimentation and noise impacts on protected bat species.

CO8-22 | See section 4.6 for a discussion of habitat fragmentation and impacts to wildlife species. See section 4.8.1.1 for a discussion of habitat impacts to protected bat species.

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perch upon. This means even after construction is completed, the bats will remain at risk.

Conclusion

FWW urges FERC to serve the public and not the vested interests of Spectra Energy and DTE Energy. NEXUS would threaten water resources, wetlands and water systems, disrupt vulnerable geologic areas, cross vital agricultural land, and imperil efforts to protect endangered and threatened species. It also helps create a demand and justification for climate change inducing fossil fuels and environmentally destructive energy extraction (such as fracked gas). Promoting natural gas not only will lock in decades more of fracking and contribute to the climate crisis, it will result in billions of dollars being spent on the infrastructure to support burning gas, preventing us from moving into a sustainable energy future.

There are sufficient reasons to reconsider the pipeline necessity and the environmental and community appropriateness of the project, yet FERC has a pro-pipeline mindset and has approved 99 percent of pipeline applications, rejecting just a single pipeline application over the past five years.⁷¹ FERC must realize that true energy security, and economic security, will come only from communities remaking their energy systems around clean and sustainable solutions. It's time to start building this future, and stop building compressor stations and pipelines to lock in the alternative: decades more air and climate pollution, sickening communities and bringing climate chaos. FERC should take a step in the right direction by rejecting the NEXUS pipeline proposal.

Thank you for your consideration,



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- ⁴⁸ Kasso, Mohammed and Mudantira Balakrishnan. "Ecological and Economic Importance of Bats [Order: Chiroptera]." *ISRN Biodiversity*, Vol. 2013, 2013 at 3 to 5; U.S. Fish & Wildlife Service. [Press Release]. "U.S. Fish and Wildlife Service Protects Northern Long-eared Bat as Threatened Under Endangered Species Act." April 1, 2015; United States Geological Survey, National Wildlife Health Center. "White-Nose Syndrome (WNS)." Available at <http://www.nwhc.usgs.gov/disease-information/white-nose-syndrome/>. Accessed April 20, 2015; Pennsylvania Game Commission, Wildlife Disease Reference Library. "White-Nose Syndrome." Available at <http://www.pennstate.gov/wildlife/portal/server-action.jsp?item=514&objId=126059&module=7>. Accessed April 20, 2015.
- ⁴⁹ Conserve Wildlife Foundation of New Jersey. [Fact Sheet]. "Bats of New Jersey." June 2008; Natural Resources Conservation Service, Wildlife Habitat Management Institute, Wildlife Habitat Council. [Fish and Wildlife Habitat Management Leaflet]. "Integrated Pest Management (IPM) and Wildlife." No. 24, October 2002 at 7 and 8; Curtis, Paul B. and Kristi L. Sullivan. Cornell Cooperative Extension, Wildlife Damage Management Program. [Fact Sheet]. "Bats." 2001 at 1; United States Geological Survey, National Wildlife Health Center. "White-Nose Syndrome (WNS)." Available at <http://www.nwhc.usgs.gov/disease-information/white-nose-syndrome/>. Accessed April 20, 2015.
- ⁵⁰ Kiviat, Erik and David C. Richardson. Hudsonia and SUNY New Paltz. [Report to the Pace Environmental Litigation Clinic, Inc]. "Review of the DEIS and Technical Report for the Constitution Pipelines." March 31, 2014 at 10.
- ⁵¹ Kiviat, Erik. "Risks to biodiversity from hydraulic fracturing for natural gas in the Marcellus and Utica shales." *New York Academy of Sciences*, Vol. 1286, Iss. 1, May 2013 at 5.
- ⁵² See Food & Water Watch. [Fact Sheet]. "Fracking Infrastructure is Carving Up Pennsylvania." December 2013; Messersmith, Dave. Penn State Extension. "Negotiating pipeline rights-of-way in Pennsylvania." Available at <http://extension.psu.edu/natural-resources/natural-gas/publications/negotiating-pipeline-rights-of-way-in-pennsylvania>. Accessed November 15, 2013.
- ⁵³ See Food & Water Watch. [Fact Sheet]. "Fracking Infrastructure is Carving Up Pennsylvania." December 2013; Brittingham, Margaret. Pennsylvania State University. "Habitat Fragmentation." Marcellus Shale Electronic Field Guide. Available at http://www.marcellusfieldguide.org/index.php/guide/ecological_concepts/habitat_fragmentation/. Accessed November 14, 2013.
- ⁵⁴ Woodall, Candy. "Pipeline plan rejected by federal regulators in shocking decision." *Harrisburg (PA) Patriot-News*, March 12, 2016.

R-162

COMPANIES/ORGANIZATIONS COMMENTS

CO9 – Michigan Chamber of Commerce

R-163

Monroe County Chamber of Commerce, Monroe, MI
August 5, 2016

Kimberly Bose, Secretary
Federal Energy Regulatory Commission
888 First Street, NE
Washington, DC 20426

Subject: CP16-22-000 (NEXUS Gas Transmission Pipeline Project)

Dear Secretary Bose:

The Monroe County Chamber of Commerce supports the proposed NEXUS Gas Transmission project and would like to request the FERC approve the project's application. Our mission is to promote, educate and assist in the growth and success of businesses in Monroe County, Michigan. Reliable, clean and affordable energy is vital to both of these objectives, and the NEXUS natural gas pipeline will ensure that our region and its businesses have the energy needed to succeed well into the future.

CO9-1 | The pipeline is expected to be a major contributor to employment in Michigan and Ohio. Monroe County anticipates \$253,900 in additional tax revenue that will support public services like education and public safety. These benefits have a way of rippling across a region and raising living standards, helping more people achieve prosperity. Strict regulatory oversight and advances in technology have helped make pipelines the most safe and reliable way to transport fuel.

CO9-2 | We think it is important to note that Michigan-based DTE Energy, a partner in the NEXUS Project, has demonstrated its interest in providing reliable, affordable energy while also being a good corporate citizen and a steward of our environment. The company has worked diligently and successfully to strengthen wildlife habitats and native species' populations in Monroe County, and it has signaled intent to use existing distribution lines to bring natural gas to customers without impacting critical wetland and wildlife habitats.

The NEXUS Project is vital to the economic development of Southeastern Michigan, and we believe that moving the gas via pipeline is the safest option for our community. On behalf of the Monroe County Chamber of Commerce, I ask you to please approve this important project.

Sincerely,

Don Lieto

CO9-1 Comment noted.

CO9-2 Comment noted.

COMPANIES/ORGANIZATIONS COMMENTS

CO10 – The Wilderness Center



THE WILDERNESS CENTER

EDUCATION • CONSERVATION • STEWARDSHIP

ORIGINAL

FILED
SECRETARY OF THE
COMMISSION

2016 AUG -5 P 4: 51

FEDERAL ENERGY
REGULATORY COMMISSION

July 27, 2016

Kimberly D. Bose, Secretary
Federal Energy Regulatory Commission
888 First St. NE, Room 1-A
Washington, DC 20426

Docket Number: (CP 16-22-000)

CO10-1

This letter is in reference to the NEXUS Gas Transmission Project in Ohio and the proposed City of Green Route Alternative to the primary route. We recently received information that the proposed alternative would include four parcels that are part of the 144 acre Falcon Flats Nature Preserve located in southwestern Stark Co., Ohio. The property is owned and protected in perpetuity by The Wilderness Center, Inc. a 501(c)(3) non-profit nature center and land conservancy that has been in operation in this community since 1964.

Portions of three of the parcels are protected under an Environmental Covenant through the State of Ohio (Instrument # 20151216005418). The fourth parcel is dominated by forested and emergent wetlands. This last parcel also has a USFWS verified active bald eagle nest with the successful fledging of an eaglet in 2015 and 2016.

CO10-2

Therefore, we feel that the proposed City of Green Route Alternative would have an environmentally detrimental effect on the Falcon Flats Nature Preserve; not-to-mention other environmentally sensitive stream, wetland and riparian areas along this alternate route through Stark County. It would also likely infringe upon the designated Environmental Covenant area within the Preserve.

Sincerely,

Gary J. Popotnik
Conservation Manager

Jeffrey R. Comey
Executive Director

- CO10-1 See section 3.3.3 of for a discussion of the Falcon Flats Nature Preserve on the City of Green Route Alternative. As discussed in that section, we do not find the City of Green Route Alternative provides a substantial environmental advantage when compared to the corresponding segment of the proposed route and do not recommend that it be incorporated as part of the Projects.
- CO10-2 See response to comment CO10-01 above.

R-164

COMPANIES/ORGANIZATIONS COMMENTS

CO10 – The Wilderness Center (cont'd)

13A


Instr: 201512150050418 12/16/2015
P: 1 of 13 P: \$155.00
Rick Campbell 12:30PM 15C
Stark County Recorder 720150048299

"EXHIBIT A"

ENVIRONMENTAL COVENANT

This Environmental Covenant is entered into pursuant to Ohio Revised Code 5301.80 to 5301.92 by The Wilderness Center the "Owner" and "Holder", a 501 (c) (3) non-profit conservation organization having an address of 9877 Alabama Ave. SW, Wilmot, Ohio 44689 and Akron-Canton Airport having an address of 5400 Lauby Rd NW, North Canton, Ohio 44720, and the Ohio Environmental Protection Agency as a non-holder agency, for the purpose of subjecting certain property ("the Covenant Area") to the activity and use limitations set forth herein.

WHEREAS, The Wilderness Center is the owner in fee of certain real property (Parcel# 6780146, 6780147, 6780148), which contains the Covenant Area and is situated in Sugar Creek township, Stark County, Ohio, in the Sugar Creek watershed;

WHEREAS, Akron-Canton Airport has proposed to construct a certain project on certain other real property located in Jackson Township, Stark County, Ohio which Project impacts certain surface water features located on the Akron-Canton Airport Property and the approvals for which project required that Akron-Canton Airport obtain a water quality certification pursuant to Section 401 of the Clean Water Act, 33 U.S.C. § 1344 from the Ohio EPA and Nationwide Permit ("NWP") coverage from the Army Corps of Engineers ("the Army Corps");

WHEREAS, in order to mitigate such impacts on the Akron-Canton Airport Property, and as a condition of being issued the 401 water quality certification Ohio EPA ID No. 062522 (the "401 Certification"), ACOE No. 200401289 and the NWP, the Army Corps and the Ohio EPA have required that Akron-Canton Airport obtain mitigation property and to protect this property in perpetuity with an environmental covenant;

WHEREAS, to meet the conditions in the 401 Certification, Akron-Canton Airport has entered into an agreement with the Owner which provides, among other things, that Akron-Canton Airport will construct and implement the mitigation requirements contained in Akron-Canton Airport 401 Certification and the mitigation plan on a specific area owned by The Wilderness Center;

Page 1 of 10.

*Prepared by:
The Wilderness
Center
Crawford Popotnik*

R-165

COMPANIES/ORGANIZATIONS COMMENTS

CO10 – The Wilderness Center (cont'd)

Instr: 201512160050418
P. 2 of 13 F. \$136.00 12/16/2015
Rick Campbell 12:30PM MISC
Stark County Recorder 120150048299

WHEREAS, the Covenant Area possesses substantial value in conserving and protecting the physical, biological and chemical integrity of Sugar Creek and is important in the protection of the existing or designated use of the waters of the state pursuant to § 303 of the Clean Water Act, 33 U.S.C. § 1313 and § 6111.041 of the Ohio Water Pollution Control Act. The specific conservation values (hereinafter "Conservation Values") of the Covenant Area have been documented in a document entitled "Stream Mitigation Plan, Proposed Akron-Canton Airport, Sugar Creek Township, Stark County" OEPA File# 062522; ACOE File # 200401289. Mitigation plan dated July 10, 2006.

WHEREAS, The Wilderness Center proposes to fulfill its obligation to ensure the Covenant Area and the Covenant Area's Conservation Values are protected in perpetuity by this Environmental Covenant.

Now therefore, The Wilderness Center and Ohio EPA agree to the following:

1. Environmental Covenant. This instrument is an environmental covenant developed and executed pursuant to R.C. Sections 5301.80 to 5301.92.
2. Covenant Area. The Covenant Area is an approximately 2.83 acre tract of real property; OR real property parcels numbered 6780146, 6780147, 6780148, located at The Wilderness Center's Falcon Flats Preserve, in Stark County, Ohio, and more particularly described in Exhibit A [narrative] and Exhibit B [deed and map] attached hereto and hereby incorporated by reference herein (the Covenant Area).
3. The Owner is the fee simple owner of the Covenant Area.
4. The Holder is the holder of this Environmental Covenant.
5. Activity and Use Limitations. As part of the conditions set forth in the 401 Certification issued to the Akron-Canton Airport and given the conservation values of the Covenant Area, the Owner hereby imposes and agrees to comply with the following activity and use limitations on the Covenant Area:
 - a. Division: Any division or subdivision of the Covenant Area is prohibited;
 - b. Commercial Activities: Commercial development or industrial activity on the Covenant Area is prohibited;
 - c. Construction: The placement or construction of any man-made modifications such as buildings, structures, fences, roads and parking lots on the Covenant Area is prohibited, other than construction

COMPANIES/ORGANIZATIONS COMMENTS

CO10 – The Wilderness Center (cont'd)

Instr: 201512160050418
Pg 3 of 13 F: 5135.00 12/16/2015
Rick Campbell 12:30PM EST
Stark County Recorder T20150046295

activities that are authorized by the 401 mitigation plan approved by the Ohio EPA;

- d. Cutting and Other Control of Vegetation: Any cutting of trees, ground cover or vegetation, or destroying by means of herbicides or pesticides on the Covenant Area is prohibited, other than the removal or control of invasive and noxious species and control activities that are authorized by the 401 mitigation plan approved by the Ohio EPA;
- e. Dumping: Waste, garbage and unsightly or offensive materials are not permitted and may not be accumulated on the Covenant Area;
- f. Land Surface Alteration: The removal of soil, gravel, rock and other minerals or other materials from the Covenant Area, or doing any act that would alter the topography of the Covenant Area shall be prohibited;
- g. Water Courses: Natural water courses and streams and adjacent riparian buffers may not be dredged, straightened, filled, channelized, impeded, diverted or otherwise altered on the Covenant Area, other than as part of activities that are authorized by the 401 mitigation plan approved by the Ohio EPA;
- h. Recreational Trails and Vehicles: Recreational uses that disturb or compact the soils or destroy or inhibit the growth of vegetation are prohibited;
- i. Utilities: Construction of utilities on the Covenant Area shall be prohibited. Underground or above ground utilities may only be constructed if no other alternatives are available and the Ohio EPA has approved the exception;
- j. Other Activities: Each and every other activity or construction project which might endanger the natural, scenic, biological, and ecological integrity of the Covenant Area shall be prohibited.

6. Running with the Land. This Environmental Covenant shall be binding upon the Owner and all assigns and successors in interest, including any Transferee, and shall run with the land, pursuant to R.C. Section 5301.85, subject to amendment or termination as set forth herein. The term "Transferee" as used in this Environmental Covenant, shall mean any future owner of any interest in the Covenant Area or any portion thereof, including, but not limited to, owners of an interest in fee simple, mortgagees, easement holders, and/or lessees.

COMPANIES/ORGANIZATIONS COMMENTS

CO10 – The Wilderness Center (cont'd)

Instr: 201512160050418 12/16/2015
P.4 of 13 P. 5136.00
Rick Campbell 12:30PM MSC
Stark County Recorder T20150048259

7. Compliance Enforcement. Compliance with this Environmental Covenant may be enforced pursuant to R.C. Section 5301.91 or other applicable law. Failure to timely enforce compliance with this Environmental Covenant or the use limitations contained herein by any party shall not bar subsequent enforcement by such party and shall not be deemed a waiver of the party's right to take action to enforce any provision of this Covenant. Nothing in this Environmental Covenant shall restrict the Director of Ohio EPA from exercising any authority under applicable law in order to protect public health or safety or the environment.

8. Rights of Access. Owner hereby grants to Ohio EPA, its agents, contractors, and employees and the Holder or its agents the right of access to the Covenant Area in connection with the implementation or Enforcement of this Environmental Covenant.

9. Compliance Reporting. Owner and any Transferee shall submit to Ohio EPA, upon request by the Ohio EPA, written documentation verifying that the activity and use limitations remain in place and are being complied with.

10. Notice upon Conveyance. Each instrument hereafter conveying any interest in the Covenant Area or any portion of the Covenant Area shall contain a notice of the activity and use limitations set forth in this Environmental Covenant, and provide the recorded location of this Environmental Covenant. The notice shall be substantially in the following form:

THE INTEREST CONVEYED HEREBY IS SUBJECT TO AN ENVIRONMENTAL COVENANT, DATED _____, 2015, RECORDED IN THE DEED OR OFFICIAL RECORDS OF THE STARK COUNTY RECORDER ON _____, 2015, IN [DOCUMENT _____, or BOOK _____, PAGE _____]. THE ENVIRONMENTAL COVENANT CONTAINS THE FOLLOWING ACTIVITY AND USE LIMITATIONS:

Activity and Use Limitations. As part of the conditions set forth in the 401 Certification issued to the Akron-Canton Airport and given the conservation values of the Covenant Area, the Owner hereby imposes and agrees to comply with the following activity and use limitations on the Covenant Area:

Division: Any division or subdivision of the Covenant Area is prohibited;

Commercial Activities: Commercial development or industrial activity on the Covenant Area is prohibited;

COMPANIES/ORGANIZATIONS COMMENTS

CO10 – The Wilderness Center (cont'd)


Instr: 201512150050418
P. 5 of 13 F: \$126.00 12/16/2015
Rick Campbell 12:30PM EST
Stark County Recorder T20150048259

Construction: The placement or construction of any man-made modifications such as buildings, structures, fences, roads and parking lots on the Covenant Area is prohibited, other than construction activities that are authorized by the 401 mitigation plan approved by the Ohio EPA;

Cutting and Other Control of Vegetation: Any cutting of trees, ground cover or vegetation, or destroying by means of herbicides or pesticides on the Covenant Area is prohibited, other than the removal or control of invasive and noxious species and control activities that are authorized by the 401 mitigation plan approved by the Ohio EPA;

Dumping: Waste, garbage and unsightly or offensive materials are not permitted and may not be accumulated on the Covenant Area;

Land Surface Alteration: The removal of soil, gravel, rock and other minerals or other materials from the Covenant Area, or doing any act that would alter the topography of the Covenant Area shall be prohibited'

Water Courses: Natural water courses and streams and adjacent riparian buffers may not be dredged, straightened, filled, channelized, impeded, diverted or otherwise altered on the Covenant Area, other than as part of activities that are authorized by the 401 mitigation plan approved by the Ohio EPA.

Recreational Trails and Vehicles: Recreational uses that disturb or compact the soils or destroy or inhibit the growth of vegetation are prohibited;

Utilities: Construction of utilities on the Covenant Area shall be prohibited. Underground or above ground utilities may only be constructed if no other alternatives are available and the Ohio EPA has approved the exception;

Other Activities: Each and every other activity or construction project which might endanger the natural, scenic, biological, and ecological integrity of the Covenant Area shall be prohibited.

Owner shall notify Ohio EPA within ten (10) days after each conveyance of an interest in any portion of the Covenant Area. Owner's notice shall include the name, address and telephone number of the Transferee, and a copy of the original document that imposed restrictions on the Covenant Area.

COMPANIES/ORGANIZATIONS COMMENTS

CO10 – The Wilderness Center (cont'd)


Instr: 201312160050418
P.S. of 13 F. \$136.00 12/16/2015
Rick Casbell 12:30PM NISC
Stark County Recorder T20150048299

11. Representations and Warranties. The Wilderness Center hereby represents and warrants to the other signatories hereto:

- a. that the Owner is the sole owner of the Covenant Area;
- b. that the Owner holds fee simple title to the Covenant Area that is free, clear and unencumbered and, for example, is not subject to any utility, road or other easement;
- c. that the Owner has the power and authority to enter into this Environmental Covenant, to grant the rights and interests herein provided and to carry out all obligations hereunder; and
- d. that this Environmental Covenant will not materially violate or contravene or constitute a material default under any other agreement, document or instrument to which Owner is a party or by which Owner may be bound or affected.

12. Amendment or Termination. This Environmental Covenant may be amended or terminated only by consent of all of the following: the Owner or a Transferee, the Holder[s], and the Ohio EPA, pursuant to R.C. §§ 5301.89 or 5301.90 and other applicable law. "Amendment" means any changes to the Environmental Covenant, including the activity and use limitations set forth herein, or the elimination of one or more activity and use limitations when there is at least one limitation remaining. "Termination" means the elimination of all activity and use limitations set forth herein and all other obligations under this Environmental Covenant. Amendment or termination shall not affect Akron-Canton Airport obligations pursuant to the 401 Certification.

This Environmental Covenant may be amended or terminated only by a written instrument duly executed by the Director of Ohio EPA, the Holder[s], and the Owner[s] or Transferee[s] of the Covenant Area or portion thereof, as applicable. Within thirty (30) days of signature by all requisite parties on any amendment or termination of this Environmental Covenant, the Owner[s] or Transferee[s] shall file such instrument for recording with the Stark County Recorder's Office, and shall provide a true copy of the recorded instrument to Ohio EPA.

13. Severability. If any provision of this Environmental Covenant is found to be unenforceable in any respect, the validity, legality, and enforceability of the remaining provisions shall not in any way be affected or impaired.

14. Governing Law. This Environmental Covenant shall be governed by and interpreted in accordance with the laws of the State of Ohio.

R-170

COMPANIES/ORGANIZATIONS COMMENTS

CO10 – The Wilderness Center (cont'd)

Instr: 201512160050418 12/16/2015
P. 7 of 15 F. \$136.00
Rick Campbell 12:30PM MSC
Stark County Recorder T20150048299

15. Recordation. Within *thirty (30)* days after the date of the final required signature upon this Environmental Covenant, the Owner shall file this Environmental Covenant for recording, in the same manner as a deed to the property, with the Stark County Recorders Office.

16. Effective Date. The effective date of this Environmental Covenant shall be the date upon which the fully executed Environmental Covenant has been recorded as a deed record for the Covenant Area with the Stark County Recorder.

17. Distribution of Environmental Covenant. The Wilderness Center shall distribute a file- and date-stamped copy of the recorded Environmental Covenant to: Ohio EPA; the County of Stark; Sugar Creek Township, any lessee, each person who signed the Environmental Covenant, each person holding a recorded interest in the Property, and any other person designated by Ohio EPA; see ORC Section 5301:83].

18. Notice. Unless otherwise notified in writing by or on behalf of the current owner or Ohio EPA, any document or communication required by this Environmental Covenant shall be submitted to:

Division of Surface Waters
Ohio EPA
P.O. Box 1049
Columbus, Ohio 43216-1049

19. Counterparts. This Covenant may be executed in several counterparts, each of which may be deemed an original, and all of such counterparts together shall constitute one and the same Covenant.

The undersigned [representatives of] the Owner and Holder represent and certify that they are authorized to execute this Environmental Covenant.

12/16/2015 12:30 PM
RICK CAMPBELL
STARK COUNTY RECORDER

COMPANIES/ORGANIZATIONS COMMENTS

CO10 – The Wilderness Center (cont'd)

Instr: 20151216000418 12/16/2015
P: B of 13 F \$150.00 12:30PM MISC
Rick Campbell Stark County Recorder 120150048299

IT IS SO AGREED:

OWNER/HOLDER:

The Wilderness Center

By: 
Jeffrey R. Conroy

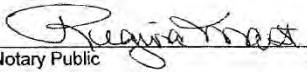
Its: Executive Director

Date: 10/30/2015

State of Ohio)
County of Stark) ss:

Before me, a notary public, in and for said county and state, personally appeared ~~John Conroy~~ a duly authorized representative of JWC, who acknowledged to me that ~~he/she~~ did execute the foregoing instrument on behalf of JWC.

IN TESTIMONY WHEREOF, I have subscribed my name and affixed my official seal this 30th day of Oct., 2015.


Notary Public

REGINA MAST
NOTARY PUBLIC - STATE OF OHIO
My commission expires Oct. 23, 2016

R-172

COMPANIES/ORGANIZATIONS COMMENTS

CO10 – The Wilderness Center (cont'd)

Instr: 201512160050418
Pg 9 of 13 F: \$136.00 12/16/2015
Rick Campbell 12:30PM MSC
Stark County Recorder T20150048299

HOLDER:

The Wilderness Center

By:

Jeffrey R. Cooney

Its: Executive Director

Date: 10/30/2015

State of Ohio)

County of Stark)

ss:

Before me, a notary public, in and for said county and state, personally appeared Jeffrey Cooney, a duly authorized representative of the, who acknowledged to me that he/she did execute the foregoing instrument on behalf of the.

IN TESTIMONY WHEREOF, I have subscribed my name and affixed my official seal this 30 day of Oct, 2015.

REGINA MAST
NOTARY PUBLIC
STATE OF OHIO
MY COMMISSION EXPIRES

Notary Public

REGINA MAST
NOTARY PUBLIC - STATE OF OHIO
My commission expires Oct. 23, 2016



COMPANIES/ORGANIZATIONS COMMENTS

CO10 – The Wilderness Center (cont'd)

Instr: 201512160050418
P. 10 of 137: 1136.00 12/16/2015
Rick Campbell 12:30PMMISC
Stark County Recorder 120150048290

OHIO ENVIRONMENTAL PROTECTION AGENCY

By: [Signature]
Its: Director

Date: 12-04-15

State of Ohio)
) ss:
County of Franklin)

Before me, a notary public, in and for said county and state, personally appeared **CRRIG W. BUTLER**, the Director of Ohio EPA, who acknowledged to me that ~~he~~ she did execute the foregoing instrument on behalf of Ohio EPA.

IN TESTIMONY WHEREOF, I have subscribed my name and affixed my official seal this 4th day of Dec., 2015.
DECEMBER



Charma Diane Casteel
Notary Public

CHARMA DIANE CASTEEL
NOTARY PUBLIC
STATE OF OHIO
MY COMMISSION EXPIRES
May 10, 2019

12/16/2015 12:30PMMISC
RICK CAMPBELL
STARK COUNTY RECORDER

R-174

COMPANIES/ORGANIZATIONS COMMENTS

CO10 – The Wilderness Center (cont'd)

President
Bruce D. Conery, P.S.

July 13, 2015

BUCKEYE SURVEYING SERVICES, INC.
1050 Liberty Lane N.W.
North Canton, Ohio 44720
E-mail: buckeyesurveying@sbcglobal.net

(330) 966-5259
FAX (330) 966-5260


Instr: 201512160050418 12/16/2015
P: 12 of 13 F: \$136.00 12:30PM NISC
Rick Campbell
Stark County Recorder T20150048299

Description of a 2.828 Acre Tract ENVIRONMENTAL COVENANT

Situated in the Township of Sugar Creek, County of Stark and State of Ohio and known as being part of the Southwest Quarter of Section 14, (T-11,R-10), and being parts of 5.543 Acre, 5 458 Acre and 6.126 Acre tracts of land as conveyed to The Stark Wilderness Center, Inc. by a deed recorded in I.N. 200508120053517 of the Stark County Records, more fully bounded and described as follows, to-wit:

Beginning at the southwest corner of said Southwest Quarter of Section 14, thence S83°58'03"E along the south line of said Quarter a distance of 614.17 feet to a point and the true place of beginning for the tract of land herein described;

1. Thence N37°09'57"E a distance of 127.43 feet to a point;
2. Thence N10°11'57"E a distance of 69.58 feet to a point;
3. Thence N15°32'03"W a distance of 276.98 feet to a point;
4. Thence N29°25'03"W a distance of 566.05 feet to a point on a southeasterly line of a 6.007 acre tract of land conveyed to The Stark Wilderness Center, Inc. by a deed recorded in said I.N. 200508120053517;
5. Thence S83°05'43"E a distance of 325.99 feet to a corner of a tract of land conveyed to The Stark Wilderness Center, Inc. by a deed recorded in I.N. 200604210023704;
6. Thence S27°46'57"W along said Wilderness Center tract and a northwesterly line of a tract of land now or formerly owned by T. O. & P. A. Bauldry (238-40), a distance of 128.10 feet to a point;
7. Thence S00°20'03"E continuing along said Bauldry tract a distance of 113.10 feet to a point;
8. Thence S29°25'03"E continuing along said Bauldry tract a distance of 216.90 feet to a point;
9. Thence S15°32'03"E continuing along said Bauldry tract a distance of 312.00 feet to a point;
10. Thence S10°11'57"W continuing along said Bauldry tract a distance of 116.40 feet to a point;
11. Thence S37°09'57"W continuing along said Bauldry tract a distance of 91.00 feet to a point on the south line of said Quarter Section;
12. Thence N83°58'03"W along said Quarter Section line a distance of 116.83 feet to the true place of beginning.

SCSW1403EC

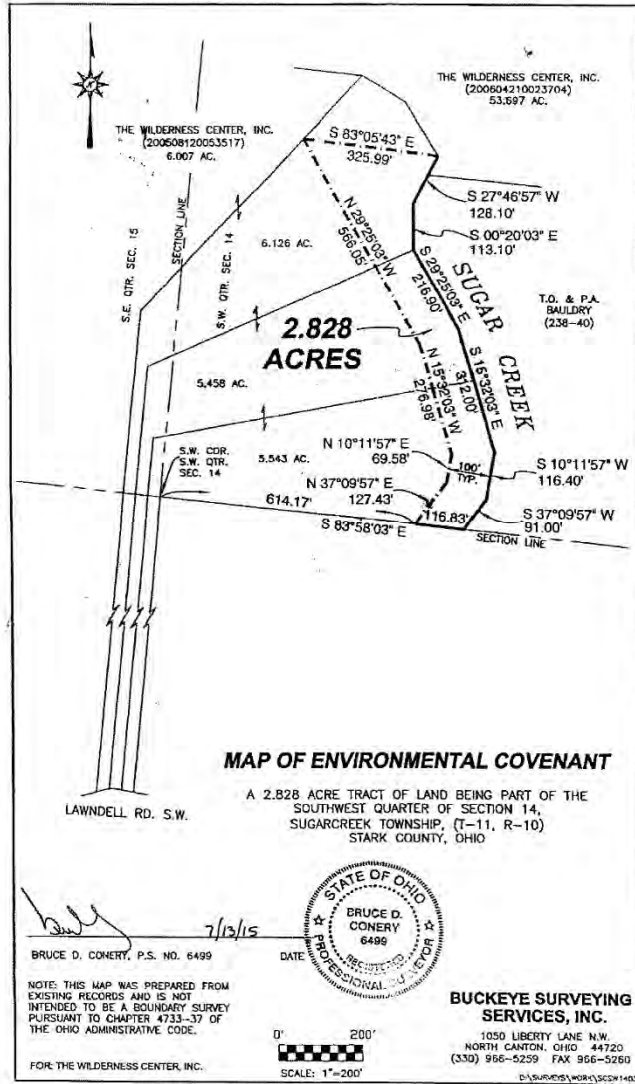
R-175

COMPANIES/ORGANIZATIONS COMMENTS

CO10 – The Wilderness Center (cont'd)

R-176

FILE # 20151216080413 12/16/15 12:18
 Rick Campbell 12/30/15 12:30PM
 Stark County Recorder 201508048299



COMPANIES/ORGANIZATIONS COMMENTS

CO10 – The Wilderness Center (cont'd)

R-177



Companies/Organizations Comments

COMPANIES/ORGANIZATIONS COMMENTS

CO10 – The Wilderness Center (cont'd)

R-178



Companies/Organizations Comments

COMPANIES/ORGANIZATIONS COMMENTS

CO11 – Oil International

20160908-5124 FERC PDF (Unofficial) 8/8/2016 11:25:02 AM

UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

August 08, 2016

In the Matter of

ATLANTIC COAST PIPELINE, LLC	CP15-554-000
	CP15-554-001
NATIONAL FUEL GAS SUPPLY CORP/EMPIRE PIPELINE, INC.	CP15-115-000
NORTHERN ACCESS 2016 PROJECT	CP15-115-001
TRANSCONTINENTAL GAS PIPE LINE CO., LLC	CP15-138-000
ATLANTIC SUNRISE PROJECT	
TEXAS EASTERN TRANSMISSION, LP	CP16-3-000
ACCESS SOUTH/ADAIR SOUTHWEST/LEBANON EXTENSION	CP16-3-001
TENNESSEE GAS PIPELINE COMPANY, L.L.C.	CP15-77-000
BROAD RUN EXPANSION PROJECT	
COLUMBIA GAS TRANSMISSION, LLC	CP16-38-000
WB XPRESS PROJECT	
COLUMBIA GAS TRANSMISSION, LLC	CP15-514-000
LEACH XPRESS PROJECT	
ROVER PIPELINE LLC	CP15-93-000
ROVER PIPELINE PROJECT	
PENNEAST PIPELINE COMPANY, LLC	CP15-558-000
PENNEAST PIPELINE PROJECT	
NEXUS GAS TRANSMISSION, LLC	CP16-22-000
NEXUS GAS TRANSMISSION PROJECT (NGT)	
MOUNTAIN VALLEY PIPELINE, LLC	CP16-10-000
MVP PROJECT (SEE EQUITRANS/CP16-13)	

COMMENTS OF OIL CHANGE INTERNATIONAL ON GREENHOUSE GAS EMISSIONS FROM NATURAL GAS PIPELINES, ON BEHALF OF OIL CHANGE INTERNATIONAL, SIERRA CLUB, EARTHWORKS, APPALACHIAN VOICES, CHESAPEAKE CLIMATE ACTION, 350.ORG, BOLD ALLIANCE, ENVIRONMENTAL ACTION, BLUE RIDGE ENVIRONMENTAL DEFENSE LEAGUE, PROTECT OUR WATER, HERITAGE AND RIGHTS (VIRGINIA & WEST VIRGINIA), FRIENDS OF WATER, MOUNTAIN LAKES PRESERVATION ALLIANCE, SIERRA CLUB WEST VIRGINIA, SIERRA CLUB VIRGINIA.

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COMPANIES/ORGANIZATIONS COMMENTS

CO11 – Oil International

20160908-5124 FERC PDF (Unofficial) 8/8/2016 11:25:02 AM

CO11-1

Oil Change International hereby files the following comments on behalf of the organizations listed above. The supporting document addresses the greenhouse gas emissions associated with the proposed pipeline projects listed above. It makes clear the importance of a climate test for all natural gas infrastructure. In light of the Final Guidance for Federal Departments and Agencies on Consideration of Greenhouse Gas Emissions and the Effects of Climate Change in National Environmental Policy Act Reviews issued by the Executive Office of the President's Council on Environmental Quality on August 1, 2016, the alignment of natural gas infrastructure permitting with national climate goals and plans must become a priority for FERC and other federal government agencies. The above organizations request FERC to conduct full Greenhouse Gas impact analysis as part of the NEPA process for all listed projects, in line with the above mentioned CEO guidance.

Respectfully submitted,

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CO11-1 See the response to comment CO8-15.

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COMPANIES/ORGANIZATIONS COMMENTS

CO11 – Oil International (cont'd)

R-181



A BRIDGE TOO FAR: JULY 2016
HOW APPALACHIAN BASIN
GAS PIPELINE EXPANSION WILL
UNDERMINE U.S. CLIMATE GOALS



COMPANIES/ORGANIZATIONS COMMENTS

CO11 – Oil International (cont'd)

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July 2016

Design: paul@hellopaul.com

Cover image: Despite Maryland's moratorium on hydraulic fracturing, the pipeline buildout in the state is moving right along. This photo shows the right-of-way of Columbia's 26th Line MB extension, 21 miles of natural gas transmission line, currently being built through Harford and Baltimore Counties. (FERC Docket: CP13-8). @Sierra Shamer, FracTracker Alliance.

Oil Change International is a research, communications, and advocacy organization focused on exposing the true costs of fossil fuels and facilitating the coming transition towards clean energy.

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COMPANIES/ORGANIZATIONS COMMENTS

CO11 – Oil International (cont'd)

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COMPANIES/ORGANIZATIONS COMMENTS

CO11 – Oil International (cont'd)

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EXECUTIVE SUMMARY

*“There is such a thing as being too late when it comes to climate change.
The science tells us we have to do more.”*

President Barack Obama, August 2015

This report details the increasing threat to the climate from American natural gas production. We document the emergence of the Appalachian Basin as the key source of projected natural gas production growth in the coming decades. We also identify the proposed pipelines that would enable that growth, and how this gas production would undermine national and global climate goals.

In the early 1990's, many promoted natural gas as a “bridge” to a clean energy future. Despite 25 years of changing economics, technology, and climate science, some in government and industry still believe in this bridge over a gap that no longer exists. This report rebuts the remaining “natural gas as bridge fuel” arguments and recommends constraining gas production by applying a climate test to the permitting of all gas pipeline proposals. Energy policy must align with climate science.

KEY POINTS

- ❑ Current projections for U.S. natural gas production – fueled by the ongoing gas boom in the Appalachian Basin – are not aligned with safe climate goals, or the current U.S. long-term climate target.
- ❑ Any analysis of the need for gas supply must be premised on national and international climate goals, not business-as-usual.
- ❑ Currently there are 19 pending natural gas pipeline projects that will increase the takeaway capacity from the Appalachian Basin and enable a doubling in gas production from the region in the coming decade. Dozens of downstream projects are also planned.
- ❑ With the 40-year plus lifespan of gas pipelines and power plants, new pipelines would lock in unsustainable levels of gas production, as investors and operators will have financial incentive to maximize production once initial investment is complete.
- ❑ Reducing methane leakage is important, but it does not provide a license to grow production.
- ❑ The Obama Administration must work to align FERC and all government agency decisions with safe climate goals. A Climate Test is essential for all decisions regarding fossil fuels: www.climatestest.org
- ❑ It doesn't have to be this way. Clean energy technology is here now, affordable, and ready to meet our needs.

COMPANIES/ORGANIZATIONS COMMENTS

CO11 – Oil International (cont'd)

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THE APPALACHIAN BASIN IS THE KEY SOURCE OF POTENTIAL U.S. GAS PRODUCTION GROWTH

In the past decade, natural gas production in the Appalachian Basin has experienced unprecedented growth – particularly in the Marcellus and Utica shale formations in Pennsylvania, West Virginia, and Ohio. As a result of the use of hydraulic fracturing (fracking) and horizontal drilling to access previously inaccessible gas formations, gas production from the Appalachian Basin has grown 13-fold since 2009, reaching over 18 billion cubic feet per day (Bcf/d) in 2015.

It is widely expected that production in the Appalachian Basin region will double over current levels by the early 2030s. In 2010, the Appalachian Basin produced just four percent of U.S. gas production, but by 2030 it could provide around 50 percent.

THE PIPELINE RUSH WOULD UNLOCK NEW GAS

To support this planned huge expansion of production, the industry wants to build infrastructure, and in particular, pipelines. Dozens of proposed pipeline projects in the region are currently being considered for permitting by FERC. Of these, there are 19 key pending pipeline projects that would unlock at least 15.2 Bcf/d of production. Building these pipelines would enable the Appalachian Basin to expand production well beyond current levels. All together, these 19 pending pipeline projects would enable 116 trillion cubic feet of additional gas production by 2050.

U.S. GAS PRODUCTION GROWTH IS OUT OF SYNC WITH CLIMATE GOALS

The potential for further growth in gas production represents a major challenge for U.S. climate policy. The Paris Agreement on climate change, signed by 178 nations as of June 2016, establishes the goal of "holding the increase in global average temperature to well below 2°C above preindustrial levels and pursuing efforts to limit the temperature increase to 1.5°C above preindustrial levels."¹ The current U.S. long-term climate target – which may not be enough to achieve the "well below 2 degrees" goal set in Paris – is an emissions cut of 83 percent from 2005 levels by 2050.²

The U.S. Energy Information Administration's (EIA) latest projection for U.S. gas supply and demand (Annual Energy Outlook 2016) shows a 55 percent increase in production and a 24 percent increase in consumption by 2040. The difference between the greater rise in production than consumption would go to export, making the U.S. a major exporter of natural gas in the coming decades. This projection also sees U.S. energy-related CO₂ emissions declining only around 4 percent from 2015 levels, in stark contrast to the climate leadership this Administration has strived for.



Cross-country pipe being installed.
©Ed Wade, Wetzel County Action Group,
FracTracker Alliance

COMPANIES/ORGANIZATIONS COMMENTS

CO11 – Oil International (cont'd)

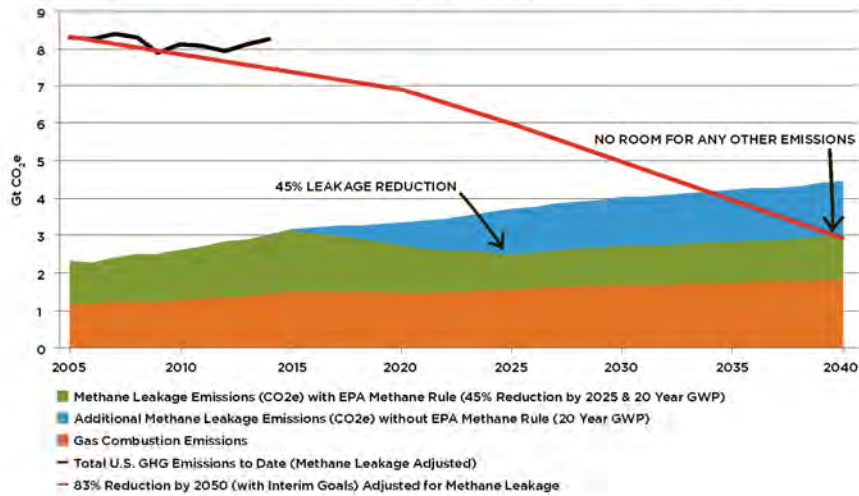
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The currently planned gas production expansion in Appalachia would make meeting U.S. climate goals impossible, even if the Administration's newly proposed methane rules are successful in reducing methane leakage by 45 percent. Our calculations show that the rise in gas consumption projected by the EIA would alone lead to emissions that would surpass the current long-term U.S. climate target by 2040, even after accounting for methane leakage cuts. This ignores the emissions from the production (and consumption) of exported gas. In other words, even if gas were the only source of greenhouse gases in 2040, it would still blow the U.S. carbon budget. This makes it clear that the growing use of gas is out of sync with U.S. climate goals (see Figure ES-1).

New gas power plants and pipelines are designed to last at least 40 years. Once the initial capital has been spent on them, they will likely operate even at a loss to the detriment of cleaner sources. It makes more sense to avoid these investments now and instead allow clean energy technologies to fulfill their maximum potential.

When President Obama made the historic decision to deny the Presidential Permit for the Keystone XL pipeline, he did so because, in his words: "America is now a global leader when it comes to taking serious action to fight climate change. And frankly, approving this project would have undercut that global leadership. And that's the biggest risk we face – not acting."

Figure ES-1: Projected U.S. GHG Emissions from Gas Usage & Leakage vs. U.S. 2050 Climate Target
Sources: U.S. Energy Information Administration, Environmental Protection Agency, and the Intergovernmental Panel on Climate Change³



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INTRODUCTION

On April 22, 2016, over 170 nations signed the Paris Agreement on climate change at the U.N. in New York. Today the number of signatories stands at 178. The U.S. received credit for working with China and other large emitters to seal the deal.

The targets in the agreement aim to keep global temperatures “well below” 2°C and “pursu[e] efforts to limit the temperature increase to 1.5°C above preindustrial levels”. Given the level that emissions have reached in recent years, these targets will require a dramatic effort.

The role of the U.S. in achieving these goals is paramount. As the world’s second largest emitter of greenhouse gases (GHGs) and as one of the most prolific sources of fossil fuels in the world, the U.S. will need to coordinate every level of government to play its role in achieving the world’s climate goals. With a currently stated national goal to cut emissions by 83 percent from 2005 levels by 2050, the U.S. has no time to waste.

To date, such coordination is sorely lacking. Departments and agencies of the federal government that are responsible for permitting fossil fuel infrastructure are pursuing a business-as-usual approach that neglects climate change as a factor in their decision-making. FERC is one such agency.

FERC is responsible for issuing permits for the construction and operation of interstate natural gas pipelines, among

other things. As the proliferation of fracking and horizontal drilling has triggered an unprecedented growth in natural gas production, FERC has issued dozens of permits in recent years to expand and redirect existing pipelines, and plow new pipelines across the country to facilitate further expansion.

In the next few years, the Appalachian Basin could become the epicenter of this pipeline buildout, and FERC stands as the gatekeeper to dozens of major projects yet to be permitted. These projects could unleash a massive surge in natural gas production from this region, allowing U.S. natural gas production to aggressively grow at precisely the time that the world needs to constrain fossil fuels of every kind.

At stake is the attainment of U.S. climate goals. Locking in new natural gas infrastructure, with an economic lifespan of at least 40 years, could appropriate all of the U.S. emissions budget for natural gas alone. In other words, far from providing a bridge to clean energy, natural gas could undermine the transition that is required for a safe climate future.

At the core of this issue are two myths that have so far been diligently plied by the natural gas industry: 1) that gas is substantially cleaner than coal, and 2) that relentless gas production growth is integral to the clean energy transition and therefore in the public interest.

Both of these myths are countered in this report.

The report details the following:

- ① The Appalachian Basin could become the primary source of U.S. gas in the future.
- ② Proposed pipelines in the Appalachian Basin would unlock substantial growth in U.S. natural gas production.
- ③ The surge in natural gas supply associated with these pipelines is entirely out of sync with U.S. climate goals.
- ④ Renewable energy is ready now to supply U.S. energy needs at competitive cost.

Finally, the report recommends that in order for the U.S. to achieve the climate goals it has set, government agencies must apply a climate test to future infrastructure and policy decisions. The test should be based on prevailing climate science and an understanding of the role of fossil fuel supply on energy markets. In particular, FERC must apply a climate test to gas pipelines and other gas infrastructure that seeks a permit.

Cross-country pipe being installed.
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COMPANIES/ORGANIZATIONS COMMENTS

CO11 – Oil International (cont'd)

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THE APPALACHIAN BASIN IS THE KEY SOURCE OF POTENTIAL U.S. GAS PRODUCTION GROWTH

The Appalachian Basin is defined by the U.S. Geological Survey as stretching from Alabama to Maine, encompassing the majority of the U.S. eastern seaboard.¹ For the purposes of this briefing, we focus on the centers of natural gas production in the states of Pennsylvania (PA), West Virginia (WV), and Ohio (OH). We use the term Appalachian Basin to encompass the gas production in these three states.

In 2009, dry gas² production from these three states was barely 1.7 Bcf/d. This is only slightly more than the capacity of just one of the larger proposed major pipelines, such as the 1.5 Bcf/d Atlantic Coast Pipeline proposed in Virginia by Dominion Resources and Duke Energy. The nearly 13-fold growth in gas production in the Appalachian Basin since 2009 has primarily come from the emergence of fracking and horizontal drilling in two key geological formations: the Marcellus and Utica.

The Marcellus formation has proved to be America's - and one of the world's - most prolific natural gas formations. Production

is primarily located in northwest West Virginia and southwestern and northeastern Pennsylvania.³ Dry gas production from the Marcellus grew from zero in 2006 to nearly 15 Bcf/d in 2015.⁴ In that time, nearly 18 trillion cf of dry natural gas has been extracted, along with nearly 200 million barrels of natural gas liquids (NGLs). Production could more than double to around 33 Bcf/d by the early 2030s.

The Utica formation lies beneath the Marcellus in certain parts of West Virginia and Pennsylvania but is predominantly located in eastern Ohio. Its exploitation only started to gather pace in 2013. Dry gas production has grown from zero in 2010 to nearly 2.6 Bcf/d in 2015. By the end of that year, over 1.5 trillion cf of dry natural gas and over 120 million barrels of NGLs and oil have been extracted from this formation. Gas production in the Utica could reach over 4.5 Bcf/d by the early 2020s.

In total, over 18 Bcf/d of dry gas is produced from the Marcellus and Utica formations today. Rystad Energy projects that

production will double by the early 2030s to over 36 Bcf/d, led by expansion in the Marcellus. Other formations in the region could bring the total dry gas production for the Appalachian Basin to over 37 Bcf/d.

The role of the Appalachian Basin in the potential growth in U.S. gas production cannot be overstated. Figure 2 shows that the region is projected to play an increasingly dominant role in U.S. gas production in the decades ahead. In 2010, the Appalachian Basin produced just four percent of U.S. gas production. At its projected peak in the 2030s, the Appalachian Basin could be supplying around 50 percent.

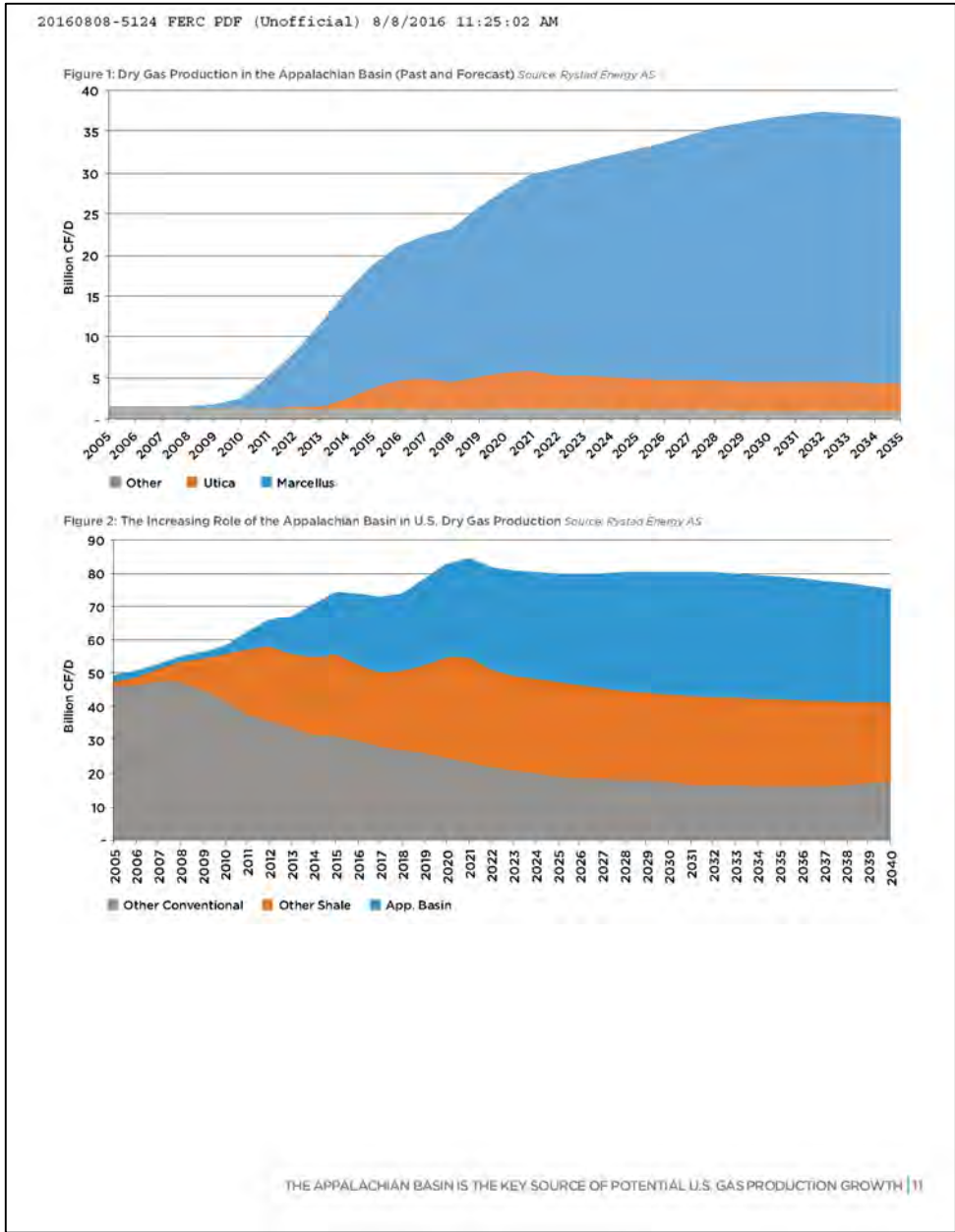
This production growth cannot be realized without building the pipeline capacity to carry it to market. We calculate that around 15.2 Bcf/d of the anticipated 18.5 Bcf/d production growth cannot go ahead without the pipelines that are currently proposed and under review.

1. This report discusses the impact of dry gas production and dry gas pipelines. While some natural gas liquids (NGLs) are produced in this region, they are beyond the scope of this report. Unless otherwise stated, the figures used refer to dry gas production only. Other sources, such as the EIA Drilling Productivity Report, include data for mixed wet and dry gas production, as production at the well is a combination of these hydrocarbons. Dry gas is separated from liquids in processing plants and transported to market in dedicated pipelines. The expansion of this dry gas pipeline network from the Appalachian Basin is the subject of this report.
2. The Marcellus formation reaches into New York and Virginia but although pipeline routes travel through these states, there is currently no plan for production in these states.
3. All gas production data are from Rystad Energy AS.

COMPANIES/ORGANIZATIONS COMMENTS

CO11 – Oil International (cont'd)

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COMPANIES/ORGANIZATIONS COMMENTS

CO11 – Oil International (cont'd)

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Differing Projections, Similar Conclusions

In this report, we use data from Rystad Energy's UCube database to provide a breakdown of both historical and projected production by geological formation in order to understand the role of the Appalachian Basin in the potential future of U.S. gas production. We also use EIA outlooks for national-level projections.

There are other sources that offer different projections. The future of any hydrocarbon production depends on many factors, including the size of the hydrocarbon resource in the ground, the development of extraction technology, and market prices and policies that may affect prices or costs of development. All projections are based on different assumptions of these factors and must be viewed as projections rather than predictions. Therefore, we do not endorse any particular outlook as being the most accurate, but view all of them as a guide to what could happen.

To date, production of oil and gas from U.S. shale formations, in particular gas production from the Marcellus, has repeatedly outperformed projections. Figure 3 is from BP's Annual Energy Outlook 2016 and shows the company's repeatedly revised projections for U.S. tight oil and shale gas production.

The latest projection in the chart (2016) suggests continued very steep growth with U.S. shale gas production reaching around 80 Bcf/d in 2035. This is much greater than the 63 Bcf/d that the Rystad data we have used shows as a peak in U.S. shale gas production in the 2030s. BP does not provide a breakdown

of formations, but it seems likely that stronger growth from the Marcellus and Utica accounts for a significant part of its bullish forecast.

It should also be noted that EIA projections show a steady increase in U.S. gas production through 2040, the last year of the EIA's outlook range. EIA revised up its gas production projection in its latest annual flagship report, the Annual Energy Outlook (AEO). The AEO 2016 has only been published as a limited early release at this time and does not show a regional breakdown of projected gas production. However, it is remarkable that projected U.S. gas production in 2040 has been revised up nearly 20 percent from the AEO 2015 (see Figure 4). The projection now sees gas production rising 55 percent from 2015 to 2040. Production in 2040 would be some 55 percent higher than in Rystad's projection.

No one really knows what the future will bring, but it is clear that without climate policies, U.S. natural gas production is very likely to grow substantially in the coming decades, and the Appalachian Basin is very likely to be at the heart of that growth.



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COMPANIES/ORGANIZATIONS COMMENTS

CO11 – Oil International (cont'd)

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Figure 3: BP Outlook 2016, Shale Play Forecasts. Source: BP p.l.c. 2016⁶

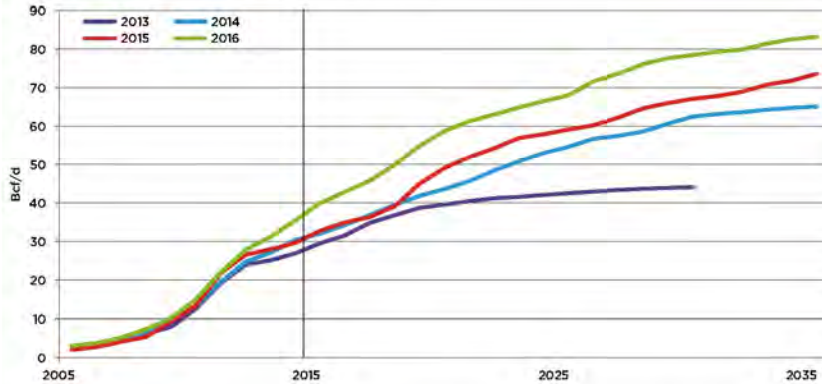
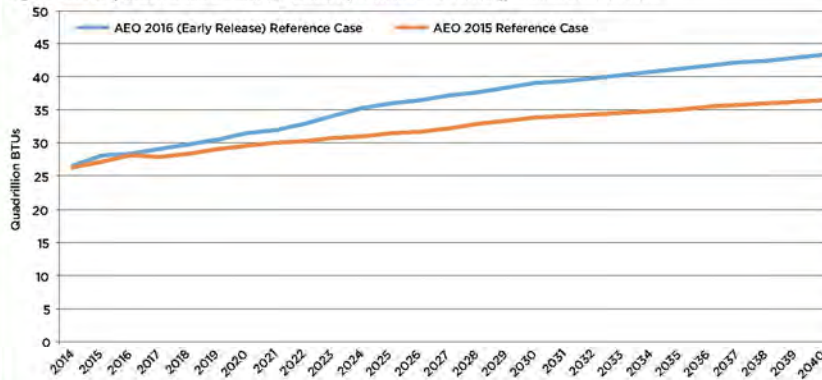


Figure 4: EIA Projected U.S. Gas Production Revised Up in 2016. Source: U.S. Energy Information Administration



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CO11 – Oil International (cont'd)

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THE PIPELINE RUSH WOULD UNLOCK NEW GAS

How much new capacity is proposed?

There has already been tremendous growth in gas production from the Appalachian Basin. The region was barely producing enough gas to fill one major pipeline in the first decade of the 21st century, and much of this gas was consumed locally. But since 2009, production has grown over 1,000 percent, spawning a wholesale re-plumbing of the pipeline network in the region. In the past, pipelines brought gas into the region, primarily from the Gulf Coast states of Louisiana and Texas. The main interstate pipelines came through the region on their way north, feeding distribution lines on their way.

Our analysis of the pipeline buildout is focused on the climate impact, and therefore we assess only those pipeline projects that add takeaway capacity from the Appalachian Basin. These are sometimes referred to as first-mile projects. There are dozens of projects that expand the distribution capacity of the gas pipeline network, but while these broaden the reach of Appalachian Basin gas, these do not in themselves increase the takeaway capacity from the basin. They therefore may not by themselves enable production growth, which leads to increased climate impact.

There are also proposed pipeline projects for Natural Gas Liquids (NGLs) in this region but we do not deal with these here. Dry gas constitutes the vast majority of the hydrocarbons that are projected to come from the Appalachian Basin.

In 2014 and 2015, eleven major projects, some with multiple phases, were completed, adding around 5.25 Bcf/d of takeaway capacity from the region. All of these involved reversals and/or expansion of existing pipeline systems. Some new pipe was laid, and new compression stations added, but none of these involved creating major new pipeline corridors.

In addition, two projects are currently under construction, and construction on another had started but has since been halted. The larger of the two that are still going forward is the latest expansion of the Rockies Express (REX) pipeline, called the Zone 3 Capacity Enhancement Project. This will add 800 million cfd by early 2017. The other is a 130 million cfd supply line that Dominion Transmission Inc. is building to feed southwest Pennsylvania supply into the Lebanon hub in Ohio. This hub supplies gas to various pipelines heading south to the Gulf Coast and west into the Rockies.

The Constitution Pipeline is a new-build project that began construction this spring

but stalled when the New York State Department of Environmental Conservation (NYSDEC) denied the project's Section 401 Water Quality Certification.⁷ The companies involved, led by pipeline giant Williams, have vowed to continue with the project.⁸ If it goes ahead, Constitution will add 650 million cfd of new takeaway capacity from northeast Pennsylvania.

Waiting on the sidelines are 18 additional major projects that could add nearly 18 Bcf/d to the takeaway capacity from the region. Ten of these projects are expansions and/or reversals of existing pipelines (see Map 1). However, to achieve those expansions some new pipeline will be laid and several new compression stations will be built to increase pressure to enable the flow of additional gas. These ten expansion projects would add over 5.5 Bcf/d of additional takeaway capacity.

Eight of the proposed pipelines are new-build projects forging new pipeline corridors over hundreds of miles (see Map 2). These would add another 12.9 Bcf/d of takeaway capacity. Together with the Constitution Pipeline, there is over 19.1 Bcf/d of takeaway capacity hanging in the balance. Building these pipelines would enable the Appalachian Basin to expand production to its likely maximum potential (see Figure 5).

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COMPANIES/ORGANIZATIONS COMMENTS

CO11 – Oil International (cont'd)

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Table 1: Proposed Pipeline Expansions

Pipeline	Capacity (Million CF/D)	Destination	Status (FERC Docket No.)
Boardwalk Northern Supply Access	384	Texas	FERC Docket CP15-513
Spectra TEAM Gulf Markets 1	250	Texas	FERC Docket CP15-90
Spectra TEAM Gulf Markets 2	400	Texas	FERC Docket CP15-90
NFGS Northern Access 2016	497	New York & Canada	FERC Docket CP15-115
Williams Transco Atlantic Sunrise	1,700	Serves Entire Mid-Atlantic onto Florida	FERC Docket CP15-138
Spectra TEAM Adair Southwest	200	Kentucky	FERC Docket CP15-3
Spectra TEAM Access South	320	Alabama & Mississippi	FERC Docket CP15-3
NFGS Empire North	300	New York & Canada	FERC Docket CP15-115
KM Broad Run Expansion	200	Tennessee, connects to Georgia & South East	FERC Docket CP15-77
CGT WB Xpress	1,300	Connects to U.S. Gulf Coast Systems and Mid Atlantic Markets	FERC Docket CP16-38
Total Capacity	5,551		

Table 2: Proposed New-Build Pipelines

Pipeline	Capacity (Million CF/D)	Destinations	Status (FERC Docket No.)
Spectra Constitution	650	New York	Construction Stalled
CGT Leach Xpress	1,000	Gulf Coast Markets	FERC Docket CP15-514
ETP Rover	3,250	Michigan & Canada	FERC Docket CP15-93
Spectra PennEast	990	Pennsylvania	FERC Docket CP15-558
Spectra NEXUS	1,500	Michigan & Canada	FERC Docket CP16-22
Dominion Atlantic Coast	1,500	Virginia & North Carolina	FERC Docket CP15-554
EQT Mountain Valley	2,000	Virginia	FERC Docket CP16-10
CGT Mountaineer Express	750	Connects to US Gulf Coast	FERC Pre-filing
Williams Transco Appalachian Connector	1,900	Connects to Atlantic Sunrise - Mid-Atlantic and SE as far as Florida	Preliminary Evaluation
Total Capacity	13,540		

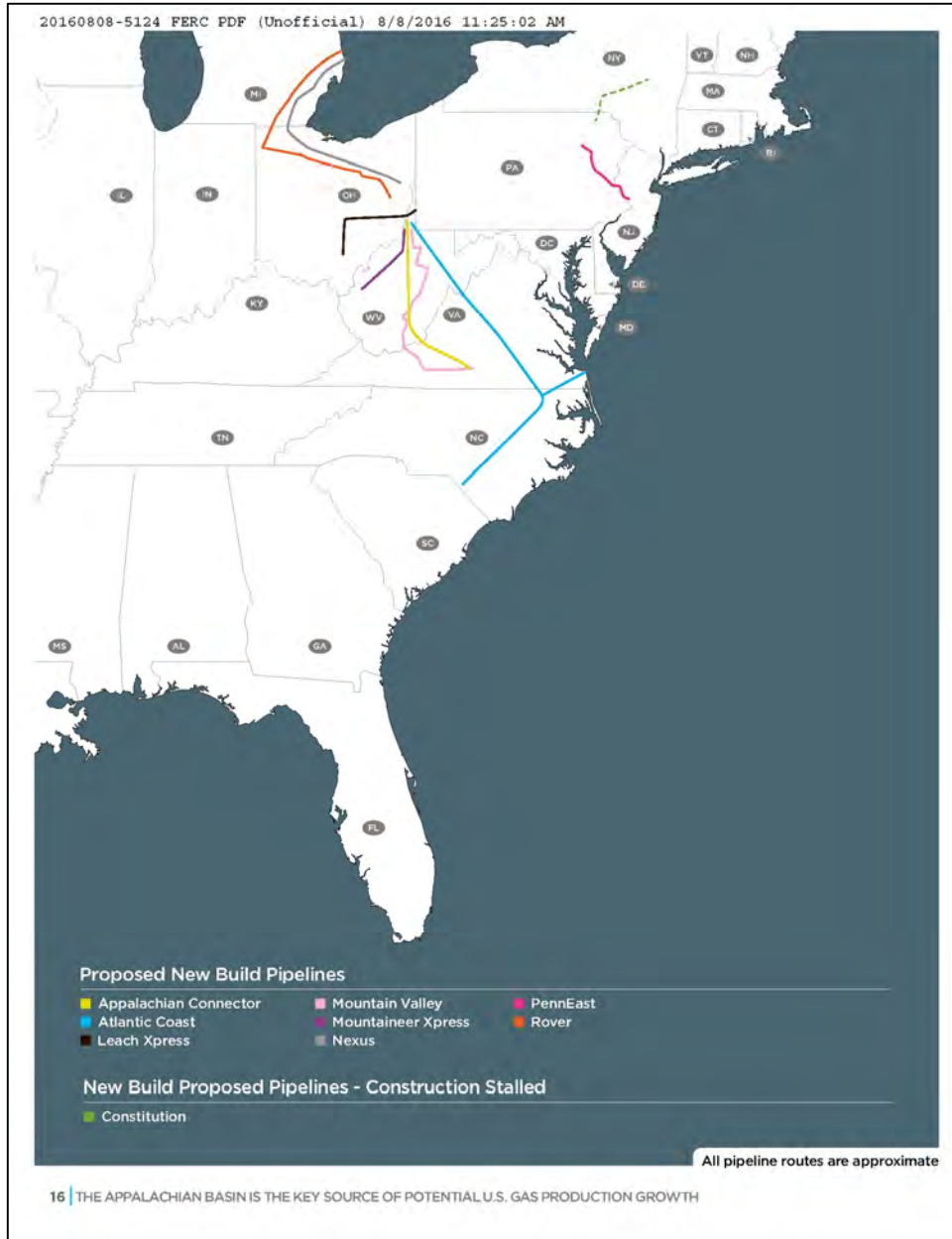
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COMPANIES/ORGANIZATIONS COMMENTS

CO11 – Oil International (cont'd)

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COMPANIES/ORGANIZATIONS COMMENTS

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CO11 – Oil International (cont'd)

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ASSESSING THE CLIMATE IMPACT

A starting point for looking at the climate impact of this pipeline buildout is to estimate how much gas production is enabled by the full realization of all the proposed pipelines.

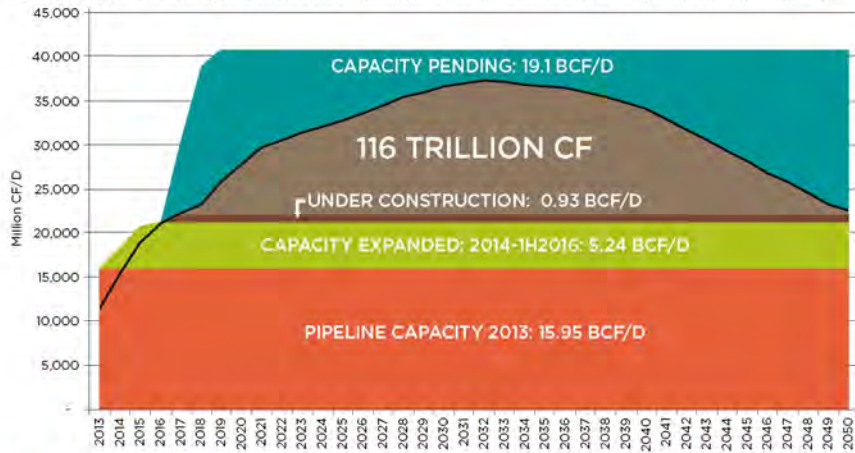
Figure 5 shows the capacity implications of the region's pipeline buildout, including pipelines that are already built, those that are currently under construction, and those yet to break ground. It also shows the Rystad Energy forecast for Appalachian

Basin gas production – in particular, the gray shaded area within the "capacity pending" area shows the total production that would be enabled by the increase in pipeline capacity from currently planned pipelines.

As the chart shows, current pipeline capacity could become full in 2017, constraining projected Appalachian Basin gas production growth to 2050 and beyond. If no new takeaway capacity is

built, production of around 116 trillion cubic feet of potential gas production from now through 2050 would be avoided. New gas drilling in the region would only occur as production from existing wells declines to free up pipeline capacity. Avoiding production of the additional gas would dent U.S. gas production growth and, as we will demonstrate in subsequent sections of this report, could help prevent the U.S. from overshooting its climate goals.

Figure 5: The Appalachian Gas Pipeline Buildout and Projected Production. Sources: Bloomberg New Energy Finance, Rystad AS, RBN Energy



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CO11 – Oil International (cont'd)

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Resistance to Pipelines

Whether these proposed pipelines are new-build projects or expansions of existing infrastructure, many are facing resistance to the appropriation of land for pipeline corridors and/or additional compression stations and other associated equipment. As Map 2 shows, proposed new-build projects are heavily concentrated in West Virginia and Virginia, and resistance is particularly strong in the Allegheny Mountains, where the projects threaten fragile mountain ecosystems, national forests, and the headwaters of the region's rivers.

The threat of eminent domain to force through these pipelines has angered many residents along these proposed routes, and growing resistance to this abuse of a law designed to appropriate land for the public good – not private profit – is increasingly threatening the realization of these plans.



Citizens resisting the proposed Atlantic Coast Interstate Gas Pipeline through West Virginia and Virginia plant Seeds of Resistance in Nelson County Virginia, June 2016. ©Peter Aslakstad, Oil Change International and Gold Alliance.

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U.S. GAS PRODUCTION GROWTH IS OUT OF SYNC WITH CLIMATE GOALS

Primarily through the development of fracking and horizontal drilling, the U.S. has become one of the largest global producers of oil and gas, rivaling Saudi Arabia and Russia. The recent oil price crash has slowed growth somewhat, but the expectation of an eventual turn in the price cycle would herald a return to the frantic drilling rates seen in recent years.

This potential for further fossil fuel production growth represents a major challenge for U.S. climate policy. The U.S. cannot continue to supply increasing quantities of oil and gas to both domestic and global markets and strive to achieve the goals set by its climate change commitments.

This section examines U.S. climate goals and the implications of the increase in U.S. natural gas production spurred by growth in the Appalachian Basin.

U.S. CLIMATE TARGETS

In 2010, the U.S. Department of State set goals for U.S. emissions reductions in its "Fifth National Communication of the United States of America Under the United Nations Framework Convention on Climate Change."¹ The long-term target is for an emissions cut of 83 percent from 2005 levels by 2050.

This goal may not be consistent with keeping warming below 2°C, even if every country cut emissions at equal rates. Equivalent emissions reduction rates raise equity issues given that the

U.S. is responsible for the largest share of historical emissions to date. In other words, to balance the responsibility for emissions more equitably, the U.S. would likely need to cut emissions more dramatically than its current goal to play its role in achieving the Paris Agreement goal of keeping warming well below 2°C.

However, as the 83 percent emissions reduction goal is the current commitment of the U.S. government, we use it here to assess whether rising natural gas production and consumption is in sync with U.S. policy.

The emissions reduction goal set out above has guided the Obama Administration's actions on climate change ever since it was put in place. While current policies are not nearly enough to fulfill the 2050 goal of an 83 percent reduction, the 2025 goal of a 28 percent reduction, which was submitted as the U.S. Intended Nationally Determined Contribution (INDC) to the Paris Agreement process,² may be within grasp if policies such as the Clean Power Plan (CPP) and vehicle efficiency standards (CAFE) reach their full potential.

However, cheap, abundant natural gas may lead to a lock-in of infrastructure that would undermine attainment of the more dramatic cuts required after 2025.

NATURAL GAS CONSUMPTION AND THE U.S. CLIMATE GOAL

The most commonly used energy forecast in the U.S. is the Reference Case produced

by the EIA in its Annual Energy Outlook (AEO). The EIA's Reference Case is based on a model that freezes energy policy at the time the report is produced and has a very cautious approach to technological and behavioral change. In other words, it is not meant as a forecast for how energy flows will necessarily pan out (although it is often treated as such), but rather a projection of how energy flows might look if all current policies and expectations of technology change remain static.³ As the projections span 25 years, it is extremely unlikely that major changes would not take place.

However, the Reference Case serves a purpose of indicating what the future will look like should we stop innovating both technology and policy. When it comes to addressing climate change, the EIA Reference Case shows how much more we need to do to prevent catastrophe.

For the purposes of assessing whether we can expand natural gas production and consumption and still meet our climate goals, the EIA Reference Case is useful because it approximately matches growth goals of the gas industry.

Figure 6 shows the AEO 2016 (Early Release)⁴ Reference Case projections for natural gas production and consumption in the U.S. Production is expected to increase 55 percent between 2015 and 2040, while consumption is seen increasing 24 percent in the same period. The difference between production and consumption is accounted for by exports. The U.S. was a net zero

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Figure 6: Projected U.S. Gas Production and Consumption in the AEO 2016 Reference Case Source: U.S. Energy Information Administration

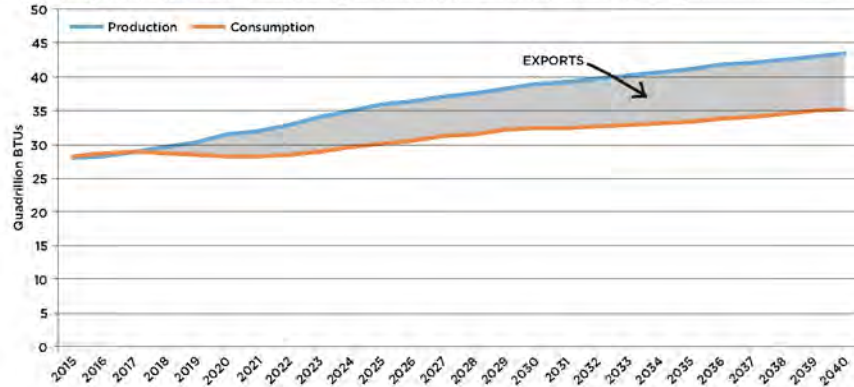
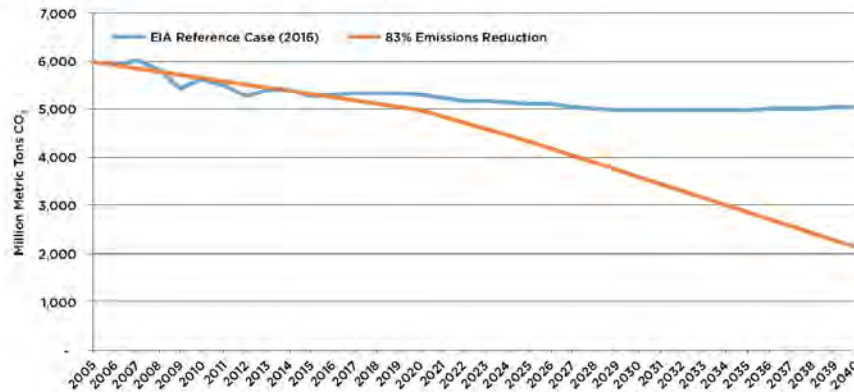


Figure 7: U.S. Energy-Related Greenhouse Gas Emissions in AEO 2016 versus U.S. Climate Goal Source: U.S. Energy Information Administration & U.S. Department of State



exporter in 2015, but could be exporting as much as nine trillion cubic feet in 2040, according to these projections.

The Reference Case also shows that if U.S. consumption of fossil fuels does follow the trajectory that the projections suggest, U.S. emissions reductions goals will be missed by an order of magnitude. Using energy-related emissions only, the Reference Case suggests that emissions could be only around 16 percent below 2005 levels in

2040, or around four percent less than in 2015. It is worth noting that the AEO 2016 Reference Case does include the impact of implementing the Clean Power Plan (CPP), the key power sector climate policy being pursued by the current administration. The CPP is projected to reduce emissions in 2040 by around eight percent compared to business as usual. However, as Figure 7 clearly shows, the U.S. would still be dramatically off course in reaching its climate goals. The difference is stark.

Emissions in 2040 are nearly 140 percent higher in the Reference Case than they would need to be to stay on course with the 2050 U.S. climate goal.

The increase in natural gas production and consumption is not the only reason emissions in the Reference Case are so far from the U.S. climate goal. But it is one part of a wider failure to reign in fossil fuels that the Reference Case clearly illustrates.

(v) U.S. climate goal percentage reduction is equally applied to energy as to other GHG sources; i.e., 83% from 2005 to 2050.

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NATURAL GAS DOES NOT PROVIDE NEEDED CLIMATE BENEFITS

For rising natural gas production and consumption to fit into a scenario of rapidly declining GHG emissions, natural gas would need to be a significant enabler of substantial emissions reductions.

The natural gas industry claims that natural gas replaces coal, leading to reduced emissions. But there is increasing evidence that not only has the past role of natural gas in emissions reduction been exaggerated, but that future natural gas consumption growth could account for more emissions than the U.S. climate goal allows for, even if emissions from all other sources are mitigated.

To assess the climate impacts of new natural gas infrastructure, several facts should be considered:

- ❑ When methane leakage is considered, natural gas can be equally or more polluting than coal.
- ❑ Reducing methane leakage is very important, but it does not provide a license for production growth.
- ❑ Even with zero methane leakage, replacing an old coal plant with a new natural gas plant may reduce emissions in the immediate term, but will lead to a net increase in aggregate CO₂ emissions if the gas plant is still emitting CO₂ decades after the coal plant would have been retired.

THE EFFECTS OF METHANE LEAKAGE ARE SIGNIFICANT

Dry gas is almost pure methane (CH₄). When combusted, the greenhouse gas emitted is carbon dioxide (CO₂), the same as with coal and oil. In general, the CO₂ emissions associated with gas combustion are lower per unit of energy produced than with coal and oil.

But if methane is vented directly to the atmosphere without combustion, the global warming potential of that gas in the atmosphere is pound-for-pound much greater than CO₂. For this reason, methane leaks occurring during the production, processing, transportation, and storage of gas can substantially increase its climate impact.

The fifth report (AR5) of the Intergovernmental Panel on Climate Change (IPCC) updated the global warming potential of methane compared to CO₂. Two figures are most often quoted for the potential – a 100-year figure and 20-year figure – which refer to the potential of the gas to force temperature change over the given time span. Methane has a shorter life span in the atmosphere than CO₂, but a much higher impact. The AR5 put the 20-year impact of methane at 86 times that of CO₂ and the 100-year impact at 36 times.

The methane leakage rate during the

production, processing, transportation, and storage of gas is central to assessing the climate impact of gas use. Independent analysis suggests that average US conventional gas leakage are between 3.8% and 5.4% of total production, while shale gas leaks at roughly 12%. Both rates would put the climate impact of gas on par with, or much greater than, coal.¹¹

In recognition that methane leaking from the oil and gas sector is a crucial issue to be addressed, in March 2016 President Obama announced an initiative with Canada to cut methane leakage from the two countries' oil and gas sectors by 45 percent.¹² If it can be implemented – the American Petroleum Institute threatened to sue¹³ – this initiative would be a good start to reducing the impact of existing natural gas supply.

However, although crucially important, we will see in the next section that reducing methane leakage does not provide room in the carbon budget to increase natural gas production.

CLIMATE IMPACTS OF RISING GAS PRODUCTION OUTWEIGH METHANE MITIGATION

The idea of natural gas as a 'bridge' to a low carbon future is a much-used talking point for the industry and its supporters, but study after study has examined the issue to find that increasing gas-fired power

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CO11 – Oil International (cont'd)

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Contamination caused by an oil and gas well failure. ©FactTracker Alliance

generation can only at best shave a couple of percentage points from overall emissions rates, and may undermine the transition to clean energy entirely. One of the problems is that rising gas use does not only displace coal; it also displaces zero-carbon energy.

For example, a Stanford University study published in 2013 used a variety of modeling tools to estimate the "emissions and market implications of new natural gas supplies."⁸ The study found that none of the six modeling systems they sampled showed a significant reduction in U.S. emissions as a result of rising gas use up to 2050. The authors concluded that "b[ut] the development has relatively modest impacts on [emissions], particularly after 2020. Over future years, this trend towards reducing emissions becomes less pronounced as natural gas begins to displace nuclear and renewable energy." In general, the models used found that higher gas supplies lowered prices for gas and increased primary energy demand, leading to higher emissions in the 2050 projections than in the lower gas supply scenario.

Another study from different researchers at Stanford together with U.C. Irvine found that cumulative U.S. GHG emissions from 2013 to 2055 were a mere 2% lower in a high gas supply scenario compared to a low one.⁹ They found that without strict climate policies, increased natural gas supply would not only reduce coal-fired generation

but renewable energy generation as well. Similar to the EIA Reference Case, this leads to U.S. power sector emissions in 2050 that are barely less than they are today. They also found that methane leakage rates from zero to three percent made little difference

to the overall result. Once again, in this study the effect of higher gas supplies is to reduce renewable energy market share and maintain unsustainable levels of CO₂ emissions.

COMPANIES/ORGANIZATIONS COMMENTS

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Statowick Well Pad, West Virginia. ©FactTracker Alliance

Most recently, a study out of Oxford University examined the '2°C Capital Stock' to see how close the world is to building the electricity generation infrastructure that, if utilized to the end of its economic life, would take the world past the 2°C goal.²⁴ The disturbing conclusion they came to is that we will be there in 2017. Those researchers used a 50-50 chance of staying below 2°C, in the climate model simulations, which we consider highly risky given the consequences of crossing the 2°C threshold.²⁵ The authors conclude that "[p]olicymakers and investors should question the economics of new long-lived energy infrastructure involving positive net emissions."

The paper raised an important point about replacing coal plants with gas, particularly when the coal plant is due to retire within a decade or so. In the case of a coal plant with ten years of economic life left, shutting the coal plant early and replacing it with a gas-fired generator may cut emissions in half (assuming no methane leakage) for those

first ten years. But when the gas plant's economic life is 40 years, the cumulative emissions from the gas plant are in fact double those from ten years of operating the coal plant. This is because the gas plant would emit half as much CO₂ per year, but for forty years rather than ten.

The nature of the climate problem is that it is the total cumulative emissions that matter. Once we have filled the atmospheric space with CO₂, there is no turning back. As we enter a period in which we have just a few decades at best to decarbonize, it is time to seriously question any investment in infrastructure that does not clearly and dramatically reduce emissions.

RIISING U.S. GAS CONSUMPTION MAKES MEETING U.S. CLIMATE GOALS IMPOSSIBLE

Using the EIA's current Reference Case as a starting point, we calculate that emissions from projected U.S. natural gas consumption growth would more than

overshoot U.S. climate goals. In other words, even if the U.S. reduced all coal and petroleum use to zero by 2040, the U.S. would still exceed its climate goals based on natural gas emissions alone.

This is even more concerning in light of the fact that the projections factor in the methane leakage reduction goals recently proposed by the EPA. This means that even under reduced methane leakage rates, U.S. gas demand must decline over the next 25 years in order to meet climate goals. This is in stark contrast to both EIA projections and the ambition of the gas industry, which is focused on massive production growth primarily centered on the Appalachian Basin.

Figure 8 shows our estimate of emissions from gas consumption and methane leakage, together with the trajectory of the U.S. climate goal to cut emissions 83 percent from 2005 levels.²⁶ It is clear that methane leakage plays a very large role in the emissions associated with gas consumption and that reducing leakage

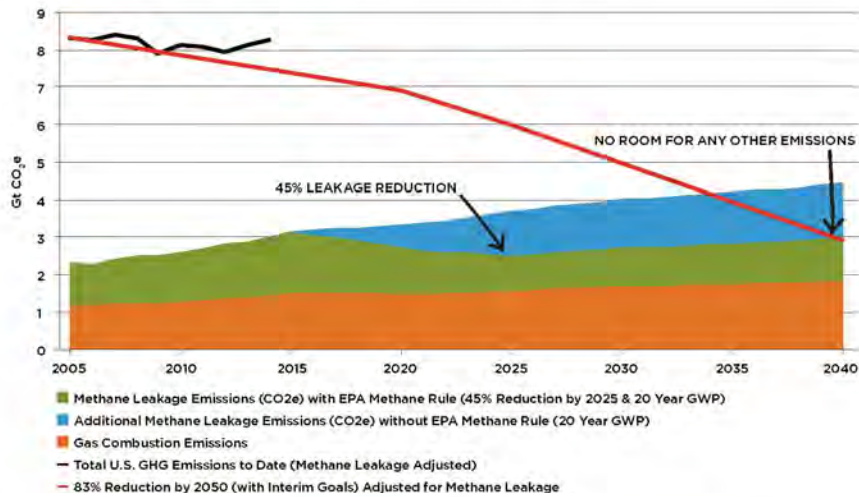
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Figure 8: Projected U.S. GHG Emissions from Gas Usage & Leakage vs. U.S. 2050 Climate Target Sources: U.S. Energy Information Administration, Environmental Protection Agency, and the Intergovernmental Panel on Climate Change



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can cut emissions dramatically. However, our calculations show that the rise in gas consumption alone projected by the EIA would lead to emissions from gas that would surpass the current long-term U.S. climate target by 2040, even after accounting for methane leakage cuts. This ignores the emissions from the production (and consumption) of exported gas.

Even if natural gas were the only source of greenhouse gas emissions in 2040 (and there were zero emissions from coal, oil, cement, and all other sources), the U.S. would still blow its carbon budget. This makes it clear that the growing use of gas is out of sync with U.S. climate goals.

About Figure 8:

We used leakage rates of 3.6%, which is the low end of estimates of gas leakage in production from Howarth 2015. Those rates are then reduced 45% under the EPA rule, which we treat as phased in on a straight line from 2015 to 2025.

We have adjusted the EPA's GHG totals to be comparable with the natural gas emissions, by replacing its (low) estimates of methane leakage from natural gas production. As well as understating the volumes (compared to other recent assessments), the EPA used the 100-year global warming potential (GWP) of methane, which is much lower than the 20-year GWP because though potent, methane is short-lived.

We have used the 20-year GWP because whereas CO₂ accumulates in the atmosphere over the long-term, the impact of methane is felt in the short term; according to the latest climate science, the impact of short-lived GHGs is related more closely to their annual emissions than their cumulative emissions - and is most significantly felt at the time of peak CO₂ concentrations. In this respect the shorter-range GWP is the relevant measure.

(For further discussion see IPCC 5AR WG1 sec.12.5.4, p.1108, http://ipcc.ch/pdf/Assessment-report/ar5/wg1/WG1AR5_Chapter12_FINAL.pdf and sec.3.7.1.12, pp.711-712, http://ipcc.ch/pdf/assessment-report/ar5/wg1/WG1AR5_Chapter08_FINAL.pdf.)

COMPANIES/ORGANIZATIONS COMMENTS

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RENEWABLE ENERGY IS READY

As renewable energy evolves, natural gas-fired power generation increasingly competes not only with coal, but with renewable energy as well. If the abundance of natural gas locks in natural gas power capacity that renewable energy could have filled, the net increase in GHG emissions is vast. As the world looks for ways to reverse emissions growth and move as rapidly as possible towards zero carbon, building new gas capacity where zero-carbon technology is possible is a clear disaster for our climate.

The idea that we need to increase gas-fired generation now because renewable energy is not yet ready is rapidly losing what little validity it ever had. In many parts of the United States and the world, renewable energy is today the lowest cost and lowest impact means to add generation capacity to our electricity system.²¹ There is nothing standing in the way of building the renewable energy capacity we need to sustain our electricity needs except the entrenched interests of the natural gas industry.

The past decade has seen an accelerating transformation of the renewable energy sector, and innovation and evolution in the sector is far from over. In the coming decade, we can only expect greater economies of scale and more transformational technology.

The rapid growth in first wind, then solar, and now efficiency and battery storage, suggests an imminent transformation of our energy landscape. There is now little doubt that the future will be powered by clean energy. We now need to accelerate the transformation in line with our climate goals.

Solar: The U.S. solar energy sector grossed over \$22.6 billion in 2015, a 21 percent increase over 2014, and 174 percent greater than in 2011.²² This revenue growth is all the more remarkable given that costs have declined 80 percent since 2008.²³ Installed solar capacity totaled 27 GW in 2015, and is expected to grow at least fourfold by 2022.²⁴ Small-scale solar could attract around \$10 billion of investment per year over the next 25 years in the U.S. alone.²⁵

Globally, the amount of electricity produced by solar power has doubled seven times since 2000.²⁶ As Tom Randall at Bloomberg Business puts it, "(t)he reason solar-power generation will increasingly dominate: It's a technology, not a fuel. As such, efficiency increases and prices fall as time goes on."²⁷

Wind: U.S. wind enjoyed revenue growth of 75 percent in 2015 despite tax structure uncertainty that was finally resolved at the end of the year. Costs have fallen 50 percent since 2009.²⁸ Onshore wind is at cost parity with new-build gas in many parts of the country and is set to reach cost parity in all parts of the country by 2025.²⁹

The CEO of wind generator giant Vestas recently told investors in London that the next wave of growth for the sector will be in 'repowering' retiring equipment with new more powerful and efficient turbines.³⁰ This signals a maturing industry set to increase market share through technology improvements.

Efficiency and Flattening Demand: Increasing energy efficiency is reducing the demand for electricity in America. Bloomberg New Energy Finance (BNEF) recently reported that, "The past five years in the US have seen a fundamental decoupling between electricity demand, on the one hand, and population and GDP, on the other. Looking across the next 25 years, we anticipate this trend to continue." The BNEF New Energy Outlook 2016 projects that U.S. electricity demand will likely peak in 2022, even with robust electric vehicle growth providing one of the few remaining drivers of power demand growth. This means that new generation capacity will in most cases replace retiring capacity, providing an opportunity to dramatically reduce emissions through switching from coal and gas to renewable energy.

Storage and Batteries: The U.S. energy storage sector grew tenfold in 2015, generating over \$730 million in revenues.³¹ All indications are that energy storage is poised to change the energy sector forever. Primarily driven by demand for electric

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vehicles, lithium-ion battery costs fell 65 percent from 2010 to 2015.³³ Further cost declines and performance improvements are widely expected, with some estimating a further 60 percent cost decline by 2020.³⁴

The next areas of market penetration are likely to be utility-scale storage as well as residential- and commercial-scale applications for both supporting solar generation and balancing demand from the grid. Tesla's PowerWall battery is likely to be just one of many products on the market designed for storing energy for use in buildings by the early 2020s. The company's 'Gigafactory' is soon to be followed by several others already under construction in the U.S. and China. According to Navigant Research, global new installed energy storage systems for renewable energy integration power capacity is expected to grow from 196.2 MW in 2015 to 12.7 GW in 2025, a 65-fold increase in ten years.³⁴

BNEF projects exponential growth in what it calls 'behind-the-meter' storage – batteries supporting solar energy systems and demand balancing in homes and commercial buildings. Globally, this use of batteries could grow from 40.0 megawatt-hours today to 760 gigawatt-hours by 2040.³⁴

Clean Energy Jobs: The clean energy sector is also breaking barriers when it comes to

Solar voltaic panels. ©Associated Press



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job creation. The International Renewable Energy Agency reported that 2015 saw clean energy jobs surpass oil and gas for the first time. The global clean energy workforce grew 5 percent in 2015 to reach 8.1 million workers, and is expected to triple to 24 million by 2030.³⁴

AVOIDING LOCK-IN

Looking ahead, it is increasingly clear that renewable energy will be the least-cost option for new generation capacity, with costs continuing to decline while the cost of gas-fired power increases. In other words, expanding gas-fired power today threatens to lock in an increasingly expensive source of power when cheaper, cleaner renewable energy will be available to meet our energy needs. The latest data and projections from BNEF illustrate this point.

According to BNEF's New Energy Outlook 2016, wind and solar power are already competitive with low-priced gas in certain markets in the U.S., where both renewable resources are abundant and state policies are favorable.³⁷

However, as we move into the next decade, the unsubsidized cost of clean power across the country will become cheaper than new-build gas power, which requires new capital but it will not yet be cheaper than the cost of existing gas-fired power plants where capital has already been sunk.³⁸ This demonstrates the danger of locking in more gas-fired power than is optimum in the coming decade.

Existing power plants are in a position to reduce the selling price to compete, even if it means making a long-term loss on capital. This is because once capital is sunk, it is better to keep operating as long as revenue covers operating costs. Any additional revenue generated above operating cost reduces the loss on capital. Therefore, new utility-scale renewable energy projects will face stiff competition from existing gas-fired power plants until installation capital costs become low enough that they can undercut existing gas plants and still provide a return on capital.

As natural gas prices are likely to rise over time (gas being a finite resource), renewable energy plants will eventually reach a point when they will price out even existing

plants. However, when it comes to meeting climate goals, it is imperative to keep in mind the urgency of the problem and the danger of locking in polluting infrastructure now.

As gas-fired power plants and pipelines built today generally have a design life of around forty years, gas infrastructure built over the next decade could be operating in the 2050s and beyond. It is imperative that we avoid locking in emissions today that we cannot afford to emit in the later part of the infrastructure's economic lifespan.

INTERMITTENCY, BASELOAD, AND STORAGE ARE NOT BARRIERS TO RENEWABLE ENERGY GROWTH

Much is made by fossil fuel proponents of the intermittency of wind and solar and the need for some breakthrough in energy storage before we can give up on fossil fuels and substantially increase levels of renewable energy generation. These solutions are sometimes said to be decades away. These arguments do not reflect either the reality of renewable energy today or where it is heading.

Wind and solar energy provided 6.2 percent of total power generated in the U.S. in the past year.³⁹ All renewable generation, including wind, solar, geothermal, biomass, and hydro, hit close to 15 percent of generation.⁴⁰ A 2012 report by the National Renewable Energy Laboratory that extensively examined high-penetration renewable energy scenarios for the U.S. found that by better managing existing dispatchable power and storage capacity, the U.S. grid can handle as much as 50 percent wind and solar penetration and still keep the grid balanced.⁴¹

Advances in grid management are reducing intermittency issues associated with increasing wind and solar penetration. Wind and solar tend to have complementary cycles of power availability. Solar power obviously tracks the sun in peaking around the middle of the day. Offshore wind tends to log higher generation during the day as well, whereas onshore wind tends to ramp up around dusk and peak during the night. Greater penetration of diverse renewable energy technologies is a solution to intermittency rather than a source of it.



One analyst explains this using the Law of Large Numbers, in which a larger number of variables—in this case weather and climate dynamics at widely dispersed locations—tend to result in less volatility across the whole.⁴² Sophisticated algorithms, similar to those used to manage online advertising, are increasingly being used to predict wind and solar dynamics and facilitate grid management in areas of high renewable energy penetration.⁴³

The increasing ability to manage grid dynamics with high renewable energy penetration has also undermined another standard talking point of fossil fuel proponents: that renewable energy cannot provide reliable baseload power, which can only be supplied by fossil fuel and nuclear

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CO11 – Oil International (cont'd)



Solar voltaic panels. ©Associated Press

plants. Earlier this spring, top executives at the world's largest grid operator, China State Grid Corp., told a stunned audience of fossil fuel executives at an industry conference in Houston that, "coal-fired generators could only serve as 'reserve power' to supplement renewables", and that "[t]he only hurdle to overcome is 'mindset.' There's no technical challenge at all!"⁴²

Evidence from China and Australia shows that coal is indeed increasingly serving as reserve power. Some coal plants in those countries are running at barely 50 percent utilization, and in some cases even less.⁴³ Grid operators are increasingly using thermal power plants, where operating costs are relatively high due to fuel costs,

to supplement other sources rather than as base load. Sven Teske, an analyst with the Institute for Sustainable Futures in Sydney states that "[b]ase load is not a technical concept, it is an economic concept and a business concept of the coal industry that is no longer feasible."⁴⁴ According to Teske, the focus of grid operators will move toward renewable energy, flexible generation, demand management, and energy efficiency.

These factors point to the ability of the U.S. electricity system to absorb increasing levels of renewable energy penetration before a substantial increase in storage will be needed. Nevertheless, the development of affordable storage solutions is happening at a rapid pace. As detailed above, both

utility-scale and 'behind-the-meter' storage solutions are set to exponentially increase their market penetration over the next decade. The age of affordable power storage is upon us.⁴⁵

Essentially, the issue of how much renewable energy can be absorbed into the grid has been solved. It is now up to the industry to invest in genuine clean energy and for government to forge policies that support the speediest transition possible.

COMPANIES/ORGANIZATIONS COMMENTS

CO11 – Oil International (cont'd)

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CONCLUSION AND RECOMMENDATIONS

The development of new and expanded gas pipelines out of the Appalachian Basin could unlock significant new flows of natural gas. These pipelines would drive an increase in U.S. gas production that would be incompatible with achieving stated climate goals.

Enabling U.S. gas demand to follow the current projection in the EIA Reference Case (2016) would lead to emissions from gas alone that would surpass the U.S. emissions goal by 2040. In other words, the current trajectory of gas production and demand is out of sync with the nation's climate goals and must be constrained.

Data presented in this report shows that the vast majority of projected gas production growth would likely come from the Appalachian Basin, but this can only happen if the pipeline projects listed in this report go ahead. That should not be allowed to happen.

The surge in gas-fired power generation that would accompany this production growth is not an inevitable or needed feature of our nation's future power market. Clean energy technologies are surging ahead at this time and are projected to become a leading source of energy in the coming decade. Our electricity grid is set to be transformed into a system based on diverse and flexible generation sources,

storage solutions, and advanced grid management. Total power demand is set to decrease even as electric vehicles grow to become a major new source of demand. Now is the time to question the need and impact of new fossil fuel infrastructure and plan an energy future that is in sync with climate science.

When President Obama made the historic decision to deny the Presidential Permit for the Keystone XL pipeline, he did so because, in his words: "America is now a global leader when it comes to taking serious action to fight climate change. And frankly, approving this project would have undercut that global leadership. And that's the biggest risk we face - not acting."⁴⁸

Not acting to constrain gas production and consumption to within science based climate limits is a major risk we face. This and future administrations have the ability to apply the same standard to gas infrastructure what was applied to the Keystone XL pipeline. That means applying a climate test to these proposed gas pipelines and all proposed fossil fuel infrastructure. A climate test would assess the need for new fossil fuel infrastructure against science-based climate goals.

The challenge to meet the Paris Agreement's goals of keeping average global warming well below 2°C and

pursuing a 1.5°C target cannot be met if a business-as-usual policy continues to permit an expansion of fossil fuel supply. For this reason, every government agency should apply a climate test if it is faced with any decision that could increase fossil fuel supply. FERC, which authorizes the construction and expansion of interstate natural gas pipelines, cannot be exempt from this requirement.

Recommendations:

- ① All federal government agencies and departments, including FERC, should apply a climate test in the permitting processes of all fossil fuel infrastructure, including Programmatic Environmental Impact Statements.
- ② No new natural gas pipeline projects should be considered unless they can pass a climate test. The climate test should be applied to all currently pending and future pipeline applications.
- ③ The EIA should provide detailed guidance in the form of alternative cases in its Outlook reports for U.S. fossil fuel supply and demand under various climate goals, including the nation's long-term climate goal, a 2°C path, and a 1.5°C path.

Rig PA. ©Scrimmering, FracTracker Alliance

COMPANIES/ORGANIZATIONS COMMENTS

CO11 – Oil International (cont'd)



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COMPANIES/ORGANIZATIONS COMMENTS

CO11 – Oil International (cont’d)

20160808-5124 FERC PDF (Unofficial) 8/8/2016 11:25:02 AM

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COMPANIES/ORGANIZATIONS COMMENTS

CO11 – Oil International (cont'd)

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COMPANIES/ORGANIZATIONS COMMENTS

CO11 – Oil International (cont'd)

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Oil Change International
714 G Street SE, Suite 202
Washington, DC 20003
www.priceofoil.org

July 2016

R-213

COMPANIES/ORGANIZATIONS COMMENTS

CO12 – Neighbors Against NEXUS, Sustainable Medina County, Freshwater Accountability Project

Law Office
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Phone (419) 205-7084
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August 8, 2016

Mr. David L. Morenoff, General Counsel
david.morenoff@ferc.gov
Ms. Joanne Wachholder, Project Manager
joanne.wachholder@ferc.gov
Federal Energy Regulatory Commission
888 First Street NE
Washington, DC 20426
Via email only

RE: NEXUS Gas Transmission, LLC; Docket No. CP16-22
(Objection to Draft EIS public comment format)

Dear Ms. Wachholder and Mr. Morenoff:

I am writing on behalf of my clients, Neighbors Against NEXUS, Sustainable Medina County and Freshwater Accountability Project, all of which are formal intervenors in the pending NEXUS certificate proceeding. We hereby formally object to FERC's just-announced restrictions on public participation in the forthcoming series of public meetings on the Draft Environmental Impact Statement for the proposed NEXUS pipeline.

CO12-1 We request that all of the meetings be canceled and rescheduled with a new public notice, and that these "public meetings" instead be conducted as "public hearings," using the familiar large-group plenary session, with one speaker at a time being heard by a FERC hearing officer. We request that DEIS public comments be taken in the same fashion as occurred during the scoping hearings on the NEXUS proposal in April and May, 2015. We further ask that a second

CO12-2 Michigan public hearing be scheduled besides the present Tecumseh gathering because of the distance for many to drive and the likely public interest in communicating with FERC.

On Thursday, August 4, 2016, staff of the Federal Energy Regulatory Commission for the first time circulated to the public a memorandum dated August 4 from Ms. Wachholder, entitled "Clarification regarding format for comment meetings and copy of handout to be provided at the meetings Docket Nos. CP16-22-000 and CP16-23-000" (copy attached). In that memo, FERC notified the public that upcoming gatherings related to the DEIS would be conducted according to these "ground rules:"

- There will not be a formal presentation by Commission staff, but FERC staff is available to answer your questions about the environmental review process.

Page 1 of 3

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- CO12-1 FERC provided opportunity for the public to provide comments on the draft EIS electronically, by mail, or in person. All comments received are publicly available as part of the docket for the project and can be viewed on the FERC website, regardless of whether the person was in attendance at the meeting or not.
- CO12-2 Comment noted. Meeting locations were selected to provide access to all affected landowners along the route with a reasonable travel distance.

COMPANIES/ORGANIZATIONS COMMENTS

CO12 – Neighbors Against NEXUS, Sustainable Medina County, Freshwater Accountability Project (cont'd)

R-215

- Individual verbal comments will be taken between 5:00 and 10:00 PM on a one-on-one basis with the court reporter. Sign-up for providing verbal comments is at the main table. You will be called individually to record your comments with the court reporter.
- Time limits on verbal comments may be limited to 3 to 5 minutes dependent on the number of people signed up to provide comments to ensure that all those wishing to comment have the opportunity to do so within the designated meeting time.
- Remain quiet in all meeting spaces so the court reporter can hear the individual providing comments. Please be mindful of room capacity and allow other interested individuals an opportunity to make comments.
- Individuals or groups may submit written comments in addition to or in lieu of providing verbal comments.

CO12-3 | We object to the use of this format. There is growing opposition to the NEXUS pipeline proposal along most of its anticipated route. FERC-sponsored gatherings are key opportunities for citizens to communicate with their government. The imposition of a one-on-one court reporter encounter is intimidating and restricts the opportunity for people who oppose the pipeline from identifying one another and learning information about the opposition. The public has a First Amendment freedom of association right which is being directly undermined by the FERC meeting structure.

One Michigan opponent contacted FERC staffer Sarah McKinley last week about the plan for the meetings, and was told by Ms. McKinley that the one-on-one court reporter meetings would avoid a "free-for-all atmosphere." Ms. McKinley admitted that no one outside the meeting rooms where statements would be taken would be able to hear the comments being recorded. There have been no public meetings or hearings related to NEXUS which could be characterized as "free-for-all" and even if there were, there are other means of maintaining order than to destroy citizens' First Amendment association rights.

CO12-4 | Indeed, FERC's proposed setup seems likely to invite, not staunch, free-for-all. For example, to attend the sole gathering planned in Michigan, people will have to travel long distances, expecting to hear a diverse range of opinions, only to find out when they arrive that the "meeting" requires that they talk to an empty room, save for a court reporter. Some will leave in frustration, lacking the confidence to talk before a court reporter, alone in a room. Others will manifest their frustration in other ways.

This pipeline scheme directly affects people's lives - in their homes, on their farms and at their places of business - and FERC is signaling that those possible personal catastrophes count far less than squelching the public's say in order to put the pipeline through without controversy. Coming to FERC public hearings may be many citizens' only means of being heard by their government and of becoming acquainted with opposition organizations. Surely FERC couldn't seriously believe that this format will encourage public participation.

The Intervenor sees the restrictions imposed on these gatherings as a form of retaliation

- CO12-3 FERC provided opportunity for the public to provide comments on the draft EIS electronically, by mail, or in person. There was no restriction at the comment sessions for people to talk to one another, as was evident by numerous small groups discussing the project and their concerns amongst each other.
- CO12-4 Comment noted. We note that there were no disruptions to the comment sessions and anyone who expressed an interest in providing verbal comments had the opportunity to do so in the time allotted.

COMPANIES/ORGANIZATIONS COMMENTS

CO12 – Neighbors Against NEXUS, Sustainable Medina County, Freshwater Accountability Project (cont'd)

R-216

CO12-5 for the very success of citizen opposition, NEXUS opponents have generated a great deal of public comment and pressure. The restrictions are FERC's retaliation for the voluminous exercise by many of their First Amendment speech and association rights. Why did FERC wait for a month after public notice of the public meetings to finally explain how they will be run, until days before the meetings? With such short notice there is no time for the public to organize and object. FERC appears to be intent on assisting NEXUS in obtaining its federal certificate with a minimum of controversy.

CO12-6 We bring our objection in order to exhaust our administrative remedies prior to suit. If there is a specific grievance resolution track within FERC for the processing of objections such as this, kindly advise and direct me to it immediately. Otherwise, I will assume that we have contacted the proper FERC staff to investigate our First Amendment retaliation claim and to act in the public interest to end it.

To summarize: we request that FERC cancel and reschedule the Draft EIS events as formal public comment hearings, even if that adds more time to the process. Many members of the public have a personal, emotional and economic stake in FERC's decision. Fairness and the participation requirements of NEPA must be scrupulously observed.

Thank you.

For the Intervenors,
/s/ Terry J. Lodge
Terry J. Lodge

cc: Katharine Jones, Leatra Harper, Liz Victor

Page 3 of 8

CO12-5 Comment noted.

CO12-6 Concerns about the format of the public comment meetings are noted. FERC received both positive and negative feedback regarding the format and will continue to review and adjust the meetings as necessary.

Questions and concerns about FERC procedures can be address to the Commission's Office of External Affairs - State, International, and Public Affairs Division. This division is the primary contact for the general public, as well as state regulators and other governmental entities, international public utility regulatory bodies, industry, trade associations, regional coalitions, consumers, communities, public interest groups, and landowners. The division can be reached at:

Toll-free: 1-866-208-3372

Email: customer@ferc.gov

COMPANIES/ORGANIZATIONS COMMENTS

CO12 – Neighbors Against NEXUS, Sustainable Medina County, Freshwater Accountability Project (cont'd)

MEMORANDUM

Memo from: Joanne Wachholder
OEP/DG2E/Gas 2

Date: August 4, 2016

Subject: Clarification regarding format for comment meetings and copy of
handout to be provided at the meetings.
Docket Nos. CP16-22-000 and CP16-23-000

This memo is intended to clarify the meeting format described in the *Notice of Availability of the Draft Environmental Impact Statement for the Proposed NEXUS Gas Transmission Project and the Texas Eastern Appalachian Lease Project* (Notice) issued on July 8, 2016.

The Notice states: "There will not be a formal start of the meeting nor a formal presentation by Commission staff, but FERC staff will be available to answer your questions about the environmental review process. You may arrive at any time after 5:00 PM and we will stop taking comments at 10:00 PM Eastern Time Zone. The primary goal is to have your verbal environmental comments on the draft EIS documented in the public record." The attachment to this memorandum further clarifies that individual verbal comments will be taken on a one-on-one basis with one of the court reporters. This format is designed to receive the maximum amount of verbal comments in a convenient way during the timeframe allotted.

The attachment is the overview for providing comments that Commission staff will provide as a handout at the upcoming comment meetings.

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COMPANIES/ORGANIZATIONS COMMENTS

CO12 – Neighbors Against NEXUS, Sustainable Medina County, Freshwater Accountability Project (cont'd)



Federal Energy Regulatory Commission Providing Draft EIS Comments Overview

Comment Meeting Purpose

The primary purpose of this meeting is to give you the opportunity to provide environmental comments on the draft Environmental Impact Statement (EIS) prepared by Federal Energy Regulatory Commission (FERC) staff on the NEXUS Gas Transmission Project (NGT Project) and the Texas Eastern Appalachian Lease Project (TEAL Project). The National Environmental Policy Act (NEPA) requires an environmental evaluation be completed for federal actions. In the case of the NGT and TEAL Projects, the federal action is the FERC decision whether the proposed Projects are in the public convenience and necessity.

FERC is the lead federal agency responsible for evaluating applications to construct and operate interstate natural gas pipeline facilities under NEPA. Cooperating agencies participating in the development of the EIS include the U.S. Fish and Wildlife Service and the U.S. Army Corps of Engineers. The FERC and cooperating agencies, therefore, are not advocates for the NGT and TEAL Projects, but advocates for the environmental review process.

Comments on the draft EIS can be provided tonight in a written format or verbally on a one-on-one basis to a court reporter. The goal of this meeting is to allow for the maximum amount of verbal comments within the timeframe allotted. All comments will be made part of the official record for these proceedings. *All comments are considered equally regardless of the format in which they are received.* It will help if your environmental comments are as specific as possible regarding the proposed projects and the draft EIS.

General Ground Rules for Verbal Comments with the Court Reporter

- There will not be a formal presentation by Commission staff, but FERC staff is available to answer your questions about the environmental review process.
- Individual verbal comments will be taken between 5:00 and 10:00 PM on a one-on-one basis with the court reporter. Sign-up for providing verbal comments is at the main table. You will be called individually to record your comments with the court reporter.
- Time limits on verbal comments may be limited to 3 to 5 minutes dependent on the number of people signed up to provide comments to ensure that all those wishing to comment have the opportunity to do so within the designated meeting time.
- Remain quiet in all meeting spaces so the court reporter can hear the individual providing comments. Please be mindful of room capacity and allow other interested individuals an opportunity to make comments.
- Individuals or groups may submit written comments in addition to or in lieu of providing verbal comments.

Comment Period

The formal draft EIS comment period is open until August 29, 2016. Written comments can be submitted at the meeting tonight or: 1) Electronically on the FERC website using the eComment or eFiling features on www.ferc.gov or 2) Via U.S. Postal Service to the following address:

Kimberly D. Bose, Secretary
Federal Energy Regulatory Commission

R-218

COMPANIES/ORGANIZATIONS COMMENTS

CO12 – Neighbors Against NEXUS, Sustainable Medina County, Freshwater Accountability Project (cont'd)



Federal Energy Regulatory Commission Providing Draft EIS Comments Overview

888 First Street NE, Room 1A
Washington, DC 20426

All comments formally submitted will become part of the FERC dockets for the Projects (*Reference FERC Docket No. CP16-22-000 for NGT and CP16-23-000 for TEAL*).

R-219

COMPANIES/ORGANIZATIONS COMMENTS

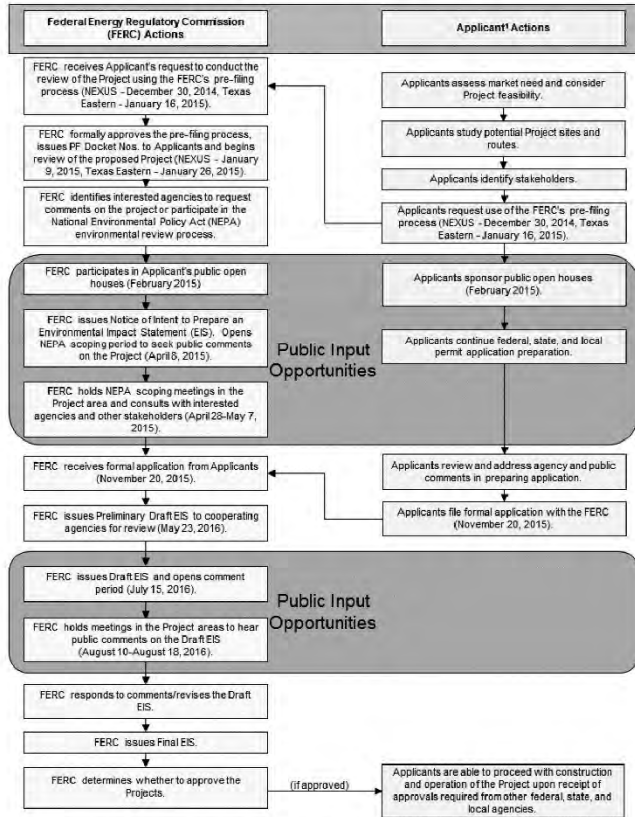
CO12 – Neighbors Against NEXUS, Sustainable Medina County, Freshwater Accountability Project (cont'd)

R-220



Federal Energy Regulatory Commission Providing Draft EIS Comments Overview

Federal Energy Regulatory Commission Review Process



*The project applicants are NEXUS Gas Transmission, LLC (NEXUS) and Texas Eastern Transmission, LP (Texas Eastern).

COMPANIES/ORGANIZATIONS COMMENTS

CO12 – Neighbors Against NEXUS, Sustainable Medina County, Freshwater Accountability Project (cont'd)



Federal Energy Regulatory Commission
Providing Draft EIS Comments Overview

R-221

COMPANIES/ORGANIZATIONS COMMENTS

CO13 – Medina County Economic Development Corporation

CP16-22-000

August 3, 2016



Ms. Kimberly D. Bose, Secretary
 Federal Energy Regulatory Commission
 888 First Street NE
 Washington, DC 20426

ORIGINAL

Dear Secretary Bose:

The proposed NEXUS Gas Transmission project (Docket Number CP16-22-000) represents the kind of plan to create jobs that the Board of Directors of the Medina County Economic Development Corporation (MCEDC) wants to support. On behalf of the board, I am writing to express our hope that the Federal Energy Regulatory Commission will approve the project's permit application.

CO13-1

The MCEDC is comprised of nearly 100 members representing private-sector businesses, county and local governments, and education institutions. We are keenly aware of the role that natural gas plays in efforts to attract and retain companies. While the United States has an abundant supply of natural gas, our nation does not have sufficient infrastructure to fully leverage this natural resource for maximum its positive effect. The NEXUS project addresses this inadequacy by providing a pipeline capable of transporting 1.5 billion cubic feet of natural gas per day to market.

CO13-2

The MCEDC's position on the shale oil and gas industry for the state of Ohio was put on record in 2013, when the organization's board approved a statement that declared support for "the opportunities presented to the growth of Medina County's economy through the development of shale oil and gas." Since then, we have worked tirelessly to fulfill our commitment to attracting businesses in the shale oil and gas industry, as well as businesses that can become members of the industry's supply chain. Spectra Energy also has worked diligently to promote awareness of the NEXUS project, communicate with members of the community and work collaboratively to address the needs of residents and government officials.

CO13-3

According to NEXUS Gas Transmission, LLC, the NEXUS project is expected to be approximately 255 miles, and independent researchers have projected its construction will generate 6,800 jobs and \$830 million in total economic activity. More than 23 miles of the proposed 255-mile interstate transmission pipeline will run through Medina County. This presence will provide numerous opportunities for jobs and provide an estimated \$6.3 million in additional annual tax revenue to county coffers, providing a critical boost in funding for core government services, such as schools and public safety, which directly benefit the public.

We hope the commission joins us in supporting the NEXUS project and approves its permit application.

Sincerely,

Bethany Dentler

Bethany Dentler, CEcD
 Executive Director

FILED
 SECRETARY OF THE
 COMMISSION
 2016 AUG 8 P 3:55
 FEDERAL ENERGY
 REGULATORY COMMISSION

Medina County Economic Development Corporation
 144 North Broadway Street, Suite 202 • Medina, Ohio 44256

- CO13-1 Comment noted
- CO13-2 Comment noted.
- CO13-3 Comment noted.

R-222

COMPANIES/ORGANIZATIONS COMMENTS

CO14 – Board of Trustees of Friends of Medina County Parks

R-223

Thomas K James, Medina, OH.

From: Friends of Medina County Parks, Inc.

6364 Deerview Lane

Medina, Ohio 44256

Mr. Nathaniel J. Davis, Sr., Deputy Secretary

Federal Energy Regulatory Commission

888 First Street N.E., Room 1A

Washington, DC 20426

Re.: CP16-102-000 et al (Nexus Gas Transmission Project)

Dear Mr. Davis:

The Board of Trustees of Friends of Medina County Parks, Inc. wishes to go on record in support of the City of Green Route Alternative or a similar route as discussed in the Draft Environmental Impact Statement (EIS) released by your office on July 8, 2016. Further, the trustees wish to comment on the Chippewa Lake C Route Variation.

Friends of Medina County Parks is a charitable organization formed to support the mission and operation of Medina County Park District. The board of trustees is elected annually to conduct the business of the organization. The issue of the Nexus pipeline project was discussed by the board at its July 20, 2016 meeting. The discussion included a review of the recommendations of the draft environmental report.

CO14-1 Medina County has been growing at a rapid pace for many years. In the 1990s, the county was the fastest-growing county in the State of Ohio. For most of the past twenty years, it has been the fastest-growing county in Northeast Ohio. As you might expect, the population of the county has been expanding rapidly. These facts make the selection of the current proposed route for the Nexus pipeline a perplexing decision.

CO14-1 Comment noted.

COMPANIES/ORGANIZATIONS COMMENTS

CO14 – Board of Trustees of Friends of Medina County Parks (cont'd)

R-224

CO14-2 In the draft EIS, the authors indicate the City of Green Alternative is, at the least, an equal alternative to the currently proposed route. The report continues and states on page 3-27, "However, we recognize that a more detailed routing analysis of the alternative route to avoid forested areas and other impacts, including a presentation of a proposed compressor station, could improve the advantages of the alternative." This reasoning makes it apparent that, with due diligence on the part of Nexus, the City of Green Alternative could be a better route for the pipeline to take. We support this route since it would remove all impacts to Medina County Park District property and would also remove impacts to three other park districts along the route. We encourage further study of the City of Green Alternative or the creation of a similar route that would move the pipeline to areas of the state with less population density.

CO14-3

CO14-4 The Chippewa Lake C Route Variation has been recommended by the draft EIS. On page 3-68, the report states, "The variation would also completely avoid the crossing of county/metro parks." This statement is incorrect. This route impacts a three-acre parcel owned by Medina County Park District. It is important to note that this area contains the Medina County Home cemetery. While not mapped, this area was used to bury indigent residents of the county home for many years. The graves are unmarked.

CO14-5 This area should not be disturbed by pipeline construction. The relocation of the line to the west to avoid this impact would cause more damage to Buckeye Woods Park than the currently proposed route. The Friends trustees oppose any deviation from the Chippewa Lake C Route Variation that would have a negative impact on Buckeye Woods Park.

Thank you for the opportunity to comment on this project. Should you have any questions, or if you need further clarification, please do not hesitate to contact me.

Sincerely,

Thomas K. James, Secretary/Treasurer
Friends of Medina County Parks, Inc.

c: Ms. Kimberly B. Bose, Secretary, Federal Energy Regulatory Commission

- CO14-2 See section 3.3.3 for a discussion of the City of Green Route Alternative. Based on our review, we did not find the City of Green Route Alternative provides a substantial environmental advantage when compared to the corresponding segment of the proposed route and did not recommend that it be incorporated as part of the Projects.
- CO14-3 See the response to comment LA3-2.
- CO14-4 See section 3.4.11 for an updated discussion of the Chippewa Lake Route Variations.
- CO14-5 See section 3.4.11 for an updated discussion of the Chippewa Lake Route Variations.

COMPANIES/ORGANIZATIONS COMMENTS

CO15 – International Union of Operating Engineers Local 18



August 11, 2016

Ms. Kimberly D. Bose
 Secretary
 Federal Energy Regulatory Commission
 888 First Street, NE
 Washington, DC 20426

**LETTER OF SUPPORT - PROPOSED NEXUS GAS TRANSMISSION PROJECT –
 DOCKET NUMBER CP 16-22-000**

Dear Ms. Bose:

CO15-1 | This letter represents my, and the International Union of Operating Engineers, Local 18's ("Local 18"), support for the NEXUS Gas Transmission Project ("NEXUS") planned for eastern Ohio. The NEXUS is an important infrastructure project that will help continue the growth of the Utica and Marcellus Shale Exploration in Ohio and surrounding states. The oil and gas industry has provided a number of great jobs to our membership which in turn contributes dollars to their fringe benefit programs. If approved, the NEXUS will help attract and create future projects for our membership such as industrial parks and power plants.

CO15-2 | Although Local 18 has pledged its support we cannot, in good faith, support any portion(s) of this project that does not utilize our 15,000 members, current and/or retired, or a statewide workforce. Because of the lasting economic impact for the State of Ohio and the potential for unlimited job creation those contractors who employ local workers should be awarded the luxury of constructing the NEXUS. With this said we will not and cannot endorse the selection of M. G. Dyress, Inc. from Bassfield, Mississippi to take part in this project. A lasting economic impact from the wages and fringes earned is what we want not a temporary impact with the remainder going back to Mississippi.

CO15-3 | In addition to the benefits and economic impact that the oil and gas industry will provide the NEXUS proves to be the safest mode for transporting natural gas. One of the significant advantages of a pipeline such as the NEXUS is that pipelines are one of the most efficient and safest means of transportation thereby minimizing the impact on the environment. Additional

CO15-4 | increased use of the pipeline will also reduce traffic on our interstate and local highway systems which are in disrepair due to the significant backlog of overdue maintenance.

- CO15-1 Comment noted.
- CO15-2 Comment noted.
- CO15-3 Comment noted.
- CO15-4 Comment noted.

R-225

COMPANIES/ORGANIZATIONS COMMENTS

CO15 – International Union of Operating Engineers Local 18 (cont'd)

Ms. Kimberly D. Bose
Page 2
August 11, 2016

CO15-5 | Additionally, to ensure that the NEXUS remains in safe and reliable operating condition a number of redundant, overlapping layers of safety and protection will be implemented. High-tech monitoring at the gas control centers, routine foot patrols of the pipeline right of way, inspections and maintenance are just a few examples of how the NEXUS will ensure the pipeline's safety.

All of these issues lead me and Local 18 to believe that this project should be approved by the Board and allow to move forward.

Sincerely,

Michael Bertolone
Special Representative

MB/pjn
C: Mr. Richard E. Dalton, Business Manager

CO15-5 Comment noted.

R-226

COMPANIES/ORGANIZATIONS COMMENTS

CO16 – Coalition to Reroute Nexus

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August 3, 2016

Laborers' Local 809
 Laborers' Local 894
 Laborers' Local 1015

Ms. Kimberly D. Bose, Secretary
 Federal Energy Regulatory Commission
 888 First Street, N.E.
 Washington, D.C. 20426

Re: Nexus Gas Transmission LLC ("NEXUS") Docket No. CP16-22, Nexus Pipeline Project ("Project") and the Federal Energy Regulatory Commission ("Commission")

Dear Secretary Bose:

The Coalition to Reroute Nexus (CoRN) is a grassroots organization germinated in Medina, Ohio. Its mission has been and continues to be to persuade NEXUS to choose a more southerly route for its Project that would largely avoid the densely populated counties of northeastern Ohio that are already well-served by natural gas supplies and infrastructure.

Laborers' Local 809, Laborers' Local 894, and Laborers' Local 1015 are all local affiliates of the Laborers' International Union of North America. The mission of these three affiliated Locals is to advocate on behalf of thousands of hard-working construction craft laborers in northeastern Ohio.

Filing jointly, CoRN, along with Laborers' Local 809, Laborers' Local 894, and Laborers' Local 1015, have found it necessary to submit comments on this Docket reporting what we believe are assertions made by NEXUS and Spectra Energy Corporation that are misleading and/or false, or intentionally created to justify their case before the public and the Commission. This pattern of dishonest and deceitful behavior has become evident in the project owner's dealings with property owners, community and labor organizations, elected officials, and common pleas court judges across the length of the Project.

Starting July 19, 2016, Locals 809, 894, and 1015 filed with the Commission a comment pertaining to false claims made by NEXUS regarding locally sourced construction labor and economic impacts. In their filings, the LiUNA Locals make two requests of the Commission including:

- CO16-1 | 1) Requiring NEXUS to provide evidence detailing how they will employ 60% Ohio residents on the Ohio portions of the Project.
- CO16-2 | 2) Requiring NEXUS to file a new and accurate Economic Impact Analysis that takes into consideration the shortfall of local employment due to the involvement of M.G. Dyess, an out-of-state contractor with a record of not hiring local workers in Ohio.
- CO16-3 | The Locals further add that NEXUS' 60% local hire commitment is unattainable without at least the entire Ohio portion of the Project operating under a collective bargaining agreement with the Locals. CoRN fully supports Locals 809, 894, and 1015, and their requests of the Commission.
- CO16-4 | Furthermore, CoRN has persistently advocated for an alternative route for the NEXUS Project. Currently, the route proposed by NEXUS severely impacts heavily populated and growing areas. The Locals were pleased to read in the Draft Environmental Impact Statement that the Commission finds the City of

- CO16-1 NEXUS has indicated that to the best of their knowledge they intend to employ 60% Ohio residents. This intention is subject to current economic conditions within the State of Ohio.
- CO16-2 Comment noted. A new economic impacts analysis is not required.
- CO16-3 Comment noted.
- CO16-4 See section 3.3.3 for a discussion of the City of Green Route Alternative. Based on our review, we did not find the City of Green Route Alternative provides a substantial environmental advantage when compared to the corresponding segment of the proposed route and did not recommend that it be incorporated as part of the Projects.

R-227

COMPANIES/ORGANIZATIONS COMMENTS

CO16 – Coalition to Reroute Nexus (cont'd)

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CO16-4
(cont'd)

Green Route Alternative acceptable and recognizes that a more detailed routing analysis of this alternative could improve the advantages of this alternative. Locals 809, 894, and 1015 are confident that this more detailed analysis will confirm the Commission's beliefs.

Locals 809, 894, and 1015 advocate for project owners and contractors to be accountable to the communities they work in, whether it be by promoting locally sourced labor and enforcing collective bargaining agreements, or by demanding responsible construction. Therefore, Laborers' Locals 809, 894, and 1015 fully support the alternate route proposal filed by the City of Green on March 23, 2015 and the modifications as requested by the Commission.

The Commission has the responsibility to provide strong leadership in the processing of energy project applications to ensure fairness and determine consistency with the public interest. This includes responding to legitimate requests by stakeholders challenging claims made by NEXUS, Spectra Energy and DTE, the Project sponsors. The Commission also has the responsibility to use the exclusive siting authority assigned to it by Congress in the Energy Policy Act of 2005 to choose a route that addresses stakeholders' concerns, resolves problems, and incorporates alternate route proposals that are consistent with the overall project objective.

Yours truly,

The Board of Directors of the Coalition to Reroute Nexus
Laborers' Local 809
Laborers' Local 894
Laborers' Local 1015



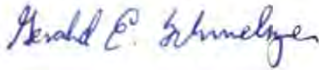
David J. Eigel



David A. Mucklow



Paul L. Gierosky



Gerry Schmelzer



Jonathan D. Strong



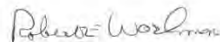
Liz Athaide-Victor, Ph.D

R-228

COMPANIES/ORGANIZATIONS COMMENTS

CO16 – Coalition to Reroute Nexus (cont'd)

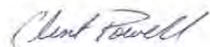
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Robert E. Workman



Thomas Ebbott



Clint Powell
Laborers' Local 809
Business Manager



Bill Orr
Laborers' Local 894
Business Manager



Jake Croston, Jr.
Laborers' Local 1015
Business Manager


R-229

COMPANIES/ORGANIZATIONS COMMENTS

CO17 – Friends of Medina County Parks

R-230

20160915-0161 FERC PDF (Unofficial) 09/15/2016



August 9, 2016

Mr. Nathaniel J. Davis, Sr., Deputy Secretary
Federal Energy Regulatory Commission
888 First Street N.E., Room 1A
Washington, DC 20426

Re.: CP16-102-000 et al (Nexus Gas Transmission Project)

Dear Mr. Davis:

CO17-1 | The Board of Trustees of Friends of Medina County Parks, Inc. wishes to go on record in support of the City of Green Route Alternative or a similar route as discussed in the Draft Environmental Impact Statement (EIS) released by your office on July 8, 2016. Further, the trustees wish to comment on the Chippewa Lake C Route Variation.

Friends of Medina County Parks is a charitable organization formed to support the mission and operation of Medina County Park District. The board of trustees is elected annually to conduct the business of the organization. The issue of the Nexus pipeline project was discussed by the board at its July 20, 2016 meeting. The discussion included a review of the recommendations of the draft environmental report.

Medina County has been growing at a rapid pace for many years. In the 1990s, the county was the fastest-growing county in the State of Ohio. For most of the past twenty years, it has been the fastest-growing county in Northeast Ohio. As you might expect, the population of the county has been expanding rapidly. These facts make the selection of the current proposed route for the Nexus pipeline a perplexing decision.

CO17-2 | In the draft EIS, the authors indicate the City of Green Alternative is, at the least, an equal alternative to the currently proposed route. The report continues and states on page 3-27, "However, we recognize that a more detailed routing analysis of the alternative route to avoid forested areas and other impacts, including a presentation of a proposed compressor station, could improve the advantages of the alternative." This reasoning makes it apparent that, with due diligence on the part of Nexus, the City of Green Alternative could be a better route for the pipeline to take. We support this route since it would remove all impacts to Medina County Park District property and would also remove impacts to three other park districts along the route. We encourage further study of the City of Green Alternative or the creation of a similar route that would move the pipeline to areas of the state with less population density.

Friends of the Medina County Parks, Inc.
6364 Deerview Lane • Medina, OH 44256
330-722-9364, 330-225-7100 ext. 9364, or 330-336-6657 ext. 9364
E-mail: parks@medinacountyparks.com

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CO17-1 Comment noted.

CO17-2 See section 3.3.3 for a discussion of the City of Green Route Alternative. Based on our review, we did not find the City of Green Route Alternative provides a substantial environmental advantage when compared to the corresponding segment of the proposed route and did not recommend that it be incorporated as part of the Projects.

COMPANIES/ORGANIZATIONS COMMENTS

CO17 – Friends of Medina County Parks (cont'd)

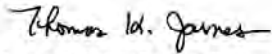
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Mr. Nathaniel J. Davis
August , 2016
Page 2

CO17-3 | The Chippewa Lake C Route Variation has been recommended by the draft EIS. On page 3-68, the report states, "The variation would also completely avoid the crossing of county/metro parks." This statement is incorrect. This route impacts a three-acre parcel owned by Medina County Park District. It is important to note that this area contains the Medina County Home cemetery. While not mapped, this area was used to bury indigent residents of the county home for many years. The graves are unmarked. This area should not be disturbed by pipeline construction. The relocation of the line to the west to avoid this impact would cause more damage to Buckeye Woods Park than the currently proposed route. The Friends trustees oppose any deviation from the Chippewa Lake C Route Variation that would have a negative impact on Buckeye Woods Park.

Thank you for the opportunity to comment on this project. Should you have any questions, or if you need further clarification, please do not hesitate to contact me at the number provided.

Sincerely,



Thomas K. James, Secretary/Treasurer
Friends of Medina County Parks, Inc.


c: Ms. Kimberly B. Bose, Secretary, Federal Energy Regulatory Commission

CO17-3 See section 3.4.11 for an updated discussion of the Chippewa Lake Route Variations.

R-231

COMPANIES/ORGANIZATIONS COMMENTS

CO18 – NRG Energy, Inc.



NRG Energy, Inc.
211 Carnegie Center
Princeton, NJ 08540
Phone: 609.524.5422

August 17, 2016

Kimberly D. Bose, Secretary
Federal Energy Regulatory Commission
888 First Street, NE
Washington, D.C. 20426

RE: NEXUS Gas Transmission FERC Docket No. CP16-22-000

Dear Secretary Bose:


Pursuant to the Commission's July 8, 2016 Notice of the draft environmental impact statement ("EIS") for the proposed NEXUS pipeline project (the "Project"), I write today on behalf of NRG Power Midwest LP ("NRG Power") to express our continued support for the approval and construction of the Project.

CO18-1

The EIS concludes that "construction and operation of the Project would result in some adverse environmental impacts, but impacts would be reduced to less-than-significant levels with the implementation of the applicants' proposed and [the Commission's] recommended mitigation measures."¹ In light of the EIS's findings, NRG Power urges the Commission to promptly approve the Project.

As noted in NRG Power's September 17, 2015 Comments, the proposed NEXUS pipeline would run in close proximity to the Avon Lake Generating Station ("Avon Lake Facility"), which is owned by NRG Power. The proposed path of the Project is an optimal location and would provide a reliable fuel source for the Avon Lake Facility in the event natural gas is added as a fuel at the Facility. As such, NRG Power offers its continued support of the Nexus Project.

Sincerely,



Judith Lagano
President
NRG Power Midwest GP LLC
As the General Partner of NRG Power Midwest LP

¹ NEXUS Gas Transmission Project Draft Environmental Impact Statement at ES-16 (July 8, 2016).

CO18-1 Comment noted.

R-232

COMPANIES/ORGANIZATIONS COMMENTS

CO19 – Ohio Manufacturers’ Association

R-233

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Chairman of the Board
WILLIAM E. SOPKO
President, William Sopko & Sons Co., Inc.

President
ERIC L. BURKLAND

August 16, 2016

Ms. Kimberly Bose
Secretary
Federal Energy Regulatory Commission
888 First Street, NE
Washington, DC 20426

FERC Docket No. CP16-22-000 – NEXUS Gas Transmission Pipeline

Dear Ms. Bose:

Because the proposed NEXUS Gas Transmission Pipeline is critical for increasing access to natural gas and supporting Ohio's economic growth and job creation, The Ohio Manufacturers' Association (OMA) fully supports the project.

As Ohio's advocate for more than 1,400 manufacturing companies, OMA urges the Federal Energy Regulatory Commission to approve the NEXUS pipeline. Access to reliable, affordable energy is a significant competitive issue for manufacturers, and construction of the NEXUS Project will provide Ohioans immediate employment opportunities and provide the state a foundation for long-term economic growth.


Energy policy and energy infrastructure play a major role in the economic welfare of local communities, the state, and the nation. Accordingly, state and federal energy policies must be designed to stimulate economic growth, attract business investment, and spur job creation, especially in manufacturing, which provides 17% of Ohio's GDP, greater than any other industry sector. These policies should promote the diversification of energy resources while appropriately balancing concerns about affordability, reliability, and conservation.

The low price and high reliability of clean-burning, domestically-produced natural gas make it a prime fuel for residential customers and businesses, particularly manufacturers. The 255-mile NEXUS Project will start in Columbiana County, and its transport of Appalachian shale gas will enhance the region's and the state's appeal to existing and prospective businesses. Investments that improve productivity while saving energy, minimizing waste, and reducing environmental emissions are highly valuable as part of broader efforts to foster Ohio's economic development.

33 N. High St., 6th floor
Columbus, Ohio 43215-3005

Phone: 614-224-5111 • Toll free: 800-662-4463
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COMPANIES/ORGANIZATIONS COMMENTS

CO19 – Ohio Manufacturers’ Association (cont’d)

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CO19-1

The NEXUS pipeline is precisely such a project. The construction will create 6,800 jobs and spur some \$830 million in total economic activity, according to studies by Michigan State University and Economic & Policy Resources. Local governments stand to benefit from millions of dollars in additional tax revenue that will support public schools and other municipal services that directly affect residents’ quality of life, factors that are considered by employers when evaluating potential sites for expansion and relocation. Greater access to natural gas will help lower energy prices for consumers; and manufacturers, notably, will gain greater access to a raw material utilized in many manufactured products including chemicals, polymers and fertilizer.

The men and women who work in Ohio manufacturing are among the most skilled and most productive anywhere in the world. With construction of the NEXUS pipeline, the state’s manufacturing industry will be able to sustain and grow its 700,000 employees statewide while strengthening other sectors of the state’s economy. And, because natural gas is cleaner burning and pipelines are the safest way to transport fuel, the project will also improve our environment.

The NEXUS pipeline holds great promise for manufacturing in Ohio and the Midwest. The current route as proposed by NEXUS stands to benefit industry specifically because of the Brickyard and Rittman industrial tap. For all of these reasons, the OMA is proud to support the current NEXUS route and again respectfully requests that the Federal Energy Regulatory Commission approve the project without undue delay.

Sincerely,



Ryan Augsburger
Vice President & Managing Director
OMA Public Policy Services

CO19-1 Comment noted.

R-234

COMPANIES/ORGANIZATIONS COMMENTS

CO21 – Dominion East Ohio



Dominion East Ohio
1201 East 55th Street, Cleveland, OH 44103

August 23, 2016

Kimberly D. Bose, Secretary
Federal Energy Regulatory Commission
888 First Street, N.E.
Washington, D.C. 20426

Re: NEXUS Gas Transmission Project
Docket No. CP16-22-000

Dear Secretary Bose:

I'm writing today on behalf of The East Ohio Gas Company d/b/a Dominion East Ohio ("DEO") to voice our continued support for the approval and construction of the NEXUS Gas Transmission Project ("NEXUS"). DEO is a Cleveland-based natural gas utility devoted to providing safe and reliable natural gas service to 1.2 million residential, commercial, and industrial customers in Ohio. As a member of the communities that we serve, DEO highly values the economic development opportunities and consumer benefits that will be provided through the implementation of the NEXUS pipeline.

CO21-1 | As currently proposed, the NEXUS project provides the opportunity to connect with major DEO pipelines in Columbiana, Erie, Medina and Wayne Counties in Ohio. Additional interconnections in those areas would enhance supply diversity and reliability, provide an additional outlet for low-cost, Ohio-produced natural gas, expand opportunities for siting natural gas-fired generation, and support much-needed economic development in the region.

We encourage the Federal Energy Regulatory Commission to approve this important project without delay.

Respectfully submitted,

A handwritten signature in blue ink that reads "Jeffrey A. Murphy".

Jeffrey A. Murphy,
Vice President and General Manager,
The East Ohio Gas Company d/b/a
Dominion East Ohio

CO21-1 Comment noted.

R-235

COMPANIES/ORGANIZATIONS COMMENTS

CO21 – Dominion East Ohio (cont'd)

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CERTIFICATE OF SERVICE

I hereby certify that, on this, the 25th day of August, 2016, I have caused a copy of the foregoing document to be served, by electronic mail or by first class U.S. mail, postage prepaid (for any addresses without email addresses) upon all parties listed on the service list compiled by the Office of the Secretary, Federal Energy Regulatory Commission, for the above-referenced proceeding.

/s/ Russell Kooistra
Russell Kooistra

R-236

COMPANIES/ORGANIZATIONS COMMENTS

CO22 – Coalition to Reroute Nexus (cont'd)

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CO22-2
(cont'd)

and need and most importantly alternate routes where viable alternatives would reduce the impact on the aforementioned issues. "to the fullest extent possible" 42 U.S.C. § 4332. See also 40 C.F.R. § 1500.2.

"NEPA requires the federal government to identify and assess in advance the likely environmental impact of its proposed actions, including its authorization or permitting of private actions. *Dep't of Transp. v. Pub. Citizen*, 541 U.S. 752, 756-57, 124 S.Ct. 2204, 159 L.Ed.2d 60 (2004). NEPA's mandate, which incorporates notice and comment procedures, serves the twin purposes of ensuring that (1) agency decisions include informed and careful consideration of environmental impact, and (2) agencies inform the public of that impact and enable interested persons to participate in deciding what projects agencies should approve and under what terms. *Id.* at 768. The statute serves those purposes by requiring federal agencies to take a "hard look" at their proposed actions' environmental consequences in advance of deciding whether and how to proceed. *Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 350-51, 109 S.Ct. 1835, 104 L.Ed.2d 351 (1989). The statute does not dictate particular decisional outcomes, but "merely prohibits uninformed--rather than unwise--agency action." *Id.* at 351; see also *Pub. Citizen*, 541 U.S. at 756-57.

At the heart of NEPA is the procedural requirement that federal agencies prepare and make publicly available, in anticipation of proposed "major Federal actions significantly affecting the quality of the human environment," an Environmental Impact Statement (EIS) that assesses the action's anticipated direct and indirect environmental effects, and that the agencies consider alternatives that might lessen any adverse environmental impact. 42 U.S.C. § 4332(C); 40 C.F.R. § 1508.11. Regulations promulgated by the Council on Environmental Quality (CEQ) provide common guidance for all federal agencies in carrying out their NEPA responsibilities.

COMPANIES/ORGANIZATIONS COMMENTS

CO22 – Coalition to Reroute Nexus (cont'd)

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Pub. Citizen, 541 U.S. at 757; see 40 C.F.R. pts. 1501-02. Some agencies, such as the Corps, have promulgated their own, complementary NEPA regulations in order to provide additional guidance to their personnel to carry out the directives of the statute and the CEQ regulations in agency-specific contexts. See, e.g., 33 C.F.R. § 325 App. B (Corps regulations); see also 40 C.F.R. § 1500.2(a)-(b). *Sierra Club v. United States Army Corps of Engineers*, 803 F.3d 31, 37 (D.C. Circuit, 2015).

CO22-3 In the DEIS at Section 4.13.1, FERC writes: "Under a Memorandum of Understanding on Natural Gas Transportation Facilities (Memorandum) dated January 15, 1993, between DOT and FERC, DOT has the exclusive authority to promulgate federal safety standards used in the transportation of natural gas. . . . FERC accepts this certification [of compliance with federal safety standards] and does not impose additional safety standards." "FERC also participates as a member of the DOT's Technical Pipeline Safety Standards Committee, which determines if proposed safety regulations are reasonable, feasible and practicable." Page 4-232.

While this arrangement may be convenient for the Applicant and FERC, this arrangement violates the principles and doctrine of separation of powers protected by the U.S. Constitution and the federal statutes and federal regulations specifically promulgated to regulate the siting of the pipelines such as the Nexus pipeline. The memorandum arrangement specifically ignores

CO22-4 safety considerations and impact to the human environment in the planning or siting of a pipeline in close proximity to homes, businesses and parks and the required analysis of the types of pipelines, the size, the extreme pressure and the science and engineering studies that recognize the danger to human life posed by high pressure pipelines such as Nexus. Such high consequence areas or blast zone studies have been repeatedly filed on this docket supporting urgency and concern for siting this pipeline in a high consequence area and high density

CO22-3 Through the NEPA process, the Commission evaluates the safety impact of siting natural gas transmission facilities.

CO22-4 We disagree. Using the pipeline safety regulations that DOT develops, in combination with historic incident reporting data maintained by DOT, the EIS addresses the safety impacts associated with siting the Project. In particular, section 4.13.1 of the EIS identifies the potential impact radius should an incident occur. The EIS goes on to explain that based on historic data, the likelihood of an incident is very low. The EIS also explains that more stringent design, construction, and operating criteria established by DOT provides for a greater level of protection in increasingly populated areas. Therefore the EIS addresses the safety impact of siting the Project, and finds that regardless of population density, pipelines are a safe and reliable method of transporting natural gas.

R-239

COMPANIES/ORGANIZATIONS COMMENTS

CO22 – Coalition to Reroute Nexus (cont'd)

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CO22-4
(cont'd)

population community when alternatives exist, which have far fewer conflicts with the human environment. The Memorandum may have worked at its creation in 1993, but can no longer be valid when accidents on high pressure pipelines cause extreme damages and deaths routinely in the United States some 23 years later, when pipeline technology has advanced to extreme size and pressures. The Memorandum shifts responsibility to another federal agency with no responsibility for the siting of the pipeline, but only its construction and operation. This deflection of responsibility and disconnection between siting the pipeline and concern for human safety at the planning and siting stage defies logic and common sense and ignores NEPA and the regulation promulgated thereunder. It creates the appearance of extreme disregard for human life and bias in favor of the Applicant that provides funding to FERC through filing fees. The Commissioners routinely are appointed from within the industry furthering the appearance of impropriety. For these reasons, it is clear that FERC is violating federal law by ignoring NEPA, the federal regulations, the doctrine of separation of powers, due process and equal protection guaranteed by the U.S. Constitution 5th and 14th Amendments. FERC must rescind its agreement of January 15, 1993 and come into compliance with the federal law. Should it not do so, stakeholders will be compelled to seek the aid and relief of the judiciary to break up this unholy alliance between applicants and FERC and reassert a separation and balance of power in favor of the people, who hold ultimate power and authority over the federal government.

At Section 3.3.3, the DEIS states:

Pipeline safety in the proximity to residential, commercial, and industrial development is a primary concern raised by many stakeholders who commented in support of the city of Green Alternative. DOT safety standards are intended to ensure adequate protection regardless of proximity to development. . . . Projects must be designed, constructed, operated and maintained

COMPANIES/ORGANIZATIONS COMMENTS

CO22 – Coalition to Reroute Nexus (cont'd)

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in accordance with these safety standards. **Therefore, we find that either route is safe, regardless of population density (see section 4.13).** However, an important consideration in routing a natural gas transmission pipeline instead is the impact on land use." Page 3-23 of DEIS.

CO22-5

FERC expended considerable coverage in the DEIS justifying that HCA classifications and using thicker, more brittle pipe, as the solution to protecting humans within high consequence areas (HCA) or areas of dense population in the pages that follow in Section 4.13, DEIS, 4-232-246. FERC recognizes that 49 CFR 195.210 provides safety setback restrictions for transporting hazardous liquids; it contends that these regulations do not apply to natural gas under high pressure and no regulation therefore exists and these requirements may be ignored. This analysis is legally, scientifically, and logically flawed for failing to recognize that natural gas under high pressure at greater than 1,000 psi renders compressed natural gas more volatile than liquids and capable of self-ignition as recognized by Dr. Charles Rhodes PHD creating blast zones of up to 500 meters and radiant fire zones beyond that distance as has occurred repeatedly throughout North America. Arguably the regulation is applicable because of the changes in technology which have placed natural gas under such extreme pressures giving it characteristics fundamentally the same as liquids regulated by 49 CFR 195.210. FERC has provided no analysis to refute this clear and present danger and is clearly siding with the Applicant by avoiding this issue and ignoring scientific and technological advances. FERC routinely ignores this safety issue and provides the same essential paragraphs in every decision that it makes reflecting that FERC lacks decision making ability or processes that provide objective criteria to analyze the issue. Skirting it does not make it go away. FERC ignores this scientific data compiled both by experts like Dr. Charles Rhodes PHD and other industry studies filed on this docket. FERC simply concludes without evidence that "either route is safe, regardless of

CO22-5

The regulations under 49 CFR 195.1(b) explicitly states that "transportation of a hazardous liquid transported in a gaseous state" is not covered by this subpart applicable to hazardous liquid pipelines, including 49 CFR 195.210. Instead, DOT developed separate regulations under 49 CFR 192 to address transportation of natural gas via pipeline. We continue to maintain that the setback requirements established for hazardous liquid pipelines do not apply to natural gas transmission pipelines. Pipelines are sited in the most densely populated areas of the United States, including New York City. Based on historic incident data, comprising a wide range of population densities, the EIS determines that pipelines are a safe method of transporting natural gas.

R-241

COMPANIES/ORGANIZATIONS COMMENTS

CO22 – Coalition to Reroute Nexus (cont'd)

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CO22-5 (cont'd) | population density” and natural gas lines do not require safety setbacks while less volatile liquids do require avoidance in residential areas. Liquids that combust can be doused with chemicals (available to most firefighters) that starve the accelerant of oxygen; while no such solution exists for fighting natural gas fires caused by high pressure static charge ignition on natural gas transmission lines. In fact most emergency plans simply call for procedures to locate and turnoff valves and alert local officials, which take considerable time. Some fires have burned for days.

CO22-6 | Current federal regulations under PHMSA do not even call for automatic shutoff valves or similar safety procedures, which are currently under consideration in the rule making process before PHMSA, recently closed for comment. Establishing appropriate safety setbacks in the planning process, consistent with current federal law, would protect the human environment to a greater degree until such time that PHMSA passes more sufficient safety regulations. FERC cannot continue to ignore the reality of the impact of incidents on the human environment and trauma that it creates for humans. No amount of money paid by Applicants can justify such an apathetic position. This point of contention could be determined by a court of law having no

CO22-7 | financial stake in approving this or any other Project. FERC simply defers to sending out “information brochures to landowners, businesses, potential excavators, and public officials along the pipeline systems . . . on how to recognize and react to unusual activity on the area.” These measures are about as effective as “duck and cover drills” taught to school children in the early 1960’s on how to react to nuclear explosions in the event of nuclear war. These types of measures and recommendations insult the intelligence of the American people and the

CO22-8 | communities faced with possible catastrophic events. FERC further states: “In accordance with 49 CFR 192.615, NEXUS would develop, maintain, and implement a written emergency response plan to minimize the hazards from a pipeline emergency.” Unfortunately, there are no

CO22-6 | As discussed in section 4.13, NEXUS would comply with design requirements established in 49 CFR 192.

CO22-7 | See the responses to comments CO22-3 through CO22-06.

CO22-8 | Section 4.13.1 describes key elements of NEXUS' emergency response plan, as required by DOT regulations at 49 CFR 192. NEXUS has committed to compliance with these regulations. However, the DOT is responsible for enforcing compliance with its regulations.

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CO22 – Coalition to Reroute Nexus (cont'd)

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CO22-8 (cont'd) guarantees that such a plan would be followed or that Nexus would not file bankruptcy to avoid such responsibility or would be incapable of executing such a plan in the event of a major incident. On Page 29 of Spectra Energy's most recent 10-K filing the Company said: "In addition [to leaks, explosions, fires and other natural disasters] these risks could result in **significant injury, loss of life, significant damage to property**, environmental pollution and impairment of operations, any of which could result in substantial losses. **For pipeline and storage assets located near populated areas, including residential areas, commercial business centers, industrial sites and other public gathering areas, the level of damage resulting from these risks could be greater.**"

CO22-9 When better alternatives exist, the Commission is required under NEPA to "consider alternatives that might lessen any adverse environmental impact." Better alternatives exist in the City of Green alternate route which avoids HCAs. Consider the following:

1. Over one year ago, the FERC had asked NEXUS specifically to address the following: "...several issues that we think deserve attention...alternatives, including...a southern route to avoid residential areas in and around the City of Green, Ohio." ¹ Nexus has taken no meaningful activity to study and develop this alternate route and continues to defy FERC.
2. This request was made presumably for considerations of safety, the well-being of individuals and impact to communities and high consequence areas (HCAs).

¹ "Notice of Intent to Prepare an Environmental Impact Statement for the Planned NEXUS Gas Transmission Project and TEXAS Eastern Appalachian Lease Project, Request for Comments on Environmental Issues, and Notice of Public Scoping Meetings," FERC Docket Nos. PF15-10-000 and PF15-11-000, April 8, 2015.

CO22-9 The EIS considered the City of Green Route Alternative as well as several other route alternatives. See section 3.3.3 for a discussion of the City of Green Route Alternative. Based on our review, we did not find the City of Green Route Alternative provides a substantial environmental advantage when compared to the corresponding segment of the proposed route and did not recommend that it be incorporated as part of the Projects.

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CO22 – Coalition to Reroute Nexus (cont'd)

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CO22-10 3. An example of the elevated human impact of the current route is given by the following example using the data from Table 11.4-1 “Location of High Consequence Areas along the NEXUS Project Pipeline Facilities” in NLEXUS Resource Report 112:

Distance through Summit Co:	16.0 miles
Distance of HCAs in Summit Co:	9.0 miles
Distance through State of Ohio:	188.0 miles
Distance of HCAs in Ohio:	31.7 miles
Density of HCAs in Ohio:	16.9%
Distance of HCAs in Summit Co:	56.3%

(Distances through Summit Co and State of Ohio approximate)

CO22-11 4. The Potential Impact Radius (PIR, or R_{IP}) for determination of HCAs is (49 CFR 192.903):

$$R_{IP} = 0.69\sqrt{pd^2}$$

For the NEXUS project, with maximum operating pressure $p = 1440$ psi and nominal diameter: $d = 36$ inches,

$$R_{IP} = 943 \text{ ft}$$

In the NEXUS Resource Report 11, the R_{IP} is reported as 1100 feet, presumably a carry-over from when the plan was for a 42 inch DIA line.

5. The radiation Safety Setback per Charles Rhodes³ is calculated as:

$$R_S = 17.71d(p - p_a)^{0.25}$$

2 NEXUS Resource Report 11, Reliability and Safety, November 2015.

3 Natural Gas Pipeline Rupture/Fire: Calculating safety setbacks from high-pressure gas lines” by Dr. Charles Rhodes, P. Eng., Ph.D. (January 2010).

CO22-10 See the response to comment LA3-2.

CO22-11 We use the methodology established by the DOT in its pipeline safety regulations to identify the potential impact radius of an incident along a pipeline. The draft EIS incorrectly used an older pipeline diameter in determining the potential impact radius. Based on the proposed pipeline diameter of 36 inches, the potential impact radius is reduced from 1,100 feet to 943 feet. The final EIS has been updated to reflect this potential impact radius. Any other suggested methodologies for establishing a potential impact radius should be presented to the DOT for scientific verification and future inclusion in its regulations.

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CO22 – Coalition to Reroute Nexus (cont'd)

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with the diameter in meters and the pressure in Pascals, or,

$$R_S = 17.71 \left(\frac{36}{39.4} \right) (1440 * 6870 - 14.7 * 6870)^{0.25}$$

$$R_S = 905 \text{ m} = 2972 \text{ ft}$$

The radius of burn R_c is about half of R_S , or $R_c = 1500$ ft, which is similar to the R_{IP} cited above, and what has been used in other safety assessments, such as the City of Green Alternative route.⁴

6. FERC should consider, not only the current state, but the likely future state when the project has been in service for a number of years. The regulations contemplate future development. The likelihood of additional buildings and dwellings being built close to the pipeline is much greater when traversing incorporated cities than it is with a path through rural areas. The density of HCAs through Southern Summit County could easily rise to 70%. The density of IICAs along the rest of the route will probably not change from 17%.
7. The current route through the City of Green is a poor route for the NEXUS pipeline (and presumptively violates federal law). Consider Figure 1:
 1. In an attempt to route the pipeline through the city and avoid sensitive areas, the route now has many direction changes that has increased the length by 2 miles since June 2015, through the COG alone (See Figure 1)(Note that the Southern Alternative is now shorter than the NEXUS preferred route.). The current route shown in Figure 1 is not optimal for an interstate/international transmission line.

⁴ City of Green letter to Secretary Bose, "Proposed NEXUS Pipeline – Alternative Re-route," FERC Docket PF15-10-000, March 23, 2015. (<http://www.cityofgreen.org/uploads/alternate-route-submittal.pdf>)

CO22-12 As discussed in section 4.13.1, if an increase in population occurs near the pipeline resulting in a Class location change, NEXUS would be required to reduce the MAOP or reclassify the pipeline, accordingly. NEXUS would be required to comply with Class location and HCA requirements.

CO22-13 Comment noted.

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CO22 – Coalition to Reroute Nexus (cont'd)

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CO22-14

2. The route now has many more direction changes including many bends, some at 90 degrees. These bends increase the risk of a pipe failure through at least 3 mechanisms:
 1. Any physical bending of the pipe causes plastic deformation which can lead to the coalescence of voids that can lead to crack initiation and growth over time.
 2. Any additional welds required for a zig-zag route introduces more chances of flaws being introduced by the welding process that can lead to crack initiation and growth over time. Inspections can only detect flaws of a certain size, and the detection mechanism is not 100% guaranteed.
 3. When gas is flowing through a direction change in the pipe, the local stresses in the pipe are elevated as a result of the momentum change ($mass \times velocity_vector$) of the flowing gas.

CO22-15

3. The recent failure of a Spectra Energy natural gas pipeline in Pennsylvania⁵ is a reminder that these events do happen despite FERC's attempt to downplay the number of incidents or loss of life and injuries. Statistics compiled by PHMSA provide analytical data to support that incidents do routinely occur on Projects such as Nexus and that even compressor stations operated safely adversely impact human health in the areas surrounding the compressor stations. The federal law requires the siting of such pipelines should be away from populated areas whenever possible. FERC lacks sufficient protocols to objectively determine

⁵ See e.g. "Another Spectra-Energy Pipeline Fails. Huge Fireball in Gas Explosion Burns Homes, Fleeing Man April 29, 2016." FERC Docket CP16-22-000, 20160429-5458, April 29, 2016.

CO22-14

Bends in natural gas transmission pipeline are a common occurrence. Pipelines are routinely inspected using internal devices that can detect pipeline thickness, deformations, dents, cracks etc. NEXUS would comply with 49 CFR 192, which provides details on pipeline welds for natural gas transmission pipelines. Subpart E Welding of Steel in Pipelines describe welding procedures (section 192.225), welder qualifications (192.227), and weld testing and inspections (192.241). Section 192.7 incorporates American Petroleum Institute's API-1104 (Standard for Welding Pipelines and Related Facilities) by reference. DOT regulations for pipeline design account for pipeline stress.

CO22-15

The EIS acknowledges that pipeline incidents do happen and reports the historic incident statistics, demonstrating that the likelihood of such incidents is low. See also the responses to comment CO22-5.

COMPANIES/ORGANIZATIONS COMMENTS

CO22 – Coalition to Reroute Nexus (cont'd)

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CO22-15
(cont'd)

when HCAs should be avoided in favor of routes with fewer conflicts to the human environment. Failure to move the pipeline implicate Constitutional violations of the procedural and substantive due process rights of stakeholders in close proximity to the Nexus Project.

4. 49 CFR § 195.210 provides:

“Pipeline location. (a) **Pipeline right-of-way must be selected to avoid, as far as practicable, areas containing private dwellings, industrial buildings, and places of public assembly.**

(b) No pipeline may be located within 50 feet (15 meters) of any private dwelling, or any industrial building or place of public assembly in which persons work, congregate, or assemble, unless it is provided with at least 12 inches (305 millimeters) of cover in addition to that prescribed in [49 CFR] § 195.248.”

CO22-16

The regulation from 49 CFR Section 195.210 (a) places a requirement on a carrier to select a right-of-way that avoids “as far as practicable, areas containing private dwellings, industrial buildings, and places of public assembly.” High pressure natural gas is equal to if not more dangerous than petroleum liquids; as Dr. Rhodes outlines in his studies, previously filed on this docket, high pressure natural gas (CH₄) will self-ignite due to static charge as it leaks through holes in welds. The explosion creates a pulse wave, large fire balls, and extreme heat that is devastating to the human environment and results in loss of life and damage to property. The regulation does not distinguish between petroleum liquids under normal atmospheric pressure and gas placed under high pressure or higher than normal atmospheric pressure greater than 1000 psi. The definitions at 49 CRF 195.1 states: “Hazardous liquid means petroleum, **petroleum products**, anhydrous ammonia, or ethanol.” “Petroleum means crude oil, condensate,

CO22-16 See the response to comment CO22-5.

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COMPANIES/ORGANIZATIONS COMMENTS

CO22 – Coalition to Reroute Nexus (cont'd)

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CO22-16
(cont'd)

natural gasoline, natural gas liquids, and liquefied petroleum gas. Petroleum product means **flammable, toxic, or corrosive products obtained from distilling and processing of crude oil, unfinished oils, natural gas liquids, blend stocks and other miscellaneous hydrocarbon compounds.**” The natural gas used in the Nexus Project is a **petroleum product which is flammable and toxic “obtained from distilling and processing of crude oil . . . and other miscellaneous hydrocarbon compounds”** emanating from processing plants (e.g. Kensington, OH and other locations) that have distilled or separated the natural gas and placed it under extreme pressure. Natural Gas is CH₄ and is a “miscellaneous hydrocarbon compound.” Nexus falls within the definition

CO22-17

required under the federal regulations because it is transporting CH₄. FERC has routinely ignored the scope and requirements of these federal regulations, arguing the lack of applicability of the regulation to natural gas transmission pipelines as reflected in the DEIS, Page 4-237. The regulation requires avoiding dwellings in the siting process if practicable and special safety setbacks requiring special covering within 50 feet from any dwelling transporting hazardous liquids. Natural gas constitutes a hazardous liquid because it is flammable and is obtained from distilling and processing of crude oil and other miscellaneous hydrocarbon compounds in the refining and separation process.

CO22-18

Alternate routes exist in this particular case, which avoid the HICAs and dwellings located in Stark, Summit, Wayne and Medina Counties. FERC’s interpretation defies the language of the Code of Federal Regulations, common sense, and logic and is not defensible or sustainable. Constitutional rights to be

CO22-17 See the response to comment CO22-5.

CO22-18 See the response to comment LA3-2.

COMPANIES/ORGANIZATIONS COMMENTS

CO22 – Coalition to Reroute Nexus (cont'd)

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CO22-18
(cont'd)

free from potential bodily harm are implicated since reasonable alternatives exist. Moving the pipeline to the City of Green alternate route would render this issue moot. The American Revolution was ignited with a publication titled: "Common Sense" by Sam Adams. Apparently conditions in Washington D.C. have left decision makers bereft of common sense.

CO22-19

5. The elevated number of conflicts with the environment, the community, and homeowners has been previously demonstrated over 1 year ago with the COG alternative route analysis.⁶ The City of Green is refining this route since Nexus refuses to do so and continues to pay for permanent easements on the current route.

CO22-20

6. The amount of zig-zags in the route through the City of Green combined with the elevated population density creates a situation with much higher risk of property damage, injury and death than a rural route with less bends. The increased risk of death, injury or property damage is difficult to estimate, but considering the following through the City of Green, the level of risk might be 1000-10,000 times greater than that for a rural route:

1. The amount of bends and welds in the pipe may increase the chance of an incident by 10 times over that of a pipeline with a straighter route.
2. Because dwellings, parks, etc. are nearby, the chance of an incident causing death, injury or property damage might be 10 times that of a pipeline going through more rural areas.

⁶ City of Green letter to Secretary Bose, "Proposed NEXUS Pipeline – Alternative Re-route," FERC Docket PF15-10-000, March 23, 2015. (<http://www.cityofgreen.org/uploads/alternate-route-submittal.pdf>)

CO22-19 An Optimized City of Green Route Alternative based on refinements submitted by city officials is discussed in section 3.3.3.

CO22-20 See the responses to comments LA3-2 and CO22-14.

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CO22 – Coalition to Reroute Nexus (cont'd)

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CO22-20
(cont'd)

3. Since NEXUS plans to traverse developing incorporated cities, more dwellings, schools, parks, churches, etc. will be built (with digging) close to the pipeline over the next 20-30 years. This further increases the chance of death, injury, or property damage.
4. Many of the incidents with pipelines are caused by human activity. The density of humans and activities like digging in the incorporated cities is easily 100 times that of a rural area, further increasing the risk. Even though Green is an incorporated city, there is farming, digging, target shooting and other similar activities within the city and near the proposed route.

CO22-21

8. There are many practicable alternative routes that do not traverse the populated areas in Northeast Ohio. Further discussion on this is provided below and in multiple previous filings.

CO22-22

9. Prior to the end of the draft EIS comment period, Nexus must file with FERC: "13.b. minor route adjustments and realignments to the City of Green Route Alternative in order to minimize impacts on residences, forests, and other environmental resources (Section 3.3.3)" Page 5-22 of DEIS.

CO22-23

10. Land uses and zoning laws in Summit County and other places are not compatible with a dangerous industrial process such as Nexus which is the equivalent of having a dynamite factory amongst residential neighborhoods. Zoning laws in the City of Green and New Franklin do not allow dangerous industrial processes such as Nexus next to residential housing and certain commercial uses. The Tenth Amendment to the U.S. Constitution has reserved issues of land use to the States and local governments. Ignoring the Tenth

CO22-21

See the response to comment LA3-2.

CO22-22

Comment noted.

CO22-23

See section 1.5 for a discussion of local zoning. FERC encourages cooperation between NEXUS and Texas Eastern and state and local authorities; however, state and local agencies, through the application of state and local laws, may not prohibit or unreasonably delay the construction or operation of facilities approved by FERC.

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CO22 – Coalition to Reroute Nexus (cont'd)

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Amendment and local zoning laws brings the Nexus Project in conflict with the municipalities, Ohio law, and the Constitutional rights of stakeholders.

CO22-24

Since NEXUS has not produced any genuine response to the FERC request of April 2015 for “a southern route to avoid residential areas in and around the City of Green, Ohio,” I request that FERC continue to do so in the absence of NEXUS, since there is high likelihood that a much improved route is available that does not go through incorporated cities and populated areas or HCAs. The possibility that NEXUS, a private-sector, for-profit enterprise will have done this on their own volition is unlikely, since developing such a route would impact their self-imposed schedule, profits, revenue stream and the CEO’s outrageous levels of compensation. Moreover,

CO22-25

NEXUS has been paying for permanent easements in Stark, Summit and Medina and other Counties which make it impossible for NEXUS to exercise an objective public function or duty which would be expected at this stage of the development project because no Certificate has been issued by FERC. This paradigm, recognized by the Ohio Supreme Court in *Norwood, Ohio v. Horney*, 110 Ohio St.3d 353 (2006) in response to the *Kelo v. New London*, 545 U.S. 469, 125 S. Ct. 2665, 162 L.Ed 2d 439 (2005) illustrates the inherent flaw with allowing for profit private agencies to site or plan its own pipeline. The public function cannot be properly or efficiently delegated under the 5th Amendment to a private for profit agency guided by profits and greed rather than public safety. Nexus simply lacks any credibility at this stage considering its activities and attempts to payoff property owners to acquire support for its Project and entrench its position. FERC cannot shirk this responsibility and leave it in the hands of the Applicant.

CO22-26

In a recent communication from Nexus in response to the City of Green, NEXUS states, “As NEXUS has explained, the process for considering alternatives is well advanced by both

- CO22-24 Section 3.3 evaluates several alternatives that follow a more rural southern route, including the Rover, Southern, City of Green, Canton A, Canton B, Canton C, and Doylestown route alternatives.
- CO22-25 Comment noted.
- CO22-26 Comment noted.

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CO22 – Coalition to Reroute Nexus (cont'd)

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CO22-26
(cont'd)

NEXUS and the Commission's staff and has involved substantial public input and comments on routing, including from the City of Green.⁷ It is difficult to ascertain what is meant by "well advanced", since NEXUS has not addressed in any realistic manner, the basic request that has been before them for almost two years now – an alternate route that avoids the populated areas and incorporated cities in Northeast Ohio. The DEIS further ordered NEXUS to consider the alternate route and an alternate site for the Wadsworth, OH compressor station. NEXUS has no intentions of complying based upon the large sums of money spent on permanent easements in Stark, Summit and Medina Counties. The lack of regulation by FERC encourages this activity of purchasing support from property owners prior to completion of the siting or pre-certificate process. NEXUS assumes that FERC will approve the current route, why else would it purchase permanent easements.

CO22-27

There are cases where a pipeline such as NEXUS needs to be sited though populated areas when there are no practicable alternatives. This is not one of those cases. Multiple, practicable, alternative routes, south of Canton, OH, have been demonstrated (e.g. see COG, and Options 1 and 2 in Figure 2) that meet the overall project objectives with over 3 times less HCAs and potentially 10,000 times less risk.

IN CONCLUSION, FERC must require a route change for NEXUS consistent with the City of Green alternate route avoiding HCAs and densely populated areas when reasonable alternative exist.

/s/ David A. Mucklow
DAVID A. MUCKLOW(#0072875)

⁷ "Answer to Pleading/Motion of NEXUS Gas Transmission, LLC under CP16-22." FERC Docket CP16-22-000, 20160331-5375, March 31, 2016.

CO22-27 See the response to comment LA3-2.

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CERTIFICATE OF SERVICE

I hereby certify on this 25th day of August, 2016 that a copy of the foregoing document was served upon Nexus Gas Transmission, LLC and each person designated on the official service list compiled by the Secretary in this proceeding via email.

/s/ David A. Mucklow
DAVID A. MUCKLOW(#0072875)

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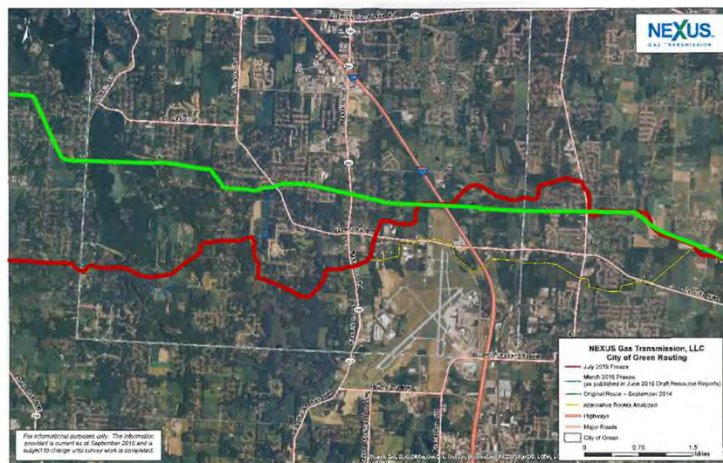


Figure 1 – NEXUS Routes through the City of Green. Original route in GREEN color. November 2015 route in RED color (2+ miles longer).

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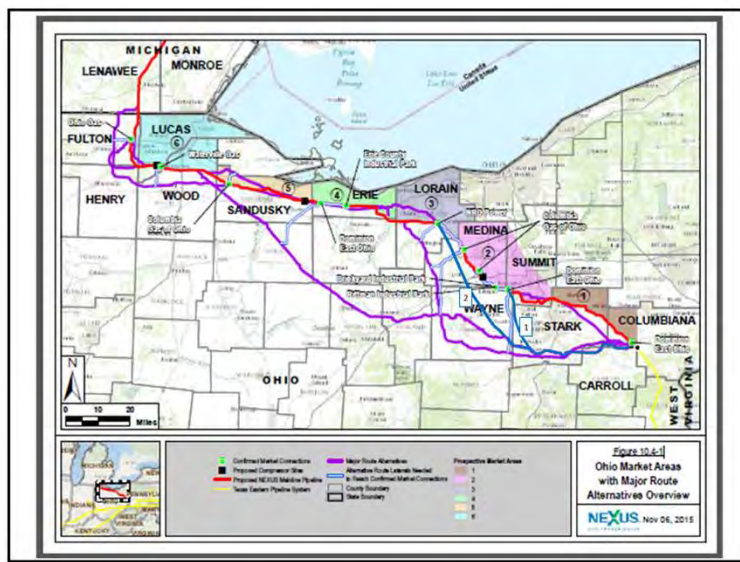


Figure 2 – NEXUS Route (Red) with Possible Alternatives (Blue, Purple) to Avoid Populated areas.

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<http://www.xylenepower.com/Natural%20Gas%20Pipeline%20Safety%20Setback.htm>

XYLENE POWER LTD.

NATURAL GAS PIPELINE SAFETY SETBACK

CALCULATION OF SAFETY SETBACKS FROM LARGE DIAMETER HIGH PRESSURE NATURAL GAS PIPELINES

By C. Rhodes, P. Eng., Ph.D.

INTRODUCTION:

An essential element of any electric power system is reliable load following generation that can be used to match the total electricity generation to the total electricity load. From a global warming perspective the ideal load following generator is a hydroelectric dam containing a large amount of storage. However, since about 1970 the Ontario government and other governments have failed to face both the political and practical issues involved in construction of major new hydroelectric dams and their associated electricity transmission lines.

Since about 2005 the Ontario Power Authority (OPA) has chosen to use natural gas fueled combustion turbines for supplying load following generation. In order to minimize electricity transmission line right-of-way requirements the OPA chose to locate the natural gas fueled power plants close to urban areas. However, the OPA failed to adequately consider the public safety issues related to the large diameter high pressure natural gas pipelines that these combustion turbine power plants require. For public safety these pipelines should be installed in dedicated energy transmission corridors. The minimum width of these corridors is twice the minimum setback distance between the pipeline axis and the public. At present in Ontario, for natural gas pipes up to 20 inches in diameter, this minimum setback distance is municipally regulated. This web page focuses on determination of reasonable minimum setback distances, which distances are functions of both the pipeline diameter and the pipeline operating pressure.

DEDICATED ENERGY TRANSMISSION CORRIDORS:

Natural gas transmission pipelines in Canada have a relatively good safety record. There have been various explosive rupture failures with accompanying major fires, but the incidence of these failures and the related loss of life has been relatively small because most natural gas transmission lines are located in rural areas and are buried in dedicated energy transmission corridors. The use of dedicated energy transmission corridors located in rural areas reduces the incidence of both accidental impact damage and long term corrosion damage and provides distance separation between the pipeline and the public.

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A major error in the Ontario Power Authority's planning has been allowing routing of large diameter high pressure natural gas pipelines under public road allowances where these pipelines are subject to a high ongoing risk of damage by third parties engaged in drainage maintenance, installation or replacement of utility poles, installation and maintenance of other buried services and road construction. Furthermore, burial of large diameter high pressure natural gas pipelines beneath public road allowances eliminates much of the distance separation that is normally achieved by pipeline burial within dedicated energy transmission corridors that run through rural areas.

COST CONSTRAINTS:

To minimize capital cost natural gas is transported in steel pipes.

Major high pressure natural gas pipelines are generally designed for a maximum working pressure that causes an operating pipe hoop stress of about 30% of the pipes Specified Minimum Yield Stress (SMYS). A further margin of safety can be introduced by reducing the working pressure. However, practical material cost considerations usually prevent a major reduction in working pressure.

There are pipeline sections that operate at 67% of SMYS. However, such pipeline sections provide little safety margin against local earth movement (earth quakes) or local weld or corrosion problems. Pipelines routed through urban areas should be restricted to a maximum allowable operating pressure that causes a hoop stress of 33% of SMYS.

CORROSION PROTECTION:

1. To prevent external corrosion steel pipes conveying natural gas pipe are coated with a layer of electrically insulating material known as dielectric. The pipe steel is electrically or galvanically biased slightly negative with respect to the surrounding ground water. This bias is usually maintained by use of sacrificial magnesium electrodes or by use of DC power supplies that are electrically bonded to the steel pipe.
2. The negative bias attracts positive hydrogen ions in ground water toward any pipe steel that is exposed by imperfections in the pipe's external dielectric coating. The corresponding negative hydroxyl ions flow toward the sacrificial positive electrode.
3. The hydroxyl ions cause corrosion of the sacrificial electrode.
4. As long as corrosion is confined to the sacrificial electrode, corrosion of the pipe steel is prevented.
5. Eventually the sacrificial electrode will corrode away or worse, it may be accidentally disconnected or may be stolen for its scrap metal value. Under these circumstances the galvanic corrosion protection mechanism is defeated and corrosion will occur anywhere that pipe steel is exposed to ground water, such as at a coating scratch that might have been inadvertently caused by a backhoe, trenching machine or utility pole auger used for work on a nearby unrelated service.
6. A relatively new threat to buried steel pipelines is electrical ground current that results from nearby grounded electrical equipment such as wind turbine transformers. Such ground current can aggravate otherwise minor corrosion problems. In extreme cases of soil over bed rock the region of accelerated pipe corrosion can extend as far as 1 km from the wind generator transformer. This issue must be considered when a wind farm and a buried steel pipeline are in close proximity.

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CO22 – Coalition to Reroute Nexus (cont'd)

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SAFETY:

Usually large diameter high pressure natural gas pipes are buried. The functions of the soil cover are to protect the pipe and its dielectric coating from damage due to UV radiation, external impact, thermal stress and frost heaving.

There are real risks related to long term corrosion and to damage from mechanical equipment such as trenching machines, back hoes, utility pole augers and boom trucks. In the winter, when snow is piled high or during flood conditions the operators of such equipment frequently scratch or damage other buried services, in spite of their best efforts to avoid such damage.

The risks of being scratched or damaged by mechanical equipment are greatly reduced if the large diameter high pressure natural gas pipeline is buried in a dedicated energy transmission corridor. Then almost all the risks due to installation and maintenance of utility poles, buried electrical services, drainage culverts, fresh water pipes, storm sewer pipes, sanitary sewer pipes, low pressure natural gas pipes, district heating pipes, district cooling pipes, subways, telephone multipair cables, TV coaxial cables and fiber optic cables are eliminated. Frequently a natural gas transmission corridor is located adjacent to or within a high voltage electricity transmission corridor.

Another means of improving public safety is to ensure that buildings that routinely contain large numbers of people are not constructed within a specified setback distance from the axis of a large diameter high pressure natural gas pipeline. Similarly a setback distance should be maintained between the pipeline axis and outdoor locations where large groups of people routinely assemble.

A responsible organization that focuses on pipeline safety matters is the Pipeline Safety Trust. Its website is pstrust.org. Its telephone number is 360-543-5686.

RISKS:

The main risks to a large diameter high pressure natural gas pipeline are:

1. Improper engineering, fabrication or commissioning, including but not limited to inadequate:
 - a) Provision for hoop stress
 - b) Provision for thermal stress
 - c) Provision for sheer stress related to ground movement
 - d) Provision for pipe buoyancy
 - e) Mill testing of pipe steel
 - f) Weld inspection
 - g) Route choice (high and dry preferred to low and wet)
 - h) Burial depth
 - i) Pipe bedding and support
 - j) Corrosion protection
 - k) Hydraulic pressure testing
 - l) Drainage after hydraulic pressure testing
 - m) Nitrogen pressure testing
 - n) Documentation of magnesium electrode locations
 - o) Documentation of DC corrosion protection
 - p) Provision for insertion of pigs for automatic scanning of pipe wall thickness

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2. Physical damage from external human activity. eg. The gas line is directly damaged by a trenching machine, backhoe, utility pole auger or boom truck leg.

3. Physical damage due to non-human activity. eg Earthquake, sinkhole, landslide or flood.

4. Minor outside surface damage in combination with loss of galvanic corrosion protection. eg Plastic coating is scratched by a trenching machine, backhoe or utility pole auger and the scratch is not promptly repaired. The magnesium electrode then rapidly corrodes away. Alternatively a magnesium electrode may be accidentally disconnected by a backhoe or utility pole auger or may be stolen for its scrap metal value.

5. Failure of the pipeline owner to periodically check that all the magnesium electrodes are still present and connected.

6. Failure of the pipeline owner to periodically fully check the actual pipe wall thickness using a pig type electronic inspection apparatus that scans the pipe wall from the inside and measures and records the pipe wall thickness as a function of linear and angular position.

Risks #2, #4 and #5 above are greatly magnified if the pipeline is installed in a road allowance instead of in a dedicated energy transmission corridor.

Risk #6 occurs if there are pipe joints, pipe elbows, pipe fittings, valves or compressor stations that are not designed to allow insertion and axial travel of the pig type electronic equipment for measuring the pipe wall thickness as a function of linear and angular position.

Risk #6 is greatly magnified if the pipeline maintenance personnel do not have adequate time to examine the pig data and the resources to follow up risks identified via the pig data. It is essential that the pipeline owner employ sufficient staff whose first priority is pig data acquisition, analysis and followup.

RUPTURE FAILURE MECHANISM:

If one makes a small hole with a diameter less than twice the pipe wall thickness in a high pressure natural gas pipeline the immediate result is a loud hissing noise as natural gas leaks out. The leaking high pressure natural gas will blow away soil in its path. The natural gas will mix with surrounding air and form a cloud with concentrated natural gas at its center and dilute natural gas at its edges. If the edge of this cloud with a natural gas concentration in the range 5% to 15% encounters a source of ignition such as a spark made by an electrical switch, there will be a delayed ignition explosion followed by a localized ongoing fire. However, the size of this fire will be limited by the size of the original small hole in the natural gas pipe.

However, if a hole in a high pressure natural gas pipe grows to an axial length that exceeds about four times the pipe wall thickness, a very different sequence of events takes place. At the axial ends of the hole the local hoop stress will exceed the material yield stress. The pipe will then immediately rip down its axis to form a rupture that has an open area several times the cross sectional open area of the pipe. This rupture discharges natural gas at the maximum possible flow rate from both open ends of the ruptured pipe.

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PIPE RUPTURE SEQUENCE:

- 1.The pipe wall is thinned by corrosion, by cutting, by defective welding or by impact;
- 2.At the thin spot a hoop stress concentration develops that exceeds the yield stress of the pipe material;
- 3.The pipe wall deforms in a manner that magnifies the hoop stress concentration. This process can be observed in a stretched elastic band with a nick;
- 4.The pipe suddenly rips down its length causing a complete rupture. This process is similar to the sudden explosive rupture of a fully inflated child's balloon that is hit by a dart.

DAMAGE SEQUENCE:

- 1.The escaping high pressure natural gas explosively blows away the soil over burden, forming a large crater in the ground;
- 2.The pipe rupture is fed with high pressure natural gas from both the upstream and downstream pipes.
- 3.The escaping gas makes a noise comparable to a large jet aircraft at takeoff;
- 4.The escaping gas mixes with the surrounding air. In regions where the volumetric natural gas concentration is in the range 5% to 15% the mixture is highly flammable;
- 5.When the flammable gas mixture finds a source of ignition such as a flame, hot surface or electric spark there is an explosive delayed ignition pressure pulse. This pressure pulse is deafeningly loud and can break windows in buildings over a kilometre from the pipe rupture location. In extreme cases the energy release during the delayed ignition explosion is comparable to the energy release of a small atom bomb.
- 6.Then there is a steady state flame that is fed by high pressure gas flowing out of both open ends of the ruptured pipeline. This flame is almost impossible to extinguish and continues burning until it runs out of fuel. It typically takes the pipeline company one to two hours to close valves that isolate the ruptured section of gas pipe. The natural gas flame typically burns for several more hours.

SETBACK UNCERTAINTY:

Due to uncertainty regarding wind conditions and the position of the nearest point of ignition it is impossible to specify a practical safety setback distance that will ensure no damage or personnel injury from concussion or shrapnel related to the delayed ignition explosion. However, the subsequent fire emits a quantifiable amount of thermal radiation for which a reasonable safety setback distance can be calculated.

THERMAL RADIATION:

- 1.The thermal radiation intensity from the steady state natural gas flame is easy to calculate and is the basis of minimum setback calculations;
- 2.The radiation level may be substantially larger than calculated if black smoke from burning oil, wood or asphalt is conveyed by natural convection into the natural gas flame;
- 3.For a clean lean natural gas flame I have derived a formula for recommended safe setback distance as a function of pipe diameter and maximum operating pressure;
- 4.The distance R_s corresponds to a thermal radiation intensity from the natural gas flame equal to the solar irradiance (the maximum solar energy intensity incident on the Earth).
5. At distance $R_s / 2$ the thermal radiation intensity from the natural gas flame is four times as large as at distance R_s .
6. Natural gas pipeline rupture accident site photographs show that due to secondary fires everything inside radius $(R_s / 2)$ burns to a crisp. Municipal fire departments are not normally equipped to get closer than radius $(R_s / 2)$. At $(R_s / 2)$ the exposed surface

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temperature due to direct radiation from the natural gas inferno is about 200 °C. At that infrared radiation level vehicle windows crack and human flesh is quickly damaged.

PRESSURE PULSE:

The magnitude of the initial delayed ignition pressure pulse is unpredictable. The size of the delayed ignition explosion depends on the distance between the pipe rupture and the point of ignition. The larger this distance the larger the delayed ignition explosion. Depending on the location of the source of delayed ignition the pressure wave damage radius can exceed the radius of the thermal radiation damage by several fold. In extreme cases the delayed ignition explosion is comparable to the blast wave from a small tactical nuclear weapon. For this reason it is important to limit the sizes of high pressure natural gas lines in urban areas. In the Middletown, Connecticut accident the delayed ignition blast wave shattered windows over 1.6 km away from the location of the natural gas release. At Englehart, Ontario the delayed ignition explosion pressure pulse tossed a length of 914 mm OD steel pipe with 9.1 mm wall thickness a distance of 150 m from the rupture point.

FORMULA FOR SAFE DISTANCE R_s :

In this document a formula is developed for the safe setback distance R_s from a natural gas pipe line required for personnel to avoid radiation related skin damage from the steady state fire that follows a high pressure natural gas pipeline rupture. It must be emphasized that the calculated safety setback R_s applies only to thermal radiation from lean combustion of clean natural gas.

A delayed ignition explosion can cause blast damage beyond the calculated radiation safety radius. Toxic gases such as H₂S can cause loss of life beyond the calculated radiation safety radius. If the natural gas flame is over rich or if the natural gas burns in combination with other substances such as oil, coal, asphalt, wood, plastic resins, etc. soot forms. That soot can increase the thermal radiation fraction F_r as much as four fold and hence can double the required radiation safety radius R_s . Secondary fires can lead to a fire storm that causes damage far beyond safety radius R_s .

The formula developed herein assumes that only natural gas is burning and that there is sufficient combustion air to keep the burning air-gas mixture lean. The results of the formula are compared to the actual fire damage radius that occurred at Appomattox, Virginia where a 30 inch diameter buried high pressure natural gas pipeline ruptured and burned in a farm field on September 14, 2008. There have been other major natural gas pipeline ruptures, delayed ignition explosions and fires in urban areas such as at Middletown (suburb of Hartford), Connecticut on February 7, 2010 and at San Bruno (a suburb of San Francisco), California on September 9, 2010.

FORMULA DEVELOPMENT:

Consider a long straight natural gas pipeline that is subject to a sudden rupture that opens the full cross section of the pipe. To calculate the radiant heating consequences if there is a fire it is necessary to first find the natural gas mass flow rate out of the rupture. In reality there are two flows, because the pipes on both sides of the rupture discharge natural gas into the rupture. We will calculate one of these gas flows and then double the result to obtain the total mass flow rate out of the rupture.

Let P_a = the pressure in the pipeline distant from the rupture

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Let **Pb** = the pressure at the point of rupture after the rupture. Normally **Pb** is atmospheric pressure.

Let **Dp** = pipe inside diameter

Let **Pi** = 3.14159

Let **En** = nozzle efficiency of natural gas pressure energy to kinetic energy conversion in a long straight pipe.

Generally:

0.90 < En < 0.99

The uniform pipe cross-sectional area **Ac** is given by:

Ac = Pi (Dp / 2)^2

Let **X** indicate linear position along the pipe of an element of volume **Ac dX**.

Let **Rm** = natural gas mass density as a function of linear position **X**.

Let **Rma** = natural gas density at pressure **Pa**

Let **Rmb** = gas density at pressure **Pb**

The mass of gas **dM** contained in the element of volume **Ac dX** is:

dM = Rm Ac dX

Let **T** = time

Then the gas linear velocity **V** is given by:

V = (dX / dT)

The gas linear motion kinetic energy in element of volume **Ac dX** is:

(dM / 2) (dX / dT)^2
= (Rm Ac dX / 2) (dX / dT)^2

Hence the kinetic energy density is:

(Rm / 2) (dX / dT)^2

Let **P** = pressure at **X**

Then the gas pressure potential energy contained in the element of volume **Ac dX** is given by:

P Ac dX

The pressure **P** is the gas potential energy density at **X**.

Within the pipe but near the point of rupture the gas pressure potential energy density decreases and the gas linear motion kinetic energy increases causing an increase in linear gas velocity **V**.

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Let E_n be the nozzle efficiency with which gas pressure potential energy converts into gas kinetic energy of linear motion. E_n is complex to calculate but generally lies in the range: $0.90 < E_n < 0.99$

Note that a small fraction $(1 - E_n)$ of the pressure potential energy is converted into heat.

Conservation of energy along the pipe requires that:

$$- dP E_n = d[(Rm / 2) (dX / dT)^2]$$

or

$$- 2 E_n dP = d[Rm (dX / dT)^2]$$

Let subscript a indicate a parameter value at a point in the pipe far from the rupture. Let subscript b indicate a parameter value at the rupture location. Hence the linear gas velocity at the point of rupture is V_b . The mass flow rate from one pipe at the point of rupture is: $Rmb Ac Vb$

Integrating from Pa to Pb gives:

$$- 2 E_n (Pb - Pa) = [Rm (dX / dT)^2]_b - [Rm (dX / dT)^2]_a$$

Assume that as a result of the pipe rupture the natural gas pipeline supervisory control system closes isolation valves distantly upstream and downstream from the pipe rupture. Then the condition at the location of each of these valves is no flow, or expressed mathematically in terms of the gas stream:

$$[dX / dT]_a = 0$$

Hence:

$$2 E_n (Pa - Pb) = [Rm (dX / dT)^2]_b$$

or

$$[dX / dT]_b = [2 E_n (Pa - Pb) / Rmb]^{0.5}$$

$$\begin{aligned} Fm &= \text{exiting gas mass flow rate from one pipe} \\ &= Rmb Ac [dX / dT]_b \\ &= Rmb Ac [2 E_n (Pa - Pb) / Rmb]^{0.5} \\ &= Ac [2 E_n (Pa - Pb) Rmb]^{0.5} \end{aligned}$$

Let Ec be the combustion heat release per unit mass of natural gas. Then the total combustion heat release H per unit time is given by:

$$H = 2 Fm Ec$$

where the 2 reflects the fact that the rupture is fed by two pipes.

Let Fr be the fraction of the combustion heat that is emitted via radiation.

Let Rz = radius from the center of the flame to a surface subject to radiation damage.

Assume that the radiation is evenly distributed over a sphere with radius Rz and surface area $4 Pi Rz^2$. Then at radius Rz the radiation intensity / unit area is:

$$Rz = (H Fr) / (4 Pi Rz^2)$$

Assume that to avoid skin damage the radiation intensity should be less than the most intense possible solar radiation incident on the Earth's surface ($1365 W / m^2$). This parameter is known as the Solar Irradiance. Hence, in terms of radiant energy, the safe

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distance **Rs** from the center of the flame is defined by:

$$(H Fr) / (4 \text{ Pi } Rs^2) = 1365 \text{ watts} / \text{m}^2$$

or

$$Rs = [(H Fr) / (4 \text{ Pi } \times 1365 \text{ watts} / \text{m}^2)]^{0.5}$$
$$= [(2 \text{ Fm } Ec Fr) / (4 \text{ Pi } \times 1365 \text{ watts} / \text{m}^2)]^{0.5}$$

where natural gas mass flow **Fm** is given by:

$$Fm = Ac [2 \text{ En } (Pa - Pb) Rmb]^{0.5}$$
$$= \text{Pi } (Dp / 2)^2 [2 \text{ En } (Pa - Pb) Rmb]^{0.5}$$

Combining the formulas for **Rs** and **Fm** gives:

$$Rs = [(2 \text{ Fm } Ec Fr) / (4 \text{ Pi } \times 1365 \text{ watts} / \text{m}^2)]^{0.5}$$
$$= [(2 \text{ Pi } (Dp / 2)^2 [2 \text{ En } (Pa - Pb) Rmb]^{0.5} Ec Fr) / (4 \text{ Pi } \times 1365 \text{ watts} / \text{m}^2)]^{0.5}$$
$$= Dp [En (Pa - Pb)]^{0.25} [(2 Rmb)^{0.5} Ec Fr] / (8 \times 1365 \text{ watts} / \text{m}^2)^{0.5}$$

The value of **Fr** can be found from a paper by J. P. Gore et al titled Structure and Radiation Properties of Large-scale Natural Gas/Air Diffusion Flames, published in Fire and Materials, Vol. 10, 161-169 (1986). These authors found that the radiation emission from a **207 MW** natural gas flame measured at ground level about **11.9 m** from the flame center was **6.37 kW / m²**.

The surface area of that sphere was:

$$4 \text{ Pi } (11.9 \text{ m})^2 = 1778.62 \text{ m}^2$$

Hence the emitted radiation was:

$$6.37 \text{ kW} / \text{m}^2 \times 1778.62 \text{ m}^2 = 11330 \text{ kW}$$
$$= 11.330 \text{ MW}$$

Hence:

$$Fr = 11.330 \text{ MW} / 207 \text{ MW}$$
$$= .0547$$

This **Fr** value is in good agreement with other **Fr** data for lean burn flame retention natural gas burners provided to this author by the Canadian Gas Research Institute.

NUMERICAL SIMPLIFICATION:

$$\text{Pi} = 3.1415928$$

$$Rmb = 16 \text{ gm} / 22.4 \text{ lit}$$

$$= 16 \times 10^{-3} \text{ kg} / 22.4 \times 10^{-3} \text{ m}^3$$

$$= .714 \text{ kg} / \text{m}^3 = \text{density of natural gas at standard temperature-pressure}$$

$$Ec = (10.4 \text{ kWh} / \text{m}^3) \times (1 \text{ m}^3 / .714 \text{ kg}) \times 3600 \text{ s} / \text{h}$$

$$= 52437 \text{ kJ} / \text{kg}$$

Hence:

$$Rs = Dp [En (Pa - Pb)]^{0.25} [(2 Rmb)^{0.5} Ec Fr] / (8 \times 1365 \text{ watts} / \text{m}^2)^{0.5}$$
$$= Dp [En (Pa - Pb)]^{0.25} [(2 \times .714 \text{ kg} / \text{m}^3)^{0.5} \times 52437 \text{ kJ} / \text{kg} \times .0547] / (8 \times 1365 \text{ watts} / \text{m}^2)^{0.5}$$
$$= Dp [En (Pa - Pb)]^{0.25} [1.428 \text{ kg} / \text{m}^3]^{0.5} \times .26266 \text{ kJ m}^2 / \text{kg-watts} \times 1000 \text{ J} / \text{kJ}]^{0.5}$$
$$= Dp [En (Pa - Pb)]^{0.25} [1.195 \text{ kg}^{0.5} \text{ m}^{-1.5} \times 262.66 \text{ J m}^2 / \text{kg-watts}]^{0.5}$$

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$$\begin{aligned} &= Dp [En (Pa - Pb)]^{0.25} \times 17.71 \text{ kg}^{0.25} \text{ m}^{-0.75} \text{ m} (\text{J} / \text{kg-watts})^{0.5} \\ &= 17.71 Dp [En (Pa - Pb)]^{0.25} \text{ kg}^{0.25} \text{ m}^{-0.75} \text{ m} (\text{watt s} / \text{kg-watts})^{0.5} \\ &= \mathbf{17.71 Dp [En (Pa - Pb)]^{0.25} \text{ kg}^{-0.25} \text{ m}^{0.25} \text{ s}^{0.5}} \\ &= \mathbf{17.71 Dp [En (Pa - Pb) / \text{Pascal}]^{0.25}} \end{aligned}$$

If pipe diameter **Dp** is in meters and if the operating pressure (**Pa - Pb**) is in Pascals this formula gives the safe setback distance **Rs** in meters.

Units Check:

$$\begin{aligned} (\text{Pascal})^{0.25} &= (\text{newtons} / \text{m}^2)^{0.25} = (\text{kg m s}^{-2} \text{ m}^{-2})^{0.25} \\ &= \text{kg}^{0.25} \text{ m}^{-0.25} \text{ s}^{-0.5} \end{aligned}$$

For practical calculations use the assumption that:

$$\mathbf{En^{0.25} = 1.0.}$$

This assumption may lead to as much as a **2.7 %** error in the calculated value of **Rs** but this assumption simplifies the formula for **Rs** sufficiently to make it suitable for practical regulatory use.

INTERPRETATION OF RESULTS:

At:

$$\mathbf{Rz = Rs}$$

the radiation level from the natural gas inferno is equal to the solar irradiance, so human skin damage is confined to sunburn like effects.

At:

$$\mathbf{Rz = (Rs / 2)}$$

the radiation level from the natural gas inferno is four times the solar irradiance. This is the maximum radiation level that normally equipped municipal fire fighters can sustain. Hence in the area defined by:

$$\mathbf{Rz < (Rs / 2)}$$

secondary fires usually burn unimpeded unless suppressed by water bombers or other comparable specialized equipment.

At:

$$\mathbf{Rz = (Rs / 4)}$$

the radiation level from the natural gas inferno is sixteen times the solar irradiance. In the region:

$$\mathbf{Rz < (Rs / 4)}$$

there is rapid direct ignition of almost all combustible surfaces and there is total property loss regardless of the available fire fighting capability.

SECONDARY IGNITION:

Almost immediately after the natural gas fire starts exposed combustible surfaces in the region:

$$\mathbf{Rz < (Rs / 4)}$$

ignite. However, from a property damage perspective the bigger problem is that fires which are directly ignited within the region:

$$\mathbf{Rz < (Rs / 4)}$$

quickly spread into the region:

$$\mathbf{(Rs / 4) < Rz < (Rs / 2)}$$

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because the thermal radiation levels in the region:
 $Rz < (Rs / 2)$
are too high for municipal fire fighters to function in that region.

History has demonstrated that the practical way of minimizing property damage in the region:

$(Rs / 4) < Rz < (Rs / 2)$
is to use water bombers to minimize spread of fires via secondary ignition.

Assuming normal municipal fire fighter response not supported by water bombers, the area that will likely be destroyed by secondary fires is the ring defined by:

$(Rs / 4) < Rz < (Rs / 2)$.
The area of this ring is about three times the area defined by:
 $Rz < (Rs / 4)$
that burns via direct ignition.

DAMAGE MITIGATION:

Both theory and field experience indicate that the most favorable condition for mitigating of damage by a burning natural gas pipeline is a deep snow cover. The snow reflects the infrared radiation up into the sky and if the snow melts the resulting water prevents most surfaces getting hot enough to ignite.

POTENTIAL IMPACT RADIUS (PIR):

In the Province of Ontario the **Technical Standards & Safety Authority (TSSA)** has defined what **TSSA** terms **Potential Impact Radius** or **PIR**, where:
 $1.0 \text{ PIR} \sim (Rs / 4)$.

A technical representative of **TSSA** readily admitted that **1.0 PIR** is not an adequate safety radius. **1.0 PIR is a compromise made by TSSA between urban pipeline corridor real estate cost and public safety.** Buildings such as secondary schools, etc. that routinely contain concentrations of healthy independently mobile people should be set back at least **2.0 PIR** from the pipeline axis. Buildings such as elementary schools, nursing homes and hospitals, that routinely contain people who are not independently mobile, should be set back at least **4.0 PIR** from the pipeline axis. However, in Ontario **the actual amount of setback from the pipeline axis is determined by the governing municipal authority, not TSSA.**

The practical effect of using the **TSSA PIR** as a regulatory setback is to reduce the cost of natural gas pipeline rupture failure related fire damage by about a factor of three under circumstances of no wind and good municipal fire fighting capacity. Assuming these circumstances, a regulatory setback of at least **2.0 PIR** is required to reduce the direct fire damage to close to zero. If the region in question has frequent wind or minimal fire fighting capacity, then a setback of **4.0 PIR** should be used.

EXAMPLES:

ENGLEHART, ONTARIO:

On September 12, 2009 a 914 mm OD, 9.1 mm wall natural gas transmission pipe operating at 6869 kPa ruptured about 12 km NW of Englehart, Ontario. An area of 25

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hectares (250,000 m²) was totally destroyed, indicating an average radius R of total destruction of:

$$R = (250,000 \text{ m}^2 / \text{Pi})^{0.5}$$

$$= 282 \text{ m}$$

The fire was contained by use of water bombers. In spite of use of water bombers a rural home 320 m from the rupture point was damaged.

Assume:

$$En^{0.25} = 1.0$$

$$Dp = .914 \text{ m}$$

$$Pb = 14.7 \text{ psia} = 1 \text{ bar} = 101 \text{ kPa} = 1.01 \times 10^5 \text{ newtons} / \text{m}^2$$

$$Pa = 6.869 \times 10^6 \text{ newtons} / \text{m}^2$$

Hence:

$$Rs = 17.71 \times .914 \text{ m} \times (6.869 \times 10^6 \text{ newtons} / \text{m}^2)^{0.25} \text{ kg}^{-0.25} \text{ m}^{.25} \text{ s}^{0.5}$$

$$= 17.71 \times .914 \text{ m} \times 686.9^{0.25} \times 10 \text{ (kg m s}^{-2} \text{ m}^{-2})^{0.25} \text{ kg}^{-0.25} \text{ m}^{.25} \text{ s}^{0.5}$$

$$= 828.5 \text{ m}$$

The corresponding theoretical value of (Rs / 2) is given by:

$$Rs / 2 = 414 \text{ m}$$

and

$$(Rs / 4) = 207 \text{ m}$$

Clearly the actual destruction was in good agreement with the theoretical formula.

YORK ENERGY CENTRE PIPELINE, KING TOWNSHIP, ONTARIO:

The York Energy Centre is a natural gas fueled air cooled combustion turbine based 400 MW electricity generation station located in York Region, north of Toronto. This facility is served by a dedicated 16 inch diameter 600 psi natural gas pipeline running through a mostly rural area.

Assume:

$$En^{0.25} = 1.0$$

$$Dp = 16 \text{ inches} = .406 \text{ m}$$

$$Pb = 14.7 \text{ psia} = 1 \text{ bar} = 101 \text{ kPa} = 1.01 \times 10^5 \text{ newtons} / \text{m}^2$$

$$Pa = 600 \text{ psia} = 40.81 \text{ bar} = 4122.4 \text{ kPa} = 41.22 \times 10^5 \text{ newtons} / \text{m}^2$$

Hence:

$$Rs = 17.71 \times .406 \text{ m} \times (40.21 \times 10^5 \text{ newtons} / \text{m}^2)^{0.25} \text{ kg}^{-0.25} \text{ m}^{.25} \text{ s}^{0.5}$$

$$= 17.71 \times .406 \text{ m} \times 402.1^{0.25} \times 10 \text{ (kg m s}^{-2} \text{ m}^{-2})^{0.25} \text{ kg}^{-0.25} \text{ m}^{.25} \text{ s}^{0.5}$$

$$= 321.97 \text{ m}$$

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Application of this formula to the York Energy Centre pipeline gives a radiation safety distance of about:

Rs = 322 metres.

At **Rz = (Rs / 2) = 161 metres** the radiation level will be four times as high as at **Rs = 322 m**. In practice:

Rz = (Rs / 2)

is the closest that municipal fire fighters are able to approach the natural gas inferno. Hence in the area where:

Rz < (Rs / 2)

secondary fires involving both buildings and farm crops will burn unimpeded.

In the case of the York Energy Centre pipeline a minimum **161 metre setback** should be maintained from the pipeline center line to all human occupied structures and to all places of routine outdoor human assembly. This is an ongoing setback requirement that should be actively enforced by municipal authorities for the life of the pipeline. All parties should clearly understand that the radiation emitted by a pipeline rupture/fire is so intense that the only practical strategy for a municipal fire department is to let the fire burn itself out. It is also unrealistic to expect persons within radius:

Rz < (Rs / 2)

of a pipeline rupture/fire to be rescued by fire department personnel who lack equipment for working in zones of high thermal radiation.

If possible the municipality should attempt to enforce a **322 m setback** instead of a **161 m setback**. There could still easily be litigation related to injury and property damage in the ring:

161 m < Rz < 322 m

resulting from the fire simply overwhelming the capabilities of rural municipal fire department(s).

APPOMATTOX, VIRGINIA:

On September 14, 2008 a 30 inch diameter buried natural gas pipeline that normally operates at a pressure of 800 psi ruptured and burned in a farmer's field near the intersection of Highway 26 and State Route 677 just north of Appomattox, Virginia. There was a modest delayed ignition explosion. Overhead news photographs showed the area where the crop burned. The burned area was measured using distance calibrated overhead photographs from Google maps. It was found that with reference to the pipe rupture crater the burned crop area extended **311 m** to the south-west and **275 m** to the north-east.

Assume:

En^{0.25} = 1.0

Application of the formula for the radiation safety distance **Rs** gives:

Dp = 30 inch X .0254 m / inch = 0.762 m

Pa = 800 psi X 101 X 10⁻³ Pa / 14.7 psi = 549.66 X 10⁻⁴ Pa

Pb = 101 X 10⁻³ Pa = 10.1 X 10⁻⁴ Pa

Rs = 17.71 Dp (Pa - Pb)^{0.25} kg^{-0.25} m^{.25} s^{0.5}

= 17.71 X 0.763 m X (539.56 X 10⁻⁴ Pa)^{0.25} kg^{-0.25} m^{.25} s^{0.5}

= **651.25 m**

Thus the radius to which the crops spontaneously burned approximately conformed with:

Rz < (Rs / 2).

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SAN BRUNO, CALIFORNIA:

On September 9, 2010 at 6:11 PM a **30 inch diameter** buried natural gas pipeline operating at a pressure of **400 psia** ruptured and burned in a single family estate home residential area in San Bruno, California. San Bruno is a southern suburb of San Francisco, about 2 miles from the San Francisco airport. The homes near the rupture location each had lot sizes in excess of one acre. San Bruno had the benefit of probably the best available municipal fire fighting capacity in North America.

There was a modest delayed ignition explosion followed by a large natural gas fire that persisted for more than two hours. Secondary fires continued for more than eight further hours. The fire scene was attended by **67 fire trucks, 4 fixed wing aerial water bombers and 1 fire fighting helicopter.**

Aerial photographs showing the area that burned were compared to distance calibrated Google maps. In spite of the large amount of immediately available fire fighting equipment **almost all the homes (38) within a 150 m radius damage circle were completely destroyed. A further 17 homes were severely damaged and a further 53 homes sustained lesser damage.** The center of the damage circle was displaced from the pipe rupture location by about 100 m. The cause of this displacement was a combination of local factors including natural gas pipeline orientation, natural gas exit velocity, wind, steep local terrain, local tree concentrations and asymmetrical application of fire fighting resources.

Assume:

$$En^{0.25} = 1.0$$

Application of the formula for the radiation safety distance **Rs** gives:

$$Dp = 30 \text{ inch} \times .0254 \text{ m / inch} = 0.762 \text{ m}$$

$$Pa = 400 \text{ psia} \times 101 \times 10^3 \text{ Pa} / 14.7 \text{ psia} = 274.8 \times 10^4 \text{ Pa}$$

$$Pb = 101 \times 10^3 \text{ Pa} = 10.1 \times 10^4 \text{ Pa}$$

$$Rs = 17.71 Dp (Pa - Pb)^{0.25} \text{ kg}^{-0.25} \text{ m}^{0.25} \text{ s}^{0.5}$$

$$= 17.71 \times 0.762 \text{ m} \times (264.7 \times 10^4 \text{ Pa})^{0.25} \text{ kg}^{-0.25} \text{ m}^{0.25} \text{ s}^{0.5}$$

$$= 544.3 \text{ m}$$

Thus the calculated area of damage to or loss of homes was the area where:

$$Rz < (Rs / 2),$$

which is a circle of radius **272 m.**

It is clear from subsequent photographs and incident reports that absent the massive fire fighting resources that were immediately available close to the San Francisco Airport, including **four water bombers**, the actual area of total destruction would have closely conformed to the calculated destruction radius:

$$(Rs / 2) = 272 \text{ m.}$$

The practical experience at San Bruno indicates that there is a limit to the capabilities of urban municipal fire departments. Even when there is an army of immediately available emergency personnel and almost unlimited municipal fire fighting equipment, the municipal water mains and their pumping systems limit the municipal fire fighting capacity. Water bombers designed for fighting large forest fires are of considerable help because they can combat secondary fires in the ring:

$$(Rs / 4) < Rz < (Rs / 2)$$

which is not accessible to municipal fire fighters due to high infrared radiation levels.

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However, the standby costs of maintaining a fleet of large water bombers that are available and ready to fly at a moments notice are prohibitive for most jurisdictions. In this respect the residents of San Bruno were particularly fortunate that there were four suitable water bombers immediately available and based only two miles away. Otherwise the fire damage losses would have likely at least tripled.

An important conclusion from the San Bruno NTSB accident investigation report was that the pipe section that ruptured was defective at the time of original installation and had never been subject to an as-built hydraulic pressure test to the Specified Minimum Yield Stress (SMYS) for the pipeline material.

JERSEY CITY, NEW JERSEY:

In March 2012 this author was made aware of a plan to build a **42 inch diameter 1200 psi** natural gas pipeline through a densely populated area of Jersey City, New Jersey. This author's immediate response was that this plan is stupid because that pipeline would be a long term magnet for every anti-USA terrorist in the world. This author strongly recommended that this pipeline be rerouted outside the urban area, regardless of the extra cost.

If construction of this pipeline proceeds as originally contemplated, the consequences of a rupture failure, perhaps intentionally caused, would be comparable to the air burst of a small tactical nuclear warhead. The safety radius **Rs** and the radius of probable total destruction (**Rs / 2**) can be calculated as follows:

Assume:

$$En^{0.25} = 1.0$$

$$Dp = 42 \text{ inch} \times .0254 \text{ m / inch} = 1.0668 \text{ m}$$

$$Pa = 1200 \text{ psia} \times 101 \times 10^3 \text{ Pa} / 14.7 \text{ psia} = 824.5 \times 10^4 \text{ Pa}$$

$$Pb = 101 \times 10^3 \text{ Pa} = 10.1 \times 10^4 \text{ Pa}$$

$$Rs = 17.71 Dp (Pa - Pb)^{0.25} \text{ kg}^{-0.25} \text{ m}^{0.25} \text{ s}^{0.5}$$

$$= 17.71 \times 1.0668 \text{ m} \times (814.4 \times 10^4 \text{ Pa})^{0.25} \text{ kg}^{-0.25} \text{ m}^{0.25} \text{ s}^{0.5}$$

$$= 1009.2 \text{ m}$$

Thus the calculated area of spontaneous combustion is an area where $Rz < (Rs / 2)$, which is a circle of radius **504.6 m**. The perimeter length of that circle, which would be the fire fighting front length, is:

$$2 \text{ Pi} (504.6 \text{ m}) = 3170 \text{ m.}$$

The only way to stop a fire of that size is to make back fires to create a fire break about **3 km long** and a block wide through the center of the city. The direct and consequential damages from the natural gas fire and the back fire would be unprecedented in United States history. The fire storm and consequent loss of life and property would be comparable to the WWII fire storms in Dresden, Hamburg, Tokyo and Hiroshima.

It is the hope of this author that common sense will prevail and that senior members of the United States government will do all necessary to force rerouting of this large diameter high pressure natural gas pipeline to a longer but much safer rural route.

One practical way to force rerouting of this pipeline is to immediately enact strong legislation to require the pipeline owners to continuously carry credible third party liability insurance and reinsurance sufficient to replace everything and everyone within **500 m** of any potential pipe rupture location.

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It must be emphasized that no amount of hydraulic pressure testing or pig testing will protect the public from intentional sabotage of such a pipeline passing through an urban area. The stress in the pipe walls is sufficient that even a relatively small suitably shaped fast explosive charge will cause a rupture failure.

CONCLUSIONS:

When a large diameter high pressure natural gas pipeline operating at its rated working pressure develops a crack or hole more than four pipe wall thicknesses in axial length the result is a sudden full cross section pipe rupture. The escaping high pressure gas blows away the soil overburden, forming a crater. Some time after the pipe rupture there is a large delayed ignition explosion followed by a steady state fire. This fire emits so much thermal radiation that it is impossible to approach or extinguish the fire with conventional fire fighting equipment.

One can define a radiation safety distance **Rs** from the fire at which distance the thermal radiation level is similar to the thermal radiation level at noon in the middle of the Sahara desert on a clear cloudless day. The formula for a lean burn natural gas flame is:

$$R_s = 17.71 D_p [E_n (P_a - P_b) / \text{Pascal}]^{0.25}$$

where:

Rs = radiation safety distance in metres

Dp = pipeline diameter in metres

En = nozzle efficiency (**0.90 < En < 0.99**)

Pa = pipeline absolute working pressure in Pascals

Pb = atmospheric pressure in Pascals. Normally atmospheric pressure is about 101,000 Pascals.

In highly precise scientific measurements:

$$0.90 < E_n < 0.99.$$

However, even if the nozzle efficiency **En** is as low as:

$$E_n = 0.90$$

in the formula for **Rs**:

$$E_n^{0.25} = .974$$

Hence for practical calculation purposes it is convenient to simply use the approximation that:

$$E_n^{0.25} = 1.0$$

At radii **Rz** from the rupture in the range:

$$R_z < (R_s / 4)$$

almost all exposed combustible materials rapidly spontaneously ignite and burn. In this radius range there is virtually nothing that can be done to prevent 100% loss of lives and property.

At radii **Rz** from the rupture in the range:

$$(R_s / 4) < R_z < (R_s / 2)$$

secondary ignition causes exposed combustible materials to burn. In this radius range the thermal radiation level is too high for the fire to be fought by municipal fire departments. However, in this radius range damage can be mitigated through the use of water bombers if they are immediately available.

At radii **Rz** from the rupture in the range:

$$R_z > (R_s / 2)$$

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absent a high wind, a well equipped and well staffed municipal fire department is usually able to prevent significant secondary ignition fire damage.

It should be emphasized that the above calculations apply to thermal radiation from steady state combustion of natural gas in a clean lean flame. There is additional danger if the natural gas flame is rich or if it triggers combustion of materials that form soot. If large amounts of soot mix with the natural gas combustion air the soot could increase the radiant heat fraction R_r four fold which would double the safety radius R_s .

The damage radius from the initial delayed ignition explosion could easily be larger than R_s . Based on eyewitness reports from Appomattox the sequence of events at that pipeline rupture/fire was a large delayed ignition explosion followed by steady state combustion. The same sequence of events has occurred elsewhere.

The above calculation shows that even if someone is fortunate enough to survive the initial delayed ignition explosion, the temperature within the radiation safety radius R_s of the flame will quickly rise past the point of human tolerance.

For large diameter high pressure natural gas pipelines passing through urban areas this author strongly recommends an initial as-built hydraulic pressure test to 100% of pipe SMYS (Specified Minimum Yield Stress) and a maximum operating pressure producing a pipe material stress of no more than 30% of SMYS. Furthermore, as long as the pipe remains in service in an urban area the pipe should be retested at least every five years with a non-combustible fluid to the larger of 50% of pipe SMYS or 150% of the maximum allowable operating pressure. These safety margins have been proven through many years of pressure vessel design, construction and use and are the basis of almost all modern pressure vessel safety codes.

In theory if the pipe could be assembled in the rigorously controlled conditions of a certified pressure vessel fabrication facility with complete material control and ideal welding, initial as-built hydraulic pressure testing to 50% of SMYS might be adequate. However, under the practical conditions that natural gas pipelines are assembled and welded in the field that degree of material and fabrication control is impossible. Hence the only solution is an initial as-built hydraulic pressure test to 100% of pipe SMYS. There is no mill test, x-ray test, pig test, spectrograph test, sampling test or inspection procedure that can replace a hydraulic pressure test to 100% of SMYS.

Given the limited resources of rural fire departments it is reasonable to assume that in the event of a large diameter high pressure natural gas pipeline rupture/fire they will simply ensure that the pipe is valved off on both sides of the rupture and then let the fire burn itself out. It is also reasonable to conclude that crops, buildings and other combustibles within a distance $R_z < (R_s / 2)$ of the pipeline rupture/fire will be totally destroyed.

The principal objective of emergency services must be to immediately evacuate humans from inside the radiation safety radius R_s . It can safely be assumed that for:
 $(R_s / 2) < R_z < R_s$
damage to property will be significant and for:
 $R_z < (R_s / 2)$
almost everything will be destroyed. Most municipal fire departments are not equipped to function within the high thermal radiation levels that will occur at:
 $R_z < (R_s / 2)$.

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Life and property insurance coverages should reflect this reality.

REGULATORY ISSUES:

To minimize potential damage large diameter high pressure natural gas pipelines must be installed near the center lines of available energy transmission corridors. This issue needs to be embedded in regulation.

With reference to Ontario Technical Standards & Safety Authority (TSSA) Fuels Safety Program, **OIL AND GAS PIPELINE SYSTEMS CODE ADOPTION DOCUMENT AMENDMENT FS-196-12** dated **November 1, 2012**, the formula for **Potential Impact Radius (PIR)** should be replaced by the formula for **(Rs / 2)** contained herein. The issue is that the formula for **PIR** contained in **AMENDMENT FS-196-12** yields a Potential Impact Radius that is only about **(Rs / 4)** whereas recent pipeline rupture fires have confirmed the validity of **(Rs / 2)** as being the actual impact radius.

Alternatively **TSSA** should modify the language in its regulations so that the general public clearly understands that the **PIR**, as defined by **TSSA**, is only about one half of the radius of 100% property loss.

The Ontario **TSSA** should be realistic with respect to the limited capability of municipal fire fighters working within high thermal radiation zones. In the event of a major natural gas pipeline rupture/fire the available fire fighters will likely attempt to save human lives but in so doing will likely sustain both personal skin damage and equipment damage. They will then be unable to fight or extinguish fires. Furthermore, the experience in San Bruno, California and elsewhere has been that the municipal fire fighting capacity is further constrained by the available hydrant water flow. The fire in San Bruno was in large measure contained through the use of water bombers that were stationed nearby for controlling forest fires. However, in much of Ontario there is no immediate water bomber availability nor viable chain of command for prompt water bomber dispatch.

In this matter I speak from personal experience. I grew up in British Columbia where during the 1960s major forest fires, and a major fire on the Vancouver waterfront, were contained using a fleet of WWII surplus giant Martin Mars flying boats. These flying boats were converted from military transports into water bombers. I believe that two of them are still in service today. When trying to control a big fire, there is nothing comparable to dropping 6000 imperial gallons of water/foam on the fire in a few seconds. The water/foam will not extinguish the main natural gas inferno but it will cool the surrounding exposed surfaces and thus minimize secondary fires in the ring:

(Rs / 4) < Rz < (Rs / 2).

This ring, which is not accessible to municipal fire fighters due to high thermal radiation from the natural gas inferno, may contain hundreds of homes.

It is a huge mistake to create a regulatory framework which has the practical effect of not allowing parties that build, own, operate and maintain large water bombers to financially prosper. There is no doubt that a fleet of large water bombers has a high ongoing cost that must be borne by the taxpayers and/or insurance industry and/or major forest companies. However, when there is a fire that overwhelms the municipal fire department/forest service, then every dollar invested in the water bomber fleet provides a handsome return. In hindsight, one of the benefits of leasing exclusive timber rights to large forest companies was that those companies, in their own self interest, paid the costs of ownership, operation and maintenance of the fleet of large water bombers.

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There is a major problem related to both provincial and municipal land use planning. In Ontario both provincial and municipal planners have failed to provide sufficiently wide dedicated energy transmission corridors into major urban centers such as Toronto. The 400 series highways are located in corridors that are typically about 400 m wide, including the width allowance for the adjacent electricity transmission lines. These corridors are simply not wide enough to provide an adequate safety setback distance from a 36 inch diameter high pressure natural gas pipeline, even if the pipeline is on the corridor center line. However, in Toronto there are no other even remotely suitable corridors, so private property owners on both sides of these highways are being exposed to risk related to major pipeline rupture failures.

This problem of failed governmental planning is not unique to Toronto or Ontario. There are even worse pipeline setback problems in the New Jersey - New York City area.

There is also a new class of pipeline risks related to grounded electrical equipment located near pipeline corridors. In an effort to efficiently utilize land, in some places 3.0 MVA wind turbines are being installed in or adjacent to existing dedicated energy transmission corridors. However, wind turbine transformers can cause ground currents that lead to rapid corrosion of nearby buried steel pipelines. It is crucial that the electrical codes relating to wind turbines and other distributed power equipment address this ground current issue. Every wind turbine within a wind farm must be separately isolated from its transmission/distribution line via an ungrounded low capacitance delta type transformer connection. Every wind turbine must be fitted with ground fault detection and alarm signalling. Substation transformers need to be selected for low harmonic generation.

There needs to be new legislation that makes parties that cause ground currents financially responsible for accelerated corrosion damage to nearby buried steel pipelines. In extreme cases, especially in the proximity of large unbalanced electrical power inverters, or with subsurface bed rock, the radius of such ground current induced pipeline damage can extend more than 3 km from the electrical equipment grounding point.

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**A MODEL FOR SIZING HIGH CONSEQUENCE AREAS
ASSOCIATED WITH NATURAL GAS PIPELINES**

TOPICAL REPORT

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RESEARCH SUMMARY

Title	A Model for Sizing High Consequence Areas Associated with Natural Gas Pipelines
Contractor(s)	C-FER Technologies
GRI-Contract Number	8174
Principal Investigator(s)	Mark J. Stephens
Report Type	Topical Report
Objective State	To develop a simple and defensible approach to sizing the ground area potentially affected by the failure of a high-pressure natural gas pipeline.
Technical Perspective	The rupture of a high-pressure natural gas pipeline can lead to outcomes that can pose a significant threat to people and property in the immediate vicinity of the failure location. The dominant hazard is thermal radiation from a sustained fire and an estimate of the ground area affected by a credible worst-case event can be obtained from a model that characterizes the heat intensity associated with rupture failure of the pipe where the escaping gas is assumed to feed a fire that ignites very soon after line failure.
Technical Approach	An equation has been developed that relates the diameter and operating pressure of a pipeline to the size of the affected area in the event of a credible worst-case failure event. The model upon which the hazard area equation is based consists of three parts: 1) a fire model that relates the rate of gas release to the heat intensity of the fire; 2) an effective release rate model that provides a representative steady-state approximation to the actual transient release rate; and 3) a heat intensity threshold that establishes the sustained heat intensity level above which the effects on people and property are consistent with the adopted definition of a High Consequence Area (HCA).
Results	For methane with an HCA threshold heat intensity of 5,000 Btu/hr ft ² , the hazard area equation is given by: $r = 0.685 \sqrt{p d^2}$ where r is the hazard area radius (ft), d is the line diameter (in), and p is the maximum operating pressure (psig).
Project Implications	Natural gas transmission line operators will provide periodic assurances that their pipelines are safe. The Federal code 49CFR192 mandates increased wall thickness thereby reducing the corrosion and mechanical damage risks as the population density increases. The definition of High Consequence Areas is expected to require additional protection for people with limited mobility such as day care centers, old age homes, and prisons. This report suggests the definition for the HCA area of increased protection be set by two parameters, the pipe diameter and its operating pressure.

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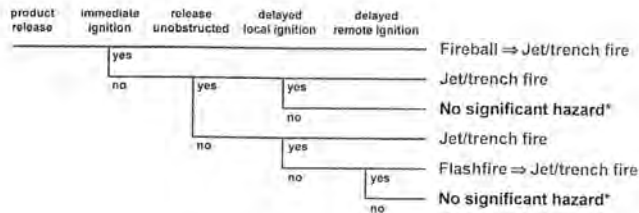
1. INTRODUCTION

1.1 Scope and Objective

This report summarizes the findings of a study conducted by C-FER Technologies (C-FER), under contract to the Gas Research Institute (GRI), to develop a simple and defensible approach to sizing the ground area potentially affected by the failure of a high-pressure natural gas pipeline. This work was carried out at the request of the Integrity Management and Systems Operations Technical Advisory Group (IM&SO TAG), a committee of GRI.

1.2 Technical Background

The failure of a high-pressure natural gas pipeline can lead to various outcomes, some of which can pose a significant threat to people and property in the immediate vicinity of the failure location. For a given pipeline, the type of hazard that develops, and the damage or injury potential associated with the hazard, will depend on the mode of line failure (*i.e.*, leak vs. rupture), the nature of gas discharge (*i.e.*, vertical vs. inclined jet, obstructed vs. unobstructed jet) and the time to ignition (*i.e.*, immediate vs. delayed). The various possible outcomes are summarized in Figure 1.1.



* Ignoring hazard potential of overpressure and flying debris

Figure 1.1 Event tree for high pressure gas pipeline failure (adapted from Bilo and Kinsman 1997).

For gas pipelines, the possibility of a significant flash fire resulting from delayed remote ignition is extremely low due to the buoyant nature of the vapor, which generally precludes the formation of a persistent flammable vapor cloud at ground level. The dominant hazard is, therefore, thermal radiation from a sustained jet or trench fire, which may be preceded by a short-lived fireball.

In the event of line rupture, a mushroom-shaped gas cloud will form and then grow in size and rise due to discharge momentum and buoyancy. This cloud will, however, disperse rapidly and a quasi-steady gas jet or plume will establish itself. If ignition occurs before the initial cloud

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disperses, the flammable vapor will burn as a rising and expanding fireball before it decays into a sustained jet or trench fire. If ignition is slightly delayed, only a jet or trench fire will develop. Note that the added effect on people and property of an initial transient fireball can be accounted for by overestimating the intensity of the sustained jet or trench fire that remains following the dissipation of the fireball.

A trench fire is essentially a jet fire in which the discharging gas jet impinges upon an opposing jet and/or the side of the crater formed in the ground. Impingement dissipates some of the momentum in the escaping gas and redirects the jet upward, thereby producing a fire with a horizontal profile that is generally wider, shorter and more vertical in orientation, than would be the case for a randomly directed and unobstructed jet. The total ground area affected can, therefore, be greater for a trench fire than an unobstructed jet fire because more of the heat-radiating flame surface will typically be concentrated near the ground surface.

An estimate of the ground area affected by a credible worst-case failure event can, therefore, be obtained from a model that characterizes the heat intensity associated with rupture failure of the pipe, where the escaping gas is assumed to feed a sustained trench fire that ignites very soon after line failure.

Because the size of the fire will depend on the rate at which fuel is fed to the fire, it follows that the fire intensity and the corresponding size of the affected area will depend on the effective rate of gas release. The release rate can be shown to depend on the pressure differential and the hole size. For guillotine-type failures, where the effective hole size is equal to the line diameter, the governing parameters are, therefore, the line diameter and the pressure at the time of failure. Given the wide range of actual pipeline sizes and operating pressures, a meaningful fire hazard model should explicitly acknowledge the impact of these parameters on the area affected.

1.3 Report Organization

The hazard model developed to relate the area potentially affected by a failure to the diameter and pressure of the pipeline is described in Section 2.0. Validation of the proposed hazard area model, based on historical data from high-pressure gas pipeline failure incidents in the United States and Canada, is presented in Section 3.0.

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2. HAZARD MODEL

2.1 Overview

An equation has been developed that relates the diameter and operating pressure of a pipeline to the size of the area likely to experience high consequences in the event of a credible worst-case failure event. The hazardous event considered is a guillotine-type line rupture resulting in double-ended gas release feeding a trench fire that is assumed to ignite soon after failure.

The hazard model upon which the hazard area equation is based consists of three parts: 1) a fire model that relates the rate of gas release to the heat intensity of the fire as a function of distance from the fire source; 2) an effective release rate model that provides a representative steady-state approximation to the actual transient release rate; and 3) a heat intensity threshold that establishes the sustained heat intensity level above which the effects on people and property are consistent with the definition of a high consequence area. Note that in the context of this study, an HCA is defined as the area within which the extent of property damage and the chance of serious or fatal injury would be expected to be significant in the event of a rupture failure.

The basis for each model, and any underlying assumptions, are described in Sections 2.2 through 2.4. The hazard area equation obtained by combining the model components is described in Section 2.5.

2.2 Fire Model

A jet flame can be idealized as a series of point source heat emitters spread along the length of the flame (see Figure 2.1). Each point source can be assumed to radiate an equal fraction of the total heat with the heat flux I_i at a given location resulting from point source i being given by (Technica 1988):

$$I_i = \frac{\eta X_g Q_{eff} H_c}{4 n_p \pi x_i^2} \quad [2.1]$$

where H_c = heat of combustion (constant for given product) $\cong 50,000$ kJ/kg for methane;
 η = combustion efficiency factor = 0.35;
 X_g = emissivity factor = 0.2;
 n_p = number of point sources;
 Q_{eff} = effective gas release rate; and
 x_i = radial distance from heat source i to the location of interest.

The total heat flux reaching a given point is obtained by summing the radiation received from each point source emitter.

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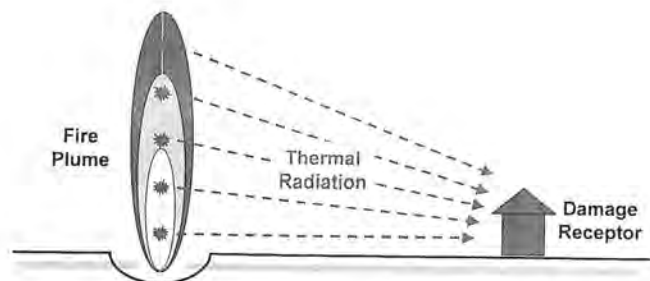


Figure 2.1 Conceptual fire hazard model.

A simplifying assumption, that generally yields a conservative estimate of the total heat flux received by ground level damage receptors, involves collapsing the set of heat emitters into a single point source emitter located at ground level (see Figure 2.2).

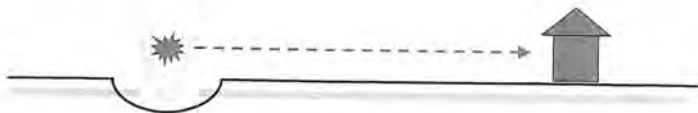


Figure 2.2 Simplified fire hazard model.

The resulting equation for the total heat flux I at a horizontal distance of r from the fire center is given by:

$$I = \frac{\eta X_g Q_H H_c}{4\pi r^2} \quad [2.2]$$

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This simplification is, in some respects, more consistent with the geometry of a trench fire which, due to the jet momentum dissipation (see Section 1.2), concentrates more of the heat-radiating flame surface near ground level. Note, however, that while a ground-level point source model represents a conservative approximation to a vertically-oriented jet flame or trench fire, this conservatism is partially offset by the fact that the model does not explicitly account for the possibility of laterally-oriented jets and/or the effects of wind on the actual position of the fire center relative to the center of the pipeline.

Note, also, that for a single point source emitter located at ground level directly above the pipeline, the locus of points receiving a heat flux of I defines a circular area of radius r centered on the pipeline. Thermal radiation hazard zones of increasing impact severity are, therefore, described by concentric circles centered on the pipeline having radii that correspond to progressively higher heat fluxes.

The adopted heat flux versus distance relationship given by Equation [2.2] represents an extension of the widely recognized flare radiation model given in API RP 521 (API 1990). It can be shown to be less conservative than the API flare model (*i.e.*, it gives lower heat intensity estimates at a given distance) but this should not be considered surprising since the API model is widely recognized to be conservative (Lees 1996).

The adopted model is also preferred over some of the more generic, multi-purpose models available for industrial fire hazard analysis because it acknowledges factors, ignored by other models, that play a significant role in mitigating the intensity of real-world jet fire events. In particular, it accounts for the incomplete combustion of the escaping gas stream (through the combustion efficiency factor η), and it acknowledges (through the emissivity factor X_e) that a significant portion of the radiant heat energy will be absorbed by the atmosphere before it can reach targets at any significant distance from the flame surface.

2.3 Effective Release Rate Model

The rate of gas release from a full-bore line rupture varies with time. Within seconds of failure, the rate of release will have dropped to a fraction of the peak initial value and over time the release rate will decay even further. This tendency for rapid release rate decay is illustrated in Figure 2.3, which shows how the rate would be expected to vary with time for two representative line diameter and operating pressure combinations. The relative release rate estimates shown in the figure were calculated using a non-dimensional rate decay model presented in a study by the Netherlands Organization of Applied Scientific Research, Division of Technology for Society (TNO 1982) which is based on realistic gas flow and decompression characteristics and which acknowledges both the compressibility of the gas and the effects of pipe wall friction.

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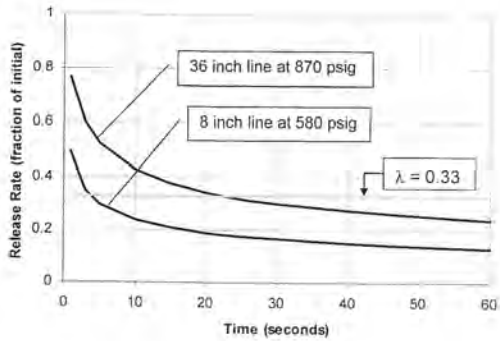


Figure 2.3 Release rate decay.

The peak initial release rate from the single end of a full-bore line rupture can be estimated using the widely recognized gas discharge equation given by the Crane Co. (1981) for sonic or choked flow through an orifice:

$$Q_m = C_d \frac{\pi d^2}{4} p \frac{\varphi}{a_s} \quad [2.3a]$$

where $\varphi = \text{flow factor} = \gamma \left(\frac{2}{\gamma+1} \right)^{\frac{\gamma+1}{2(\gamma-1)}}$ [2.3b]

$a_s = \text{sonic velocity of gas} = \sqrt{\frac{\gamma R T}{m}}$ [2.3c]

- C_d = discharge coefficient $\cong 0.62$;
- γ = specific heat ratio of gas $\cong 1.306$ for methane;
- R = gas constant = 8,310 J/(kg mol)/K;
- T = gas temperature $\cong 288$ K or 15 C;
- m = gas molecular weight $\cong 16$ kg/mol for methane;
- d = effective hole diameter \cong line diameter; and
- p = pressure differential \cong line pressure.

Given that the release rate is highly variable, it follows that the size and intensity of the associated fire will also vary with time and the peak intensity of the fire will depend on exactly

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when ignition occurs. The hazard model developed herein accounts for the above by approximating the transient jet or trench fire as a steady state fire that is fed by an *effective* release rate. The effective release rate is a fractional multiple of the peak initial release rate that can be used to obtain estimates of sustained heat flux that are comparable to those obtained from a more realistic transient fire model that assumes a slight delay in ignition time.

For a guillotine-type failure of a pipeline resulting in double-ended release, the effective release rate that is assumed to feed a steady-state fire is given by:

$$\underline{Q}_{eff} = 2\lambda \underline{Q}_m = 2\lambda C_v \frac{\pi d^2}{4} p \frac{\phi}{\alpha_m} \quad [2.4]$$

where λ is the release rate decay factor and the factor of 2 acknowledges that gas will be escaping from both failed ends of the pipeline.

In general, the most appropriate value for the release rate decay factor will depend on the size of pipeline being considered, the pressure in the line at the time of failure, the assumed time to ignition, and the time period required to do damage to property or cause harm to people. Given that even immediate ignition will require several seconds for the establishment of the assumed radiation conditions and given further that a fatal dose of thermal radiation can be received from a pipeline fire in well under 1 minute (see Section 2.4), it follows from Figure 2.3 that a rate decay factor in the range of 0.2 to 0.5 will likely yield a representative steady state approximation to the release rate for typical pipelines.

In a study of the risks from hazardous pipelines in the United Kingdom conducted by A. D. Little Ltd. (Hill and Catmur 1995), the authors report using a release rate decay factor of 0.25. A slightly more conservative value for λ of 0.33 has been adopted herein to ensure that the sustained fire intensity associated with nearly immediate ignition of fires associated with large diameter pipelines will not be underestimated (see Figure 2.3). Given that anecdotal information on natural gas pipeline failures suggests that the time to ignition may typically be in the range of 1 to 2 minutes (as in the Edison, New Jersey incident of 1994), the adopted release rate decay factor will likely yield an effective release rate estimate that overestimates the actual rate for the full duration of a typical gas pipeline rupture fire.

2.4 Heat Intensity Threshold

For people, the degree of harm caused by thermal radiation is usually estimated using a model that relates the chance of burn injury or fatality to the thermal load received where the thermal load L_p is given by an equation of the form (Lees 1996):

$$L_p = t I^n \quad [2.5]$$

where t is the exposure duration, I is the heat flux and n is an index.

Various recognized thermal load vs. effect models based on Equation [2.5] are summarized in Table 2.1 together with calculated estimates of the exposure times required to reach various

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conditions of injury and mortality for persons exposed to specified heat intensity levels. If it is assumed that within a 30 second time period an exposed person would remain in their original position for between 1 and 5 seconds (to evaluate the situation) and then run at 5 mph (2.5 m/s) in the direction of shelter, it is estimated that within this period of time they would travel a distance of about 200 ft (60 m). On the further assumption that, under typical conditions, a person can reasonably be expected to find a sheltered location within 200 ft of their initial position, a 30 second exposure time is considered credible and is, therefore, adopted as the reference exposure time for people outdoors at the time of failure.

Radiation Intensity or Heat Flux (Btu/hr ft ²)	Radiation Intensity or Heat Flux (kW/m ²)	Time to Burn Threshold (Lees 1996) (t ₁) ¹⁾ t ₁ ^{1.15} = 195	Time to Blister Threshold - lower (Lees 1996) (t ₂) ²⁾ t ₂ ^{1.33} = 210	Time to Blister Threshold - upper (Lees 1996) (t ₃) ³⁾ t ₃ ^{1.33} = 200	Time to 1% Mortality (Kinsman 1997) (t ₄) ⁴⁾ t ₄ ^{1.24} = 1000	Time to 50% Mortality (Kinsman 1997) (t ₅) ⁴⁾ t ₅ ^{1.24} = 2300	Time to 100% Mortality ⁵⁾ (t ₆) ⁴⁾ t ₆ ^{1.24} = 2500
1600	5.65	24.4	81.3	123.1	267.1	406.4	406.4
2000	6.51	23.5	81.3	91.9	199.5	302.1	302.1
3000	9.46	14.7	10.8	35.2	53.4	176.2	176.2
4000	12.62	10.8	7.2	24.0	36.4	129.2	129.2
5000	15.77	8.2	5.4	17.9	26.7	99.3	99.3
6000	25.24	4.8	2.9	9.6	14.2	67.8	67.8
10000	31.55	3.7	2.1	7.1	10.8	53.5	53.5
12000	37.85	3.0	1.7	5.6	8.4	43.3	43.3

Note:
 1) Human skin thermal time (t₁) = 210 to 1000 when flux is unity value for blister formation.
 2) The thermal time values given by Lees are based on a fixed criterion of the radiative heat flux received by the skin.
 3) The time to blister values are based on a fixed criterion of the radiative heat flux received by the skin.
 4) The time to mortality values are based on a fixed criterion of the radiative heat flux received by the skin.
 5) The time to mortality values are based on a fixed criterion of the radiative heat flux received by the skin.

Table 2.1 Effects of thermal radiation on people.

The exposure time estimates closest to this reference time are highlighted in Table 2.1 for each different thermal load effect. Note that the onset of burn injury within the reference exposure time is associated with a heat flux in the range of 1,600 to 2,000 Btu/hr ft² (5 to 6.3 kW/m²), depending on the burn injury criterion. The chance of fatal injury within the reference exposure time becomes significant at a heat flux of about 5,000 Btu/hr ft² (15.8 kW/m²), if the significance threshold is taken to be a 1% chance of mortality (*i.e.*, 1 in 100 people directly exposed to this thermal load would not be expected to survive).

For property, as represented by a wooden structure, the time to both piloted ignition (*i.e.*, with a flame source present) and spontaneous ignition (*i.e.*, without a flame source present) can also be estimated as a function of the thermal load received. For buildings, the thermal load L_b is given by an equation of the form (Lees 1996):

$$L_b = (I - I_s)^n \quad [2.6]$$

where I_s is the heat flux threshold below which ignition will not occur.

Models based on Equation [2.6], developed from widely cited tests as re-interpreted by the UK Health and Safety Executive (Bilo and Kinsman 1997), are summarized in Table 2.2 together with calculated estimates of the exposure times required for both piloted and spontaneous ignition at selected heat intensity levels.

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Radiation Intensity or Heat Flux (Btu/hr ft ²)	Radiation Intensity or Heat Flux (kW/m ²)	Time to Piloted Ignition ¹ (Dilo & Kinsman 1997) (1-14.7)t ^{0.667} =118.6	Time to Spontaneous Ign. ¹ (Dilo & Kinsman 1997) (1-25.6)t ^{1.5} =167.6
4000	12.62	no ignition	no ignition
5000	15.77		
8000	25.24	37.8	no ignition
10000	31.55	18.7	65.0
12000	37.85	11.6	26.3

Note: 1) based on experiments on American whitewood

Table 2.2 Effects of thermal radiation on wooden structures.

From Table 2.2 it can be seen that 5,000 Btu/hr ft² (15.8 kW/m²), corresponds to piloted ignition after about 20 minutes (1,200 seconds) of sustained exposure. The table further shows that spontaneous ignition is not possible at this heat intensity level. It is therefore assumed that this heat intensity represents a reasonable estimate of the heat flux below which wooden structures would not be destroyed, and below which wooden structures should afford indefinite protection to occupants.

Note that the model employed for estimating the effects of thermal radiation on property explicitly considers the duration of exposure required to cause ignition. Some earlier wood ignition models, which appear to be the basis for the often cited 4,000 Btu/hr ft² (12.6 kW/m²) threshold for piloted wood ignition, are in fact associated with an almost indefinite time to ignition and are, therefore, considered to be overly conservative given the transient (decaying) nature of real pipeline rupture fires.

In light of the above, if a high consequence area is defined as the area within which both the extent of property damage and the chance of serious or fatal injury would be expected to be significant, it follows that this area can reasonably be defined by a heat intensity contour corresponding to a threshold value below which:

- property, as represented by a typical wooden structure, would not be expected to ignite and burn;
- people located indoors at the time of failure would likely be afforded indefinite protection; and
- people located outdoors at the time of failure would be exposed to a finite but low chance of fatality.

The information presented on thermal load effects suggests that below 5,000 Btu/hr ft², a wooden structure would not be expected to burn and it, thereby, affords indefinite protection to sheltered persons. Also, this heat intensity level corresponds to approximately a 1 percent chance of fatality for persons exposed for a credible period of time before reaching shelter. A heat flux of 5,000 Btu/hr ft² has, therefore, been adopted as the threshold heat intensity for the purpose of sizing a high consequence area.

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2.5 Hazard Area Equation

Substituting the expression developed for the effective release rate (Equation [2.4]) into the heat intensity versus distance formula (Equation [2.2]), replacing all constants and rearranging gives the following expression for the radial distance to locations where the heat flux is equal to the threshold value:

$$r = \sqrt{\frac{2348 p d^2}{I_{th}}} \quad (\text{ft}) \quad [2.7]$$

where I_{th} = threshold heat intensity (Btu/hr/ft²);
 p = line pressure (psi); and
 d = line diameter (in).

For a threshold heat intensity of 5,000 Btu/hr ft², the above expression reduces to:

$$r = 0.685 \sqrt{p d^2} \quad [2.8]$$

Equation [2.8] can, therefore, be used to estimate the radius of a circular area surrounding the assumed point of line failure within which the impact on people and property would be expected to be consistent with the adopted definition of a high consequence area.

Hazard area radii, as calculated using Equation [2.8] are plotted in Figure 2.4 as a function of line diameter and operating pressure. The figure shows that, for pipelines operating at pressure levels in the range of 600 to 1,200 psi, the calculated hazard area radius ranges from under 100 ft for small diameter lines to over 1,100 ft for large diameter lines.

Note that the concept of relating the potential hazard area to the line diameter and operating pressure is not new. An approach similar to that described herein has been an integral part of the high pressure gas transmission pipeline code in the United Kingdom since 1977 (Knowles *et al.* 1978 and IGE 1993). The standard as developed in the United Kingdom incorporates the concept of a Building Proximity Distance (BPD), multiples of which serve to define development exclusion zones and establish the pipeline corridor width for the purpose of determining Location Class. The BPD is calculated directly from the line diameter and the maximum operating pressure.

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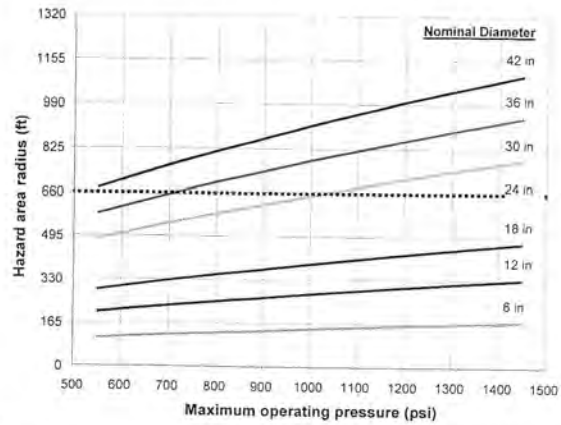


Figure 2.4 Proposed hazard area radius as a function of line diameter and pressure.

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3. MODEL VALIDATION

Pipeline incident reports, located in the public domain, were reviewed to provide a basis for evaluating the validity the proposed hazard area model given by Equation [2.8]. The data sources reviewed included reports on pipeline incidents in the United States prepared by the National Transportation Safety Board (NTSB) going back to 1970, and similar reports on incidents in Canada prepared by the Transportation Safety Board (TSB) going back to 1994. Note that the information extracted from these reports required some interpretation due to differences in the way the information was reported. The processed data together with hazard area estimates obtained using Equation [2.8] are summarized in Figure 3.1. A summary of the information that forms the basis for Figure 3.1 is given in Table 3.1.

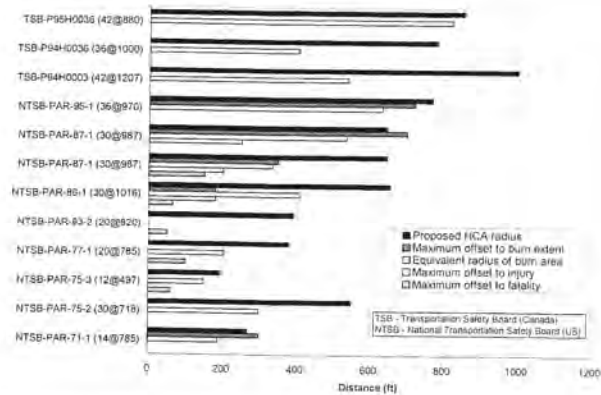


Figure 3.1 Comparison between actual incident outcomes and the proposed hazard area model.

In interpreting the incident outcomes summarized in Figure 3.1 note the following:

- the *equivalent radius of burn area* is the radius of a circle having an area equal to the reported area of burnt ground;
- the *maximum offset to burn extent* is the maximum reported of inferred lateral extent of burnt ground measured perpendicular to a line tracing the alignment of the pipeline prior to failure; and
- the *maximum offset to injury/fatality* is the maximum reported or inferred distance to an injury/fatality again measured perpendicular to a line tracing the alignment of the pipeline prior to failure.

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Figure 3.1 shows that in every case the hazard area calculated using the proposed equation is greater than the actual reported area of burnt ground. In addition, with the sole exception of one of the incidents reported in NTSB-PAR-87-1, the radius obtained from the hazard area equation conservatively approximates the maximum lateral extent of the burn zone. Finally, in all cases the calculated hazard zone radius significantly exceeds the maximum reported offset distance to injury or fatality.

Note, however, that whereas the interpretation of reported burn areas and burn distances is obvious, caution should be exercised in interpreting maximum offset distances to injury and fatality. Given that most of the incidents occurred in sparsely populated areas, the reported injury and fatality offsets are more indicative of where people happened to be at the time of failure rather than being representative of the maximum possible distances to injury or fatality for the incident in question.

Acknowledging the uncertainty associated with interpreting reported offsets to injury and fatality, the balance of information still overwhelmingly indicates that the proposed hazard area radius equation provides a reasonable, if somewhat conservative, estimate of the zone of high consequence.

It is thought that one of the main reasons for the apparent conservatism in the proposed hazard area model is that it is based on an effective sustained release rate that is consistent with the assumption of almost immediate ignition. The actual time to ignition for many of the reported incidents is probably longer (see incident notes in Table 3.1) making the effective release rate approximation conservative.

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CO2 – Coalition to Reroute Nexus (cont'd)

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Date	Report	Location	Incident	Damage	Maximum Burn Distance	Diameter (in)	Pressure (ksi)
1969	NTSB-PAR-71-1	near Houston, Texas	Rupture at 3:40 p.m. on September 9th, explosive ignition 8 to 10 minutes after failure.	Burned area 370 ft long by 300 ft wide (all to one side). Houses destroyed by blast to 250 ft, near damage to 300 ft, 106 homes damaged, 9 injuries, and 0 fatalities.	300 ft.	14	750
1974	NTSB-PAR-75-2	near Beaverton, Virginia		Burned area 700 ft by 400 ft.		30	718
1974	NTSB-PAR-75-3	near Farmington, New Mexico	Rupture at 3:45 a.m. on March 15th, ignition soon after failure.	Each charred within a 300 ft diameter circle, 3 fatal injuries (within 60 ft offset).		12.75	497
1976	NTSB-PAR-77-1	Catwright, Louisiana	Rupture at 1:05 p.m. on August 9th, ignited within seconds.	Burn area 3 acres (implies a 200 ft radius circle), 6 fatalities (within about 100 ft offset) and 1 injury.		20	770
1982	NTSB-PAR-83-2	Hudson, Iowa		5 fatalities (within 150 ft, less than 50 ft offset).		20	920
1984	NTSB-PAR-86-1	near Jackson, Louisiana	Rupture at 1:00 p.m. on November 25th, ignition soon after failure.	Burned area 1450 ft long by 360 ft wide (further fire extent 950 ft), 3 fatalities (within 55 ft, 0 ft offset), and 23 injuries (within 600 ft, 100 ft offset).	Offset 160 ft. Distance 950 ft.	30	1016
1985	NTSB-PAR-87-1	near Beaumont, Kentucky	Rupture at 9:16 p.m. on April 27th, ignition soon after failure.	Burned area 500 ft wide by 700 ft long, 2 houses, 3 house trailers and numerous other structures and equipment destroyed. 5 fatalities due to smoke inhalation in house 518 ft from rupture (150 ft offset), 3 people burned running from house 320 ft from rupture (200 ft offset), one hospitalized with 2nd degree burns.	Offset 330 ft. Distance 500 ft.	30	890
1988	NTSB-PAR-87-1	near Lancaster, Kentucky	Rupture at 2:05 a.m. on February 21st, ignition soon after failure.	Burned area 800 ft by 1000 ft, 2 houses, 1 house trailer and numerous other structures and equipment destroyed. 3 people burned running from house 280 ft from rupture (requiring hospitalization), 5 others received minor burn injuries running from dwellings between 200 and 528 ft from rupture (250 ft offset).	Offset 700 ft. Distance 800 ft.	30	987
1988	NTSB-PAR-95-1	Edison, New Jersey	Rupture at night on March 22nd, ignition within 1 to 2 minutes after failure.	Burned area 1400 ft long by 500 ft wide. Fire damage to dwelling units up to 500 ft from rupture, dwelling units at 500 ft and beyond caught fire between 7 to 10 minutes after failure, no fatalities but 58 injuries.	Offset 720 ft. Distance 980 ft.	36	970
1994	TSB Report No. P94H0003	Maple Creek, Saskatchewan	Rupture at 7:40 p.m. on February 14th, ignition soon after failure.	Fire burn area 21.0 acres (8.5 hectares).		42	1207
1994	TSB Report No. P94H0036	Latchford, Ontario	Rupture at 7:13 a.m. on July 23rd, ignition soon after failure.	Fire burn area 11.8 acres (4.77 hectares), heat-affected area 13.6 acres (7.52 hectares).		38	1000
1998	TSB Report No. P95H0035	Rapid City, Manitoba	Rupture of 42 inch line at 5:42 a.m. on July 29th, ignition soon after failure leading to rupture and fire on adjacent 36 inch line at 6:34 a.m.	Fire burn area 48.5 acres (19.6 hectares), heat-affected area 198 acres (80 hectares).		42	880

Table 3.1 Summary of relevant North American pipeline failure incident reports.

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4. REFERENCES

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COMPANIES/ORGANIZATIONS COMMENTS

CO23 –Anthony Wayne Local Schools

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Anthony Wayne Local Schools

Lucas County

Anthony Wayne Administrative Center
 9565 Bucher Rd., PO Box 2487, Whitehouse, Ohio 43571
 Phone: 419-877-5377 FAX: 419-877-9352
 www.anthonywayneschools.org

August 10, 2016

Dear FERC:

Thank you to the Federal Energy Regulatory Commission (FERC) for holding this meeting and allowing the Northwest Ohio Community an opportunity to share their concerns in regards to the proposed Nexus pipeline and compressor station.

The Anthony Wayne Local Schools Board of Education and I are concerned about the environmental impact of this compressor station on the students that attend school and staff that work in five of our six school buildings that are within an approximate three mile radius of the proposed location, along with the local community members who live in this area. There are approximately 4000 students and 300 staff members in the five school buildings within 3 miles of the location each an every day of the school year.

I would like to share with you an example of why the emissions from the compressor station are a concern. Within each classroom at Waterville Primary, there is a fresh air intake system. With 25 students and a Teacher, the ventilation requirement to meet ASHRAE requirements would be about 14 (Cubic Feet Per Minute) CFM per person. For that Waterville classroom, it totals 372 Total CFM. With over 30 classrooms and equivalent areas in Waterville Primary, that adds up to over 11,148 CFM. To pull in this amount of fresh air, for the two main classroom wings alone we continuously run exhaust fans during the school day that total 11,815 CFM. Additional fans help bring in fresh air for the Community Room, Gym and Media Center and other core areas of the building. Most businesses require less outside air ventilation, some at half of our rate.

With this amount of natural air brought into our school buildings, and prevailing winds blowing toward our school buildings, we are concerned about not only the average amount of emissions per year but especially the peak emissions during specific times of the year. On December 14, 2015, at the Anthony Wayne Local Schools Board of Education meeting, a resolution was passed expressing concern of the proposed placement of a compressor station in Waterville Township for the Nexus pipeline. The resolution asks the Ohio Environmental Protection Agency and FERC to further study the impact of the compressor station, its proposed location, and provide, through public meetings, the findings of this study. We are hopeful that FERC will consider this resolution, complete further study of this concern, and share it with our local community.

Thank you to FERC for holding this meeting and listening to the concerns of the community in regards to this compressor station and the pipeline.

Thank you,

Jim Fritz

Dr. Jim Fritz

Mission Statement: Anthony Wayne Local Schools will partner with our community to engage all students in educational opportunities empowering them to become active, responsible, and productive citizens in our global society.

- CO23-1 The EIS addresses the various impacts of constructing and operating the Waterville Compressor Station on the natural and human environment.
- CO23-2 In section 4.12.1.3, conservative AERSCREEN modeling results demonstrate that local air emissions associated with the Waterville Compressor Station would not cause or contribute to an exceedance of the NAAQS, which were established to protect human health, including sensitive populations such as children, the elderly, and those with chronic respiratory problems. NAAQS averaging periods (which vary based on the pollutant and include short-term and long-term exposures) were appropriately used to determine localized impacts.
- CO23-3 This EIS provides FERC's environmental findings and conclusions on the location and impacts of the NGT Project, including the Waterville Compressor Station.

COMPANIES/ORGANIZATIONS COMMENTS

CO24 –IUOE Local 18

Ismael Gutierrez
IUOE LOCAL 18 Organizer
2412 South. Reynolds Road
Toledo, Ohio 43614

Good Evening my name is Ismael Gutierrez, and I am here to speak on behalf of the Operating Engineers Local 18 and our 15,000 members.

Local 18 has already electronically submitted to the FERC our official support letter on the NEXUS pipeline however I am here this evening to add additional comments and testimony for the NEXUS Pipeline project.

I wanted to say that first and foremost, Local 18 supports the NEXUS Pipeline project and recognizes the need for the pipeline. Local 18 and its members ultimately support the portions of the project that their fellow members and local work force will be working on. Members of the IUOE are the most qualified, best trained and most importantly the safest workforce in the Industry.

CO24-1 The NEXUS pipeline will be a safe method of transporting gas and will be a significantly less impact on the environment than transporting gas by road or rail. All of the requirements by the FERC and other agencies involved will not only be followed by NEXUS, they will be over- followed. This will prove to the communities and groups in question of the project they care about where they operate and will maintain a safe and efficient pipeline.

CO24-3 If the NEXUS pipeline is approved, the pipeline spreads installed by our members and fellow trades men and women will be installed safe, efficiently and correct the first time. This is theirs, fellow family and community member's backyards so they will take pride in their work. As it stands now, the NEXUS if approved will be installed by local union members on at least 3 of the 4 proposed spreads.

CO24-1 Comment noted.

CO24-2 Comment noted.

CO24-3 Comment noted.

R-296

COMPANIES/ORGANIZATIONS COMMENTS

CO24 –IUOE Local 18 (cont'd)

CO24-4

The only concerns Local 18 has on the project are the portions to be installed by contractors who utilize someone other than an Operating Engineer or fellow trades men and women on the project. The beginning pipeline spread is scheduled to be installed by MG Dyess from Bassfield, Mississippi. MG Dyess will utilize a workforce that is 100 % out of state and has no ties to Ohio at all. Local 18 does not support this decision by NEXUS and questions whether or not they are qualified to be involved with the NEXUS project.

Although we are not happy with the overall contractor selection, we support the NEXUS pipeline. Please join Local 18 in supporting the NEXUS Pipeline and approve the project.

CO24-4

Comment noted.

R-297

COMPANIES/ORGANIZATIONS COMMENTS

CO25 – Teamsters Local Unions 20, 92, 299, and 348

Comments by the Teamsters before the Federal Energy Regulatory Commission (FERC) in SUPPORT of the Nexus Pipeline Project

On behalf of Teamsters Local Unions 20 (Toledo, Ohio), 92 (Canton, Ohio), 299 (Detroit, Michigan) and 348 (Akron, Ohio) and the Teamsters National Pipeline Labor Management Cooperation Trust (LMCT) we want to affirm our support for the issuance of permits for the watercourse, floodway or body of water, including wetlands and other related work on the Nexus Pipeline Project.

CO25-1

The Teamsters Local Unions and the LMCT are committed to building this project with well-trained and qualified Teamster workers most of whom reside along the route of the Nexus Project and/or other pipeline projects in Michigan and Ohio.

Therefore, they have a vested interest in building this project in an environmentally safe manner since their own families could be affected by this project.

The collective bargaining agreement between the Teamsters and Pipeline Contractors Association (PLCA) states:

“The words “regular employee” shall mean those who are regularly and customarily employed by the Individual Employer and because of their special knowledge and experience in pipeline construction work, are considered key men. It is anticipated that the number of regular employees shall not be more than a majority of the total number required but there shall be no limitation on the classification of such regular employees, with the understanding that these

CO25-1 Comment noted.

R-298

COMPANIES/ORGANIZATIONS COMMENTS

CO25 – Teamsters Local Unions 20, 92, 299, and 348 (cont’d)

R-299

classifications will be distributed as evenly as possible.” (See Exhibit A)

When a pipeline project is built using union labor, the majority of pipeline construction workers are from the local community. These workers care about getting the job done right, because they live here too.

- CO25-2 | In Michigan and Ohio our local unions supply more local labor than the 50% specified in the collective bargaining agreement.
- On our projects we receive Steward Reports listing information on the Teamster workers including home local union. I have supplied 2 of our Steward Reports one dated July 16, 2016 with Associated showing 3 out of 3 Teamsters were from Ohio and one with Price Gregory showing 27 out of 41 Teamsters from Local Unions with pipeline jurisdiction in Ohio. We will gladly supply more Steward Reports upon request. (See Exhibit B)
- CO25-3 | Our Michigan and Ohio Teamsters have within the past year participated in skills training. A list is supplied showing type of equipment and location of the training conducted in Michigan and Ohio. (See Exhibit C)
- CO25-4 | The Teamsters have contractors who specialize in Horizontal Directional Drilling (HDD) type of work.
- HDD is used for the installation of pipelines beneath rivers, highways, and other environmentally sensitive areas requiring technology and equipment that can install pipelines without any disturbance to natural habitats.

CO25-2 Comment noted.

CO25-3 Comment noted.

CO25-4 Comment noted.

COMPANIES/ORGANIZATIONS COMMENTS

CO25 – Teamsters Local Unions 20, 92, 299, and 348 (cont'd)

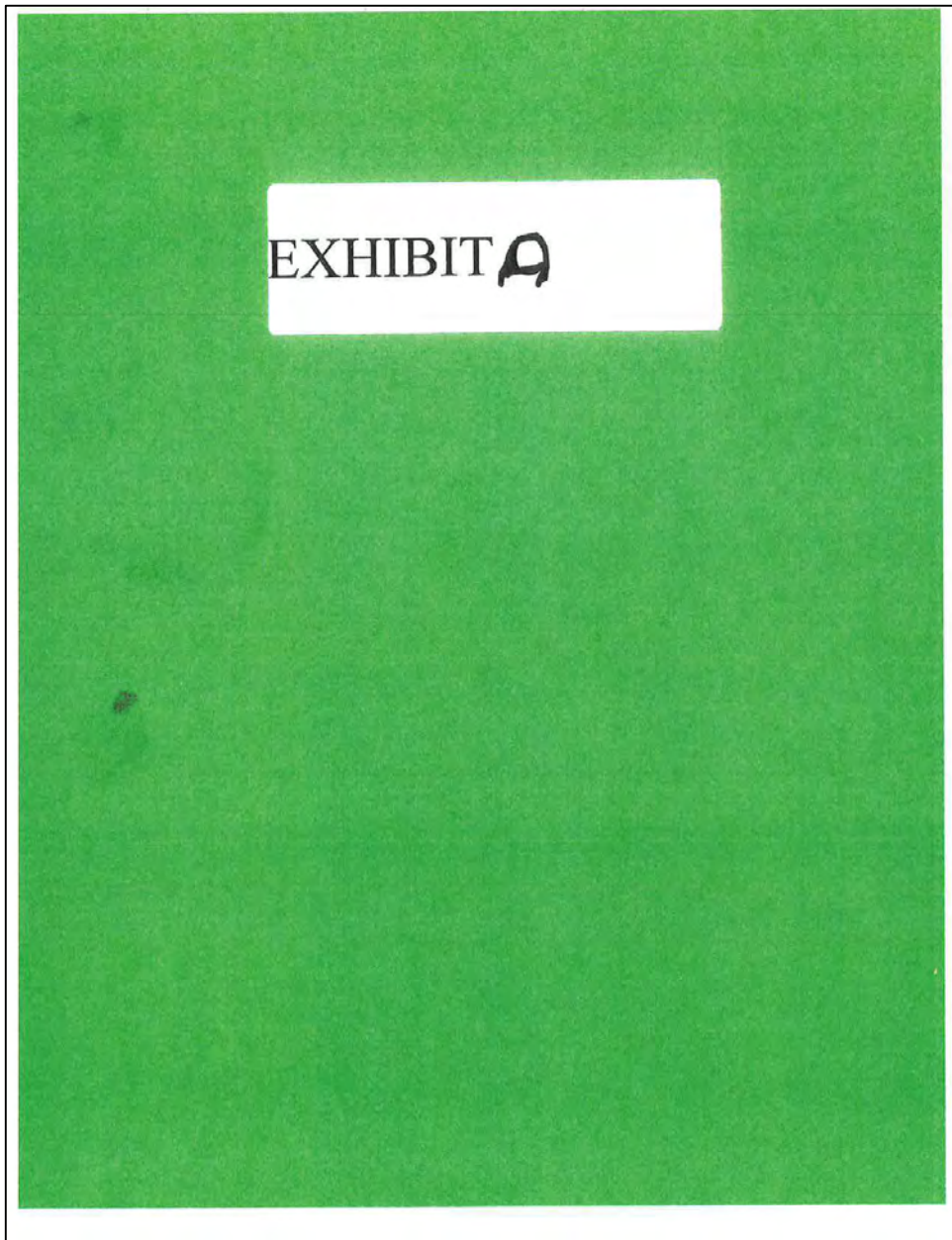
R-300

CO25-4 (cont'd)	A list of our signatory contractors and a more detailed explanation of the work they perform in areas of great environmental concern is included in this submission. (See Exhibit D)
CO25-5	<p>Prior to the Nexus Pipeline Project beginning we will schedule Classroom Training Courses on the latest U.S. Department of Transportation (DOT) regulations named Compliance, Safety and Accountability (CSA) and Defensive Driving.</p> <p>The Teamsters CSA/Defensive Driving Instructor has been cited as a "Trend Setter by the "National Safety Council" an Award he has received by them in the past. (See Exhibit E)</p> <p>In summary, we have contractors who specialize and are experienced in this type of work and use mostly local Teamster workers who have had pipeline-specific skill training and classroom instruction and courses.</p> <p>Therefore, we urge you to issue the permits for the Nexus Pipeline Project.</p>

CO25-5 Comment noted.

COMPANIES/ORGANIZATIONS COMMENTS

CO25 – Teamsters Local Unions 20, 92, 299, and 348 (cont'd)



R-301

COMPANIES/ORGANIZATIONS COMMENTS

CO25 – Teamsters Local Unions 20, 92, 299, and 348 (cont'd)

additional pre-job conference will be required if hours of work or work conditions are changed.

No representative of any individual Employer and no representative of the Union or any of its local unions shall demand at the pre-job conference or at any other time during the continuance of the job any term or condition not covered by this Agreement. A copy of the report made of each pre-job conference shall be furnished to the Pipe Line Contractors Association and to the International Brotherhood of Teamsters, and no agreement made at any pre-job conference which adds to or modifies in any way the terms and conditions of this Agreement shall be binding on any individual Employer or the Union, or any of its local unions, unless approved and ratified by the PLCA and the International Brotherhood of Teamsters.

In the event that the Union and the Employer are unable to mutually agree upon layoff procedure at the pre-job conference, the matter will be referred to the Director, Construction Division, International Brotherhood of Teamsters, and the Managing Director, PLCA, for decision along previously established guidelines.

(E) If any individual Employer pays any wages in excess of the wages negotiated in this Agreement in the form of extra money, extra hours, extra travel or stand-by-time, or in the form of a bonus by any subterfuge, and if the PLCA and the International Brotherhood of Teamsters shall jointly determine that such bonus is for the purpose of pirating men from other individual Employers, or results in conditions injurious to the pipeline industry, then such individual Employer shall be required to pay the same extra compensation to all employees classified as Group 1 or Group 2 in this Agreement, and a proportionate additional compensation to all employees classified as Group 3 in this Agreement, and such requirement shall continue until that particular job is completed. It is understood and agreed, however, that any profit-sharing, retirement, or pension plan which an individual Employer may have in effect which has not been set up for that particular job shall not be considered a bonus.

(F) Upon request of the local union having jurisdiction of the job, and upon presentation of proper authorization forms executed by the individual employees, the individual Employer agrees to deduct from the wages of such individual employees Union initiation fees and dues and shall pay over to such local unions the amount so deducted.

(G) The Union agrees to send a copy of this Agreement to each and every one of its locals having jurisdiction over any area in which Employer becomes obligated to construct a pipe line, and agrees that the terms of this Agreement shall be recognized by such local, so that industrial peace will not be disturbed and so that the Employees may perform Employer's work efficiently and continuously. The Employer agrees as well to furnish its supervisory personnel copies of this Agreement so that they may be familiar with the terms.

(H) Employer shall have the right to hire the first driver, the second employee hired shall be the steward. Employer shall have the right to employ, direct and bring into the job men who are regular employees in Employer's work and shall have the right to keep such men in his employ on all work throughout the territory covered by this Agreement.

(I) The words "regular employee" shall mean those who are regularly and customarily employed by the individual Employer and because of their special knowledge and experience in

COMPANIES/ORGANIZATIONS COMMENTS

CO25 – Teamsters Local Unions 20, 92, 299, and 348 (cont'd)

pipeline construction work, are considered key men. It is anticipated that the number of regular employees shall not be more than a majority of the total number required but there shall be no limitation on the classification of such regular employees, with the understanding that these classifications will be distributed as evenly as possible.

(J) It is understood and agreed that the above limitations shall not apply to the pipeline stringing operations.

(K) The hiring of men in addition to the Employer's regular employees, either at the start of the job or later, shall be conducted in the following manner:

1. In the event a valid non-discriminatory exclusive referral procedure has been established by collective bargaining between a local of the Union and an association of highway and heavy contractors in the area in which the job is to be done, Union shall notify the Association from time to time as to the existence of such exclusive referral procedures and Employer agrees to utilize such referral procedures upon the following conditions:

a. Nothing in this Agreement shall affect the Employer's inherent right to determine the competence and qualifications of applicants for employment or of his employees and his right to reject or discharge accordingly.

b. The selection of applicants for referral to jobs shall be based on a non-discriminatory basis and shall not be based on or in any way affected by union membership, by-laws, regulations, constitutional provisions, or any other aspect or obligation of union membership, policy or requirement.

c. Workmen referred under Article II to the contractor's job who are not able to perform the job to which they are referred because of their own lack of qualifications, or for some other reason which is the workman's own responsibility, shall not be paid show-up time.

d. Qualified applicants required by Employer at the start of the job must be referred by a local referral office within 48 hours of the receipt of Employer's request; those required by Employer after a job has started must be referred by a local referral office within 24 hours of the receipt of Employer's request. If the local referral office fails to comply with this condition, Employer may secure qualified applicants from any other source. Qualified applicants under this section must have the following:

- (i) Proper federal and state licenses;
- (ii) Proper OQ credentials where necessary;
- (iii) Pipeline or general construction work experience relevant to pipeline work or completion of a certified pipeline training course operated or approved by the Teamsters Pipeline Training Fund. The Teamsters and PLCA also agree they will jointly review the training program on a 6-month basis.
- (iv) Compliance with company Employee and safety policy standards. These

COMPANIES/ORGANIZATIONS COMMENTS

CO25 – Teamsters Local Unions 20, 92, 299, and 348 (cont'd)

EXHIBIT B

R-304

COMPANIES/ORGANIZATIONS COMMENTS

CO25 - Teamsters Local Unions 20, 92, 299, and 348 (cont'd)

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STEWARDS PIPELINE PROJECT FORM

STEWARD Anthony Ballb

DATE: 7/10/2015 CONTRACTOR: Associated

WEEK ENDING: 7/16/2016 PROJECT LOCATION: Salineville OH

COUNTY/STATE: Columbia OH CLIENT/OWNER: _____

Have ~~_____~~
Frank Tillis SAC
T
(11)

NAME (Please Print Legibly)	Lay-Off Yes = Y	Cell No.	Traveler? Yes = Y	Equipment Operated	Home Local (Traveler?)	Total Ho (Week)
Anthony Ballb	N	710-481-5808	N	Warehouse	92	60
Eric _____	N	512-788-3985	Y	Tractor	637	180
Amie Bullymans	Y	740-457-2621	N	35016 Tractor	92	20

PLEASE FAX: (202) 624-8107
Teamster Building Material & Construction Trade Division
Marion D. Davis, Director

JOB COMPLETE (Y)
Local 92 Garbop, OH
Local 637 Zalesville, OH

COMPANIES/ORGANIZATIONS COMMENTS

CO25 – Teamsters Local Unions 20, 92, 299, and 348 (cont'd)

STEWARDS PIPELINE PROJECT FORM
 CONTRACTOR: PERCE GREGORY LTD INC. CLIENT: MARATHON PETROLEUM CORP
 JOB ADDRESS: 674 W. 3RD ST. BOYER, OH, 44602
 COUNTY: HARRISON, CARROLL, TUSCARAWAS STARK
 PROJECT DESCRIPTION: 42 MILES LG. 8 INCHES 8"
 DATE: 06/20/2016 WEEK ENDING: 06/21/2016

NAME	PHONE	TRAVELER 1-YRS	EQUIPMENT OPERATED	LOCAL	HIRE DATE	LTD DATE	HOURS WORKED
BAIRD, CELDE A	330-607-7717		ESCORT	92	05/21		68.00
BARNETT, MONTY R	870-723-6125	Y	STRINGING	878	05/21		66.00
BOYTE, GEORGE E	318-503-1891	Y	LOWBOY	270	05/09		72.00
BRUCE, MICHAEL F	330-245-9781		1 TON/ ENVIRONMENTAL	92	04/11		72.00
BRUBY, JASON B	740-457-9845		STRINGING/TLOAT	92	05/10		66.00
CARICO, KEITH M	276-237-4844		STRINGING/TLOAT	637	04/12		56.00
ELAND, TIMOTHY M	662-310-9662	Y	1 TON/ TIE-IN	541	06/11		12.00
FANNIN, ROGER D	740-485-1557		ESCORT	637	05/21		60.00
FRIEND, JAMES C	724-562-9556	Y	WAREHOUSE	491	04/18		78.00
GARBY, SEANNON J	415-392-7785	Y	FOAM TRUCK	697	06/02		73.00
GARDNER, MICHAEL A	740-346-6720		FLOAT	92	05/24		64.00
GOODMAN, ROGER L JR	740-891-1121		1 TON/WATER TRUCK	637	08/20		73.00
GREEN, JOSEPH W	740-945-1845		MARCOCKA/PRE-HEATER	92	05/28		60.00
GRIMBLEY, DOUGLAS K	843-678-6619	Y	MECHANIC	22	04/18		84.00
HAMMOND, JOE S	479-216-0099	Y	FLOAT	541	04/22		66.00
HARRISON, MASON T	304-444-1548		FORKLIFT	92	05/25		60.00
HOBSON, JOHN T	318-245-7601	Y	LOWBOY	697	04/25		76.00
HOBSON, MICHAEL	234-521-4287		1 TON/ TIE-IN	92	06/03		73.00
JENNINGS, WILLIAM J	740-705-6134		FLOAT	637	05/24		64.00
JOHNSTON, JERRY C	775-527-0689	Y	LOW BOY	166	04/08		72.00

local 697 Wheeling WV
 but has jurisdiction in OH, too.

local 92 Grafton, OH
 local 632 Zanesville, OH
 local 377 Youngstown, OH
 local 284 Columbus, OH

COMPANIES/ORGANIZATIONS COMMENTS

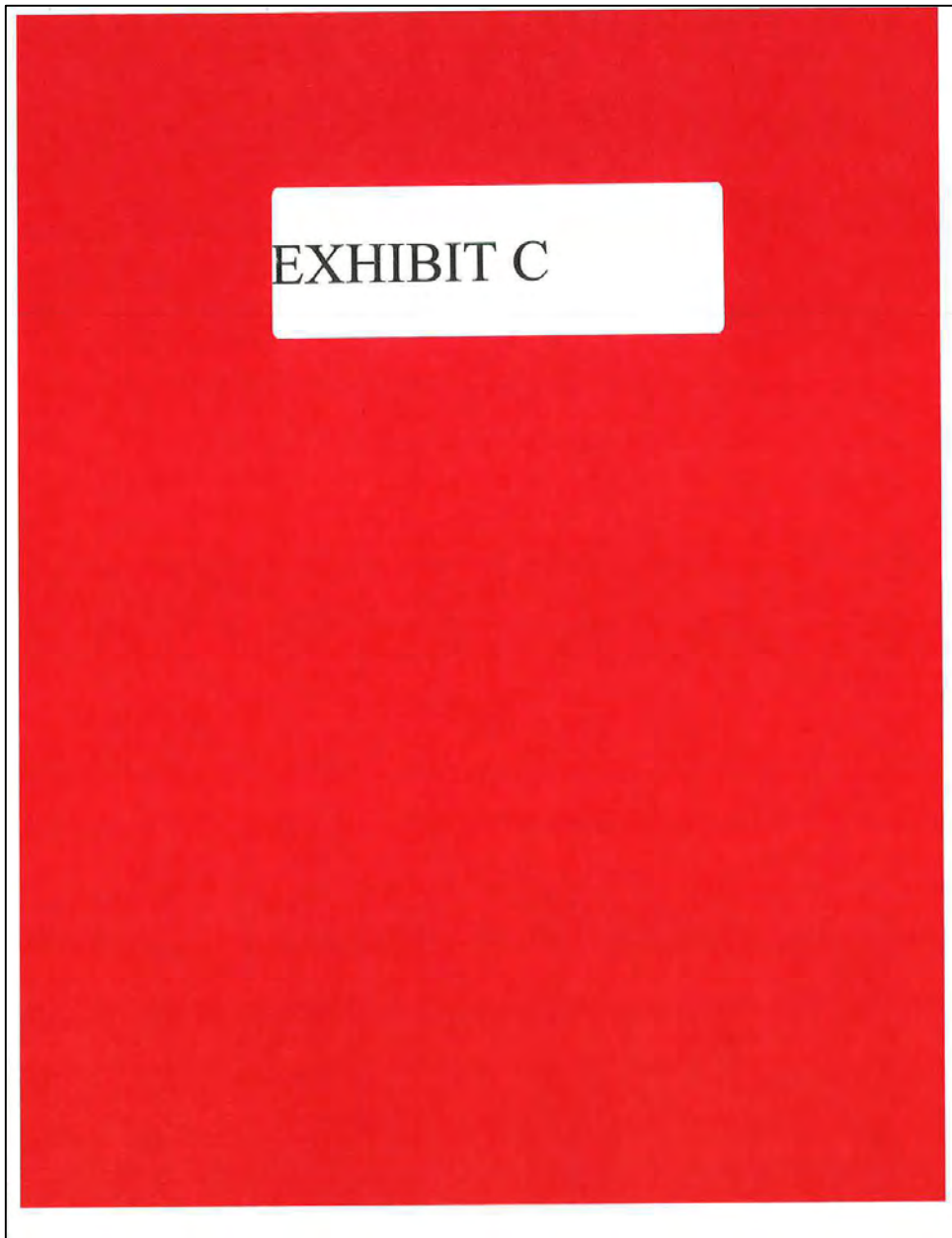
CO25 – Teamsters Local Unions 20, 92, 299, and 348 (cont'd)

KENNEDY, SPIN E	918-285-6269	Y	STEWARD	516	04/08	78.00
KOFCI, TERRIL	702-892-0486	Y	WATER TRUCK	583	06/02	72.00
LANDIN, LORRI L	740-577-8519	Y	ESCORT	697	05/21	60.00
MALLET, BENNE R	870-754-9814	Y	FLOAT	455	05/31	62.00
MAVLEY, SUZANNE K	859-585-0887	Y	PARTS RUNNER	110	04/25	78.00
MOORE, ROBERT E	740-819-2519		MAROOKAMUS COATING	637	05/24	72.00
MORGAN, SMILEY L	318-614-4868	Y	FOAM TRUCK	222	06/02	77.00
MORRISON, SCOTT A	740-617-6671		1 TON/ TRUCK	637	06/06	67.00
NISERLY, STEVEN E	740-310-7397	Y	SKID TRUCK	697	04/22	47.00
O'NEILL, CLAYTON A	740-624-9362		ESCORT	637	05/03	60.00
PATRICK, JAMES A	706-207-4889	Y	FUEL TRUCK	697	04/22	77.00
PATRICK, BEATHER N	678-756-1756	Y	SWAMPER FUEL TRUCK	697	04/22	77.00
RUSHMORE, KIM E	231-629-2322	Y	1 TON/ROAD BORE	284	05/23	74.00
SCOGGINS, NATHAN H	870-224-3790		FORKLIFT	637	04/11	73.00
SEDTIZ, DAYNE K	740-232-5095		FLOAT	92	05/18	82.00
SEAW, THOMAS E II	740-808-6015		FLOAT	637	05/18	60.00
SHOWS, CHARLES B	318-469-9017	Y	SKID TRUCK	270	05/16	73.00
STOCK, JOSEBUA C	740-219-1432		BUS/PIPE GANG	92	05/28	72.00
VARGAS, ELVIN	330-318-2307		FLOAT	92	05/18	62.00
WORTER, JAMES J.	740-607-8321		1 TON/ENVIRONMENTAL	637	04/22	72.00
WINDROW, JAMES R	330-540-6250	Y	FORKLIFT	377	05/31	50.00

STEWARDS PIPELINE PROJECT FORM
 CONTRACTOR: PRICE GREGORY INT'L INC. CLIENT: MARATHON PETROLEUM COMP
 JOB ADDRESS: 474 W. 3RD ST. DOWRY, OH 44622
 COUNTY: HARRISON, CARROLL, TUSCARAWAS, STARK
 PROJECT DESCRIPTION: 92 MILES OF 24" BUILDS E -
 DATE: 06/20/16 WEEK ENDING: 06/12/16

COMPANIES/ORGANIZATIONS COMMENTS

CO25 – Teamsters Local Unions 20, 92, 299, and 348 (cont'd)



R-308

COMPANIES/ORGANIZATIONS COMMENTS


CO25 – Teamsters Local Unions 20, 92, 299, and 348 (cont'd)

Teamsters Pipeline Training Fund Training Activity Report										
Location:	Independence, Ohio									
Training Date(s):	02-29-15 to 03-02-16									
Member Name	Local	# of days	Fort/Lift	Marooka	Stringing	CSA	Load Securement	Total Mileage	Approved Lodging	Other Expenses
Hanning, David	299	3			X					
Mc Daniel, Rodney	637	3			X					
Whitehead, Mark	299	3			X					
<i>Local 299 Detroit, MI</i>										
APPROVED BY:	<i>Richard Steer</i>				DATE:	<i>June 1, 2015</i>				

COMPANIES/ORGANIZATIONS COMMENTS

CO25 – Teamsters Local Unions 20, 92, 299, and 348 (cont'd)

Teamsters Pipeline Training Fund Training Activity Report												
Location:	New Boston, MI											
Training Date(s):	06/08/2015 to 06/11/2015											
Member Name	Local	# of days	Forklift	Marionka	Stringing	CSA	Load	Total	Approved	Other	Total	Reimbursement
							Securement	Mileage	Lodging	Expenses		
Jeffery Adams	406	4		X	X							\$300.00
Jeffrey Boyer	406	4		X	X							\$300.00
Laurie Double	299	2			X							\$150.00
Joseph Hector	247	2		X								\$150.00
AlHubble	299	2		X								\$150.00
Kevin King	247	4		X	X							\$300.00
Roger Rattledge	247	2		X								\$150.00
Joseph Schrens	406	2		X								\$150.00

APPROVED BY:  DATE: *June 25, 2015*

COMPANIES/ORGANIZATIONS COMMENTS

CO25 – Teamsters Local Unions 20, 92, 299, and 348 (cont'd)

Teamsters Pipeline Training Fund Training Activity Report										
Location:	New Boston, MI									
Training Date(s):	06/08/2015 to 06/11/2015									
Member Name	Local	# of days	Forklift	Marrocks	Stringing	CSA	Load Securement	Total Mileage	Approved Lodging	Other Expenses
Jeffery Adams	406	4		X	X					
Jeffrey Beyer	406	4		X	X					
Laurie Double	299	2			X					
Rick Dubroy	247	1		X						
Joseph Hector	247	2		X						
Al Hubble	299	2		X						
Kevin King	247	4		X	X					
Paul Kozick	247	1		X						
Roger Katedge	247	2		X	X					
Joseph Schrenns	406	2		X						
Tom Zienbovic	247	1		X						

APPROVED BY: _____

DATE: _____

COMPANIES/ORGANIZATIONS COMMENTS

CO25 – Teamsters Local Unions 20, 92, 299, and 348 (cont'd)

Teamsters Pipeline Training Fund Training Activity Report										
Location:	New Boston, MI									
Training Date(s):	06/08/2015 to 06/11/2015									
Member Name	Local	# of days	Forklift	Marooka	Stringing	CSA	Load Securement	Total Mileage	Approved Lodging	Other Expenses
Jeffery Adams	406	4		X	X					
Jeffrey Boyer	406	4		X	X					
Laurie Double	299	2			X					
Rick Dubrov	247	1		X						
Joseph Hector	247	2		X						
Al Hubble	299	2		X						
Kevin King	247	4		X	X					
Paul Kozick	247	1		X						
Roger Rattedge	247	2		X	X					
Joseph Schrens	406	2		X						
Tom Zienbovic	247	1		X						

APPROVED BY: _____ DATE: _____

COMPANIES/ORGANIZATIONS COMMENTS

CO25 – Teamsters Local Unions 20, 92, 299, and 348 (cont'd)


Teamsters Pipeline Training Fund Training Activity Report										
Location:	Independence, Ohio									
Training Date(s):	02-29-16 to 03-02-16									
Member Name	Local	# of days	Fortlift	Marooka	Stringing	CSA	Load Securement	Total Mileage	Approved Lodging	Other Expenses
Johnson, Sharon	657	3			X					
Marshall, Steven	92	3			X					
Payne, Terrence	557	3			X					

APPROVED BY: *Richard Allen* DATE: *March 12, 2016*

COMPANIES/ORGANIZATIONS COMMENTS

CO25 – Teamsters Local Unions 20, 92, 299, and 348 (cont'd)

Teamsters Pipeline Training Fund Training Activity Report										
Location:		Independence, Ohio								
Training Date(s):		02-25-16 to 02-27-16								
Member Name	Local	# of days	Fortlift	Marooka	Stingfing	CSA	Load Securement	Total Mileage	Approved Logging	Other Expenses
Cote, Adam	436	3			X					
McDermott, David	637	3			X					
Milligan, Barbara	637	3			X					
Robinson, Robert	697	3			X					
Smith, Chester	697	3			X					
Valentine, John	637	3			X					

APPROVED BY:  DATE: March 1, 2016

COMPANIES/ORGANIZATIONS COMMENTS

CO25 – Teamsters Local Unions 20, 92, 299, and 348 (cont'd)


Teamsters Pipeline Training Fund Training Activity Report										
Location:	Independence, Ohio									
Training Date(s):	02-22-16 to 02-24-16									
Member Name	Local	# of days	Forklift	Maroonia	Stringing	CSA	Load Securement	Total Mileage	Approved Lodging	Other Expenses
Callahan, Doug	957	3			X					
Michaels, Chad	957	3			X					
O'Reilly, Louis	957	3			X					

APPROVED BY: *Rachel Steen* DATE: *March 1, 2016*

COMPANIES/ORGANIZATIONS COMMENTS

CO25 – Teamsters Local Unions 20, 92, 299, and 348 (cont'd)

Teamsters Pipeline Training Fund Training Activity Report										
Location:	Independence, Ohio									
Training Date(s):	02-18-16 to 02-20-16									
Member Name	Local	# of days	Fortliffe	Maroonka	Stringing	CSA	Load Securement	Total Mileage	Approved Coding	Other Expenses
Anderson, Anthony	377	3			X					
Horner, John	377	3			X					
Johnson, Jr, Carl	92	3			X					
Lantz, Marc	92	3			X					
Marinelli, Rozzie	377	3			X					
Runyons, Antle	92	3			X					
Smalley, Ralph	377	3			X					
Torella, John	377	3			X					
Williams, John	377	3			X					
Wurndrow, James	377	3			X					
Zugay, Alan	377	3			X					

APPROVED BY:  DATE: March 1, 2016

COMPANIES/ORGANIZATIONS COMMENTS


CO25 – Teamsters Local Unions 20, 92, 299, and 348 (cont'd)

Teamsters Pipeline Training Fund
Training Activity Report

Location: Independence, Ohio

Training Date(s): 02-15-16 to 02-17-16


Member Name	Local	# of days	Forklift	Marrooka	Stringing	CSA	Load Securement	Total Mileage	Approved Lodging	Other Expenses
Brake, Ronald	92	3			X					
Carter, Thomas	92	3			X					
Lipps, Loren	92	3			X					

APPROVED BY:  DATE: March 1, 2016

COMPANIES/ORGANIZATIONS COMMENTS

CO25 – Teamsters Local Unions 20, 92, 299, and 348 (cont'd)


Teamsters Pipeline Training Fund Training Activity Report										
Location:	Independence, Ohio									
Training Date(s):	02-01-16 to 02-03-16									
Member Name	Local	# of days	Forklift	Marooka	Stringing	CSA	Load Securement	Total Mileage	Approved Lodging	Other Expenses
DeLa Cruz, Steven	92	3			X					
Green, William	92	3			X					
Green, Joseph	92	3			X					
Pajeska, Matthew	436	3			X					
Seller, Ronald	436	3			X					
Skaggs, Clifton	92	3			X					
Stewart, Mike	92	3			X					
Tomkiewicz, Scott	436	3			X					

APPROVED BY:  DATE: March 1, 2016

COMPANIES/ORGANIZATIONS COMMENTS

CO25 – Teamsters Local Unions 20, 92, 299, and 348 (cont'd)

Teamsters Pipeline Training Fund Training Activity Report										
Location:		Independence, Ohio								
Training Date(s):		02-29-16 to 03-02-16								
Member Name	Local	# of days	Forklift	Maroonka	Stringing	CSA	Lead	Total	Approved	Other
							Securement	Mileage	Logging	Expenses
Hanning, David	299	3			X					
Mc Daniel, Rodney	637	3			X					
Wiltchead, Mark	299	3			X					

APPROVED BY:  DATE: June 1, 2016

COMPANIES/ORGANIZATIONS COMMENTS

CO25 – Teamsters Local Unions 20, 92, 299, and 348 (cont'd)

Teamsters Pipeline Training Fund Training Activity Report										
Location:		Valley View OH								
Training Date(s):		03-30-16 to 03-31-16								
Member Name	Local	# of days	Forklift	Marooka	Stringing	CSA	Load Securement	Total Mileage	Approved Lodging	Other Expenses
Davidson, Richard	697	2		X						
Morrison, Scott	637	2		X						
Smith, Chester	697	2		X						
Valentine, Belinda	637	2		X						
Valentine, John	637	2		X						

APPROVED BY: *Rick Allen* DATE: *April 8 2016*

COMPANIES/ORGANIZATIONS COMMENTS

CO25 – Teamsters Local Unions 20, 92, 299, and 348 (cont'd)

Teamsters Pipeline Training Fund Training Activity Report										
Location:		Valley View, OH								
Training Date(s):		03-28-16 to 03-29-16								
Member Name	Local	# of days	Fortlift	Marooka	Stringing	CSA	Load Securement	Total Mileage	Approved Lodging	Other Expenses
Kelley, Randall	92	2		X						
McHugh, Merle	92	2		X						
Payne, Terrence	957	2		X						

APPROVED BY: *Richard Steer* DATE: *April 8 2016*

COMPANIES/ORGANIZATIONS COMMENTS

CO25 – Teamsters Local Unions 20, 92, 299, and 348 (cont'd)

Teamsters Pipeline Training Fund Training Activity Report										
Location:		Valley View, OH								
Training Date(s):		03-23-16 to 03-24-16								
Member Name	Local	# of days	Forklift	Marcooka	Stringing	CSA	Load Securement	Total Mileage	Approved Lodging	Other Expenses
Johnson, Jr., Carl	92	2		X						
Lipps, Loren	92	2		X						
Marshall, Steven	91	2		X						
Sabo, Gary	377	2		X						

APPROVED BY: *Paul Steer* DATE: *April 8, 2016*

COMPANIES/ORGANIZATIONS COMMENTS

CO25 – Teamsters Local Unions 20, 92, 299, and 348 (cont'd)


Teamsters Pipeline Training Fund Training Activity Report										
Location:		Valley View, OH								
Training Date(s):		03-21-16 to 03-22-16								
Member Name	Local	# of days	Forklift	Marooka	Stringing	CSA	Load Securement	Total Mileage	Approved Lodging	Other Expenses
Brake, Ronald	92	2		X						
Bruce, Michael	92	2		X						
Evans, Kenneth	92	2		X						
Evans, II, Kenneth	92	2		X						
Kirkus, Jr., Robert	92	2		X						
Simms, Vanessa	284	2		X						
Zugay, Alan	377	2		X						

APPROVED BY: *Randal Steen* DATE: *April 9, 2016*

COMPANIES/ORGANIZATIONS COMMENTS

CO25 – Teamsters Local Unions 20, 92, 299, and 348 (cont'd)

Teamsters Pipeline Training Fund Training Activity Report										
Location:	Independence, Ohio									
Training Date(s):	03-18-16 to 03-19-16									
Member Name	Local	# of days	Forfeit	Marooka	Stringing	CSA	Load Securement	Total Mileage	Approved Lodging	Other Expenses
Convery, Tabitha	637	2		X						
Thomas, Charles	436	2		X						

APPROVED BY:  DATE: 3/22/2016

COMPANIES/ORGANIZATIONS COMMENTS

CO25 – Teamsters Local Unions 20, 92, 299, and 348 (cont'd)

Teamsters Pipeline Training Fund Training Activity Report										
Location:		Independence, Ohio								
Training Date(s):		03-16-16 to 03-17-16								
Member Name	Local	# of days	Forklift	Marooka	Stringing	CSA	Lod	Total Mileage	Approved Lodging	Other Expenses
Core, Adam	436	2		X						
Dean, Esau	436	2		X						
Huck, Helen	436	2		X						
Pajestka, Matt	436	2		X						
Slaggs, Clifton	436	2		X						
Stubbs, Douglas	436	2		X						

APPROVED BY: *Richard Steen* DATE: *3/22/2016*

COMPANIES/ORGANIZATIONS COMMENTS

CO25 – Teamsters Local Unions 20, 92, 299, and 348 (cont'd)

Teamsters Pipeline Training Fund Training Activity Report										
Location:		Independence, Ohio								
Training Date(s):		03-14-16 to 03-15-16								
Member Name	Local	# of days	Fortlift	Marooka	Stinging	CSA	Load	Total	Approved	Other
							Securement	Mileage	Lodging	Expenses
Brashear, Ronald	436	2		X						
Logan, Scott	436	2		X						
Maroit, Norman	436	2		X						
Purno, Michael	436	2		X						
Seller, Ron	436	2		X						

APPROVED BY: *Richard Steen* DATE: *3/22/2016*

COMPANIES/ORGANIZATIONS COMMENTS

CO25 – Teamsters Local Unions 20, 92, 299, and 348 (cont'd)

EXHIBIT D

R-327

COMPANIES/ORGANIZATIONS COMMENTS

CO25 – Teamsters Local Unions 20, 92, 299, and 348 (cont'd)

R-328

CALL US TODAY: 1 520-423-2131

WHAT WE DO COMPANY SAFETY NEWS & EVENTS RESOURCES CONTACT
WHO WE ARE

HORIZONTAL DIRECTIONAL DRILLING

SINCE 1971, AFTER MARTIN LIEBERRINGTON SUCCESSFULLY DRILLED THE FIRST HORIZONTAL RIVER CROSSING, THE INDUSTRY HAS BEEN MOVING FORWARD.

Directional Drilling has seemed to be the most preferred method for pipeline construction as of late. The reason being that Directional Drilling can be installed without any disturbance to natural habitats.

Directional Drilling has the least environmental impact of any method of construction. By Directional Drilling you are able to be a great deal of depth below the obstacle, providing minimal maintenance cost and up keeping maximum protection. In some cases, Directional Drilling can cost a lot less than most other construction methods and procedures.

STEP 1 – PILOT HOLE

The pilot hole is the beginning of the Directional Drill crossing. The Pilot hole is achieved either by excavation by jetting or by a down hole motor. Depending on the condition of the soil the pilot is drilled along a pre-determined alignment in which the path is selected by traditional methods.

The typical pilot hole on most large rigs is 9 7/8 but can vary depending on the soil conditions and rig size. Drilling fluid is pumped through the drill pipe to the drill head at which time it is jetted through or pumped through a drill motor. The end of the Drill Pipe is to core the pilot hole. The drill fluid lubricates the drill stem and carries out the cutting to the surface.

<http://www.southeastdrilling.com/drilling/> Page 1 of 6

COMPANIES/ORGANIZATIONS COMMENTS

CO25 – Teamsters Local Unions 20, 92, 299, and 348 (cont'd)

SEDD Horizontal Directional Drilling Process - Southeast DIRECTIONAL DRILLING

The drill fluid is then recycled and re-injected into the drill stem. The pilot process can take several days, depending on the condition of the soil and may require changing of the drill stem or drill head.

STEP 2 – REAMING PROCESS

Once the pilot hole has been completed the 2nd step takes place with a reamer, or hole opener. The hole openers come in different shapes and sizes and vary depending on the soil conditions and density of the soil; typically a fly cutter is used in good ground conditions.

The reaming pass is done in several steps depending on the size of the hole, (example: 42" finish hole would be 3 to 5 different ream passes 14", 20", 34", 42"). The reamer is attached to the drill string and is rotated and pushed or pulled while rotating and drill fluid is pumped to the reamer through the drill pipe. The excavated soil is suspended in the drill fluid and then brought to the surface and recycled.

When the reamer is attached to the Drill string there will always be a drill pipe on both sides of the reamer allowing for the drill string to be in the hole at all times. The reaming process can take a significant amount of time depending on the condition of the soil.

<http://www.southeastdrilling.com/drilling/>

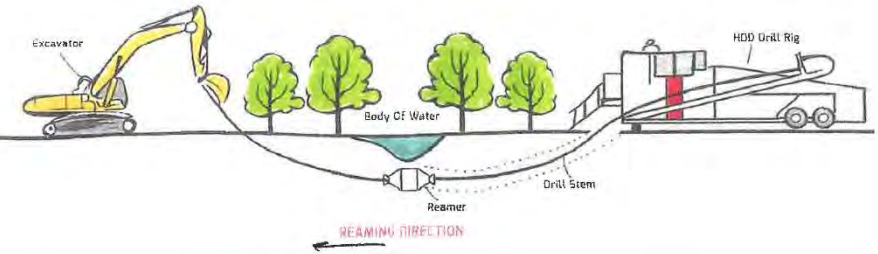
Page 2 of 6

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COMPANIES/ORGANIZATIONS COMMENTS

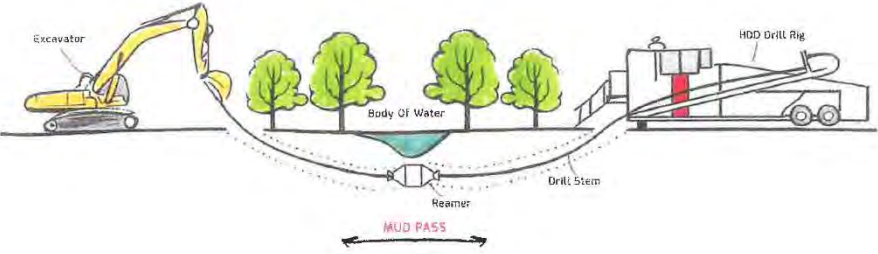
CO25 – Teamsters Local Unions 20, 92, 299, and 348 (cont'd)

SEDD Horizontal Directional Drilling Process : Southeast Directional Drilling 1/25/16, 4:47 PM



STEP 3 – MUD PASS

After the desired hole has been achieved and the reamer has passed through it completely, a mud pass or packer reamer will be done to assure that the hole is clean of all excavated material and that the drill fluid has filled the hole completely, to allow for a smooth lubricated pull back of the pipe, avoiding friction of the pull section.



STEP 4 – PULLBACK PROCESS

The final step now is when the pipe is pulled into the reamed hole. A weld cap is installed on the pipe where a swivel is placed attaching the drill string, thus not allowing any rotation of the pipeline. Depending on the size of the pipe an artificial buoyancy measure might be taken. This is to keep the pipeline as close to neutral

<http://www.southeastdrilling.com/drilling/> Page 3 of 6

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COMPANIES/ORGANIZATIONS COMMENTS

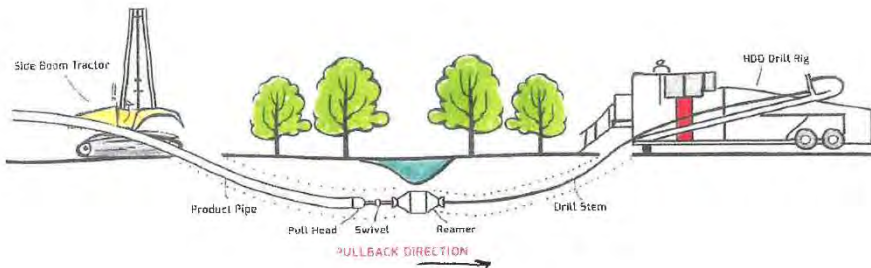
CO25 – Teamsters Local Unions 20, 92, 299, and 348 (cont'd)

buoyancy. If no measures are taken several problems may occur (example: coating damage from pipe floating in drill fluid and causing excess friction causing more pull). Most typically buoyancy control is done with pumping water into the pipeline through P.V.C. pipe and checking the gallons pumped.

At completion of directional drill, demobilization and clean-up takes place.

We will be happy to provide you a drilling quote / proposal on any HDD project. Feel free to contact our sales team at any time at 520-423-2131 to request a quote. Here is the following information needed to properly provide a quote:

- Name of Crossing
- Length
- Size
- Location
- How Many Crossings
- Start Date
- Bid Due Date
- Are You the Owner/Engineer/General Contractor?
- Do You Have Any Plans or Specs?
- Do You Have Core Samples?



COMPANIES/ORGANIZATIONS COMMENTS

CO25 – Teamsters Local Unions 20, 92, 299, and 348 (cont'd)

The screenshot shows the homepage of Southeast Directional Drilling. At the top left, the company name "Southeast Directional Drilling" is visible. On the top right, there is a phone number "CALL US TODAY: 1520-423-2131" and a date "October 19, 2014". A navigation menu includes "WHO WE ARE", "WHAT WE DO", "COMPANY SAFETY", "NEWS & EVENTS", "RESOURCES", and "CONTACT". The main visual is a large image of a drilling rig with the text "DRILLING WITH PRIDE & EXPERIENCE" overlaid. Below this, a quote reads: "It's more like a family than it is just working for corporate America. You're not treated as an employee here, you feel like family." attributed to "-SEDD Western Regional Superintendent Dane Palmer". A "LEARN ABOUT OUR SERVICE" button is present. Below the image, the text states: "We have a combined field experience of over one hundred years in pipelining and directional drilling." Further down, the text "RESULTS MATTER" and "EXPERIENCE MATTERS" is visible. At the bottom left is the URL "http://www.southeastdrilling.com/" and at the bottom right is "Page 1 of 5".

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COMPANIES/ORGANIZATIONS COMMENTS

CO25 – Teamsters Local Unions 20, 92, 299, and 348 (cont'd)

R-333

Southeast Directional Drilling

INTEGRITY MATTERS

Contact Us Today: 1 (520) 423-2131

We are pleased to introduce Southeast Directional Drilling, LLC.

Southeast consists of a key group of highly trained and experienced personnel. Our executive management team includes Steve Ugrich, Todd Barton, Charley Patterson, John Heele, Josh Ugrich and Kyle Pellinen.

When it comes to your business, you want the best, and when it comes to choosing the best, you need Southeast Directional Drilling. However, what is it that makes Southeast the ideal choice for your company? Experience and quality. These fundamental building blocks for success are only some of what has made up Southeast Directional Drilling since its inception in 2002. As far as our experience goes, Southeast has a combined field experience of over one hundred years in pipelining and directional drilling combined with over several hundred quality miles of HDD's, of which 35 miles were 42" HDD crossings. These years of experience include several hundred completed bores including one that was a record length of 6,380 feet, and another project which was the deepest directional drill river crossing in North America at a depth of 800 feet. These two projects earned Southeast the highest respect in the drilling industry. From our most recent projects, we set another world record in Trinidad by executing three 56 inch HDD crossings.

Southeast Directional Drilling's Fleet

Southeast's fleet includes 15 rigs ranging from 80,000 lbs to 1,400,000 lbs. In addition to having the proper instruments, we also have all of the required support, safety equipment, dual mud systems, semi-trucks, pick-up trucks, environmental supplies, down hole tools, reamers, tensor steering tools, and navigational equipment.

<http://www.southeastdrilling.com/>

Page 2 of 5

COMPANIES/ORGANIZATIONS COMMENTS

CO25 – Teamsters Local Unions 20, 92, 299, and 348 (cont'd)

R-334

7/28/16, 4:50 PM

ABOUT

THE STORY OF OZ

OZ DIRECTIONAL DRILLING, FORMED IN 2008, IS ONE OF MANY PIPELINE COMPANIES OWNED BY THE OSADCHUK FAMILY OVER THE PAST 50 YEARS. THE MANAGEMENT TEAM AT OZ HAS BEEN IN THE PIPELINE INDUSTRY SINCE 1950 AND THE HORIZONTAL DIRECTIONAL DRILLING INDUSTRY SINCE 1991. KNOWN FOR THEIR EXCELLENCE IN PERFORMANCE, OZ HAS COMPLETED SEVERAL HUNDRED DIRECTIONAL BORIS IN NORTH AMERICA, INCLUDING WORLD RECORD BORIS OF 6,350 FEET IN LENGTH AND THE DEEPEST BORE OF 860 FEET. OZ IS A MEMBER OF THE PLCA (PIPE LINE CONTRACTORS ASSOCIATION), THE DCA (DISTRIBUTION CONTRACTORS ASSOCIATION) AND THE IPLOCA (INTERNATIONAL PIPE LINE & OFFSHORE CONTRACTORS ASSOCIATION).

WE HAVE THE CAPABILITY OF PERFORMING DIRECTIONAL DRILLS UNDER MANY DIFFERENT CIRCUMSTANCES SUCH AS: HIGHLY SENSITIVE AREAS, ENVIRONMENTAL AREAS, CITY STREETS, CROSS COUNTRY PIPELINES, MAJOR RIVER CROSSINGS, RAILROADS, ROADWAYS AND MANY MORE. WE ALSO HAVE EXPERIENCE IN DRILLING ALL TYPES OF SOILS, INCLUDING GRANITE, SOLID ROCK, GLACIER TILL FORMATIONS, FROZEN TUNDRA, RUNNING SAND, AND GRAVEL. WE HAVE WORKED FROM THE EAST COAST TO THE WEST COAST AND AS FAR AS THE NORTHERN SLOPE OF ALASKA DOWN TO THE SOUTHERN TIP OF MEXICO. WE ARE COMMITTED TO MAINTAINING AN ON-TIME SCHEDULE WHILE MAINTAINING A SAFE WORK ENVIRONMENT, SATISFYING ENVIRONMENTAL MONITORS, PUBLIC AGENCIES, AND LAND OWNERS.

HORIZONTAL DIRECTIONAL DRILLING (HDD) IS A SOPHISTICATED BUSINESS. DWAYNE OSADCHUK HAS SPENT MANY YEARS IN THE FIELD SUPERVISING THE TRAINING OF HIS DRILL CREWS AND PERFECTING THE COMPANY'S DRILLING EXPERTISE. A KEY INGREDIENT TO THE SUCCESS

<http://www.ozdirectionaldrilling.com/#about>

Page 1 of 1

COMPANIES/ORGANIZATIONS COMMENTS

CO25 – Teamsters Local Unions 20, 92, 299, and 348 (cont'd)

R-335

LANEY DIRECTIONAL DRILLING - HOME

We go to great lengths for our customers!

Specializing in trenchless technology, Laney Directional Drilling Co. ("Laney") is a leading global Horizontal Directional Drilling ("HDD") company. Laney is the only U.S. HDD company providing integrated engineering, design and HDD construction services. In August 2014, the Company celebrated 25 years in business. During those years, the Company performed work in twelve countries on five continents, but has focused primarily in the U.S. during the past five years. Laney specializes in servicing pipeline operating companies and pipeline contractors with long, complex, challenging, or small scale HDD requirements. No project is too big or too small. Located in Spring, Texas, Laney directionally drills for the purpose of installing infrastructure such as oil and gas pipelines, telecommunications conduits, water lines, sewer lines and environmental remediation casings.

Today, Laney Directional Drilling is one of the leading large HDD contractors in North America. To date with its custom made large rigs Laney has installed more than 2625 HDDs and 975 miles of HDD crossings. Laney's fleet also includes Vermeer D100x140 rigs. Laney, known for its innovation and being a trenchless technology pioneer, is also one of a few North American companies experienced with Direct Pipe® trenchless technology. Direct Pipe® is a single pass process that uses a steerable tunnel boring machine-cutting head. The technology tunnels and pushes the pipe into place at the same time, filling the void as it progresses. This technology greatly reduces the likelihood of hydraulic fracture and inadvertent returns and is ideal for crossing under levees and environmentally sensitive areas.

Laney's evolution over the years included the creation of a HDD engineering and design team, as well as a world class sales and marketing group dedicated to supporting the customer. The Gulf Coast remains a strength for the business; however, as demand has shifted so did their geographic expansion to areas with challenging subsurface conditions such as the Northeast US/Marcellus area. Laney operates nationally and at times worked beyond the North American borders, depending on clients' needs.

Laney has installed more than:

- 2625 HDDs
- 975 miles of HDD



<http://www.laneydrilling.com/index.php>

Page 1 of 3

COMPANIES/ORGANIZATIONS COMMENTS

CO25 – Teamsters Local Unions 20, 92, 299, and 348 (cont'd)

Laney Directional Drilling

Horizontal Directional Drilling

Horizontal Directional Drilling (HDD) is a trenchless method of installing pipelines and conduits in the areas where traditional open cut excavations are not feasible and/or not desired for environmental and/or constructibility reasons. It is commonly used for the installation of pipelines beneath rivers, highways, railroads and other environmentally sensitive areas, or areas where the topography or site conditions along a proposed alignment conflicts with conventional cut and cover installation practices. During the HDD process, a pilot hole is first drilled along a predetermined path. The pilot hole is then enlarged in single or multiple steps (reaming passes) to accommodate the pullback of the carrier pipe into the enlarged hole.

We are presently operating HDD rigs capable of completing projects both large and small with pipe sizes up to 60 inches in diameter and HDD lengths over 15,000 ft.

- Large Rigs: large rigs with pullback of 180K to 1.7M. 4 to 60-in. in diameter up to 15,000 ft. Soft soil to hard rock with ten to twelve people per crew.
- Small Rigs: small rigs with pullback 100K or less. Vermeer D100x140 with small utility and midstream focus. Soft soil to hard rock with four to six people per crew. Our Vermeer rigs are also used for completion of road boring.



Large Rig



Small Rig

R-336

COMPANIES/ORGANIZATIONS COMMENTS

CO25 – Teamsters Local Unions 20, 92, 299, and 348 (cont'd)

SOUTHEAST DIRECTIONAL DRILLING



SouthEast has the capability to perform directional drilling work in a variety of different territories, such as environmentally sensitive areas, city streets, cross country areas, major river crossings, roadways, railroads, and remote locations. We have experience in all types of soils, including solid rock and fractured formations and we are also capable of drilling in lengths in excess of 6,400 ft, ranging from 2 inches to 56 inches in diameter pipe. Aside from being able to fulfill any possible drilling need, we are committed to maintaining an on time schedule, all while satisfying landowners, environmental monitors, and public agencies.

We look forward to discussing, and bidding, any potential horizontal directional drilling projects your company may require.

PLH GROUP

PLH Group is a leading full service construction and specialty contractor that serves the electric power line, pipeline, oilfield electrical services and industrial markets. Formed in 2009, PLH Group has assembled a North American team of top quality companies that deliver services covering the broad range of needs of its customers from pipeline construction and related directional drilling, right-of-way clearing/restoration and engineering to electric transmission, distribution and substation construction including specialized foundations and helicopter airborn operations.



PLH GROUP

SEDD Presented Plaque of Appreciation

December 3, 2015

28

When our President Todd Barton was approached by Aaron Goranson, father of a boy scout from Troop 993 in Maricopa Arizona, a small community just north of our Casa Grande facility asking if we could donate a 53' box trailer that was slated for auction later that month, he said "make it happen". Todd as well as rest of the executive team at SEDD, believes our company should always act as a stewards of our community and of those communities that we work in. "We encourage our employees to promote values, good conduct and respect, in all aspects of our ...

PLH GROUP

Updated Pictures!!!!

<http://www.southeastdrilling.com/>

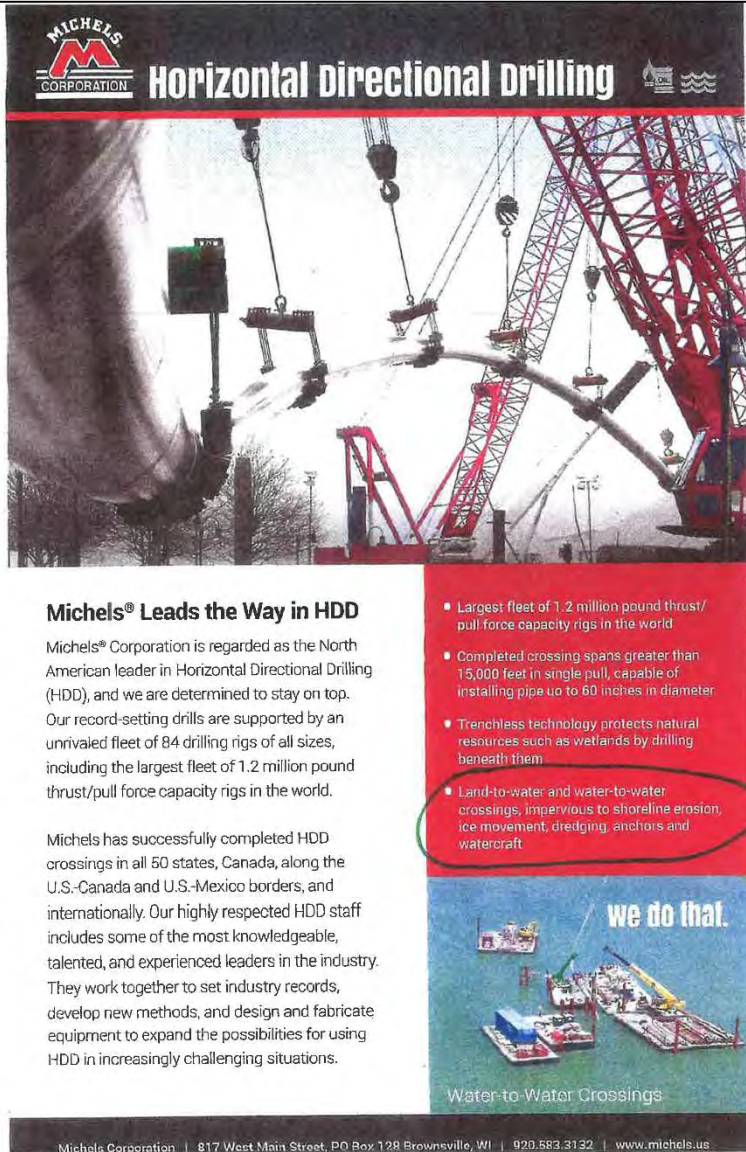
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COMPANIES/ORGANIZATIONS COMMENTS

CO25 – Teamsters Local Unions 20, 92, 299, and 348 (cont'd)

R-338



The advertisement features a large photograph of a drilling rig in operation, with a large pipe being pulled into place. The Michels Corporation logo is in the top left corner. The title 'Horizontal Directional Drilling' is prominently displayed. Below the photo, there are two columns of text. The left column contains a section header and two paragraphs. The right column contains a bulleted list of four key capabilities. At the bottom right, there is a smaller image of a water-to-water crossing with the slogan 'we do that.' and the text 'Water-to-Water Crossings'. The footer contains contact information for Michels Corporation.

MICHEL'S CORPORATION Horizontal Directional Drilling

Michels® Leads the Way in HDD

Michels® Corporation is regarded as the North American leader in Horizontal Directional Drilling (HDD), and we are determined to stay on top. Our record-setting drills are supported by an unrivaled fleet of 84 drilling rigs of all sizes, including the largest fleet of 1.2 million pound thrust/pull force capacity rigs in the world.

Michels has successfully completed HDD crossings in all 50 states, Canada, along the U.S.-Canada and U.S.-Mexico borders, and internationally. Our highly respected HDD staff includes some of the most knowledgeable, talented, and experienced leaders in the industry. They work together to set industry records, develop new methods, and design and fabricate equipment to expand the possibilities for using HDD in increasingly challenging situations.

- Largest fleet of 1.2 million pound thrust/pull force capacity rigs in the world
- Completed crossing spans greater than 15,000 feet in single pull, capable of installing pipe up to 60 inches in diameter
- Trenchless technology protects natural resources such as wetlands by drilling beneath them
- Land-to-water and water-to-water crossings, impervious to shoreline erosion, ice movement, dredging, anchors and watercraft

we do that.

Water-to-Water Crossings

Michels Corporation | 817 West Main Street, PO Box 128 Brownsville, WI | 920.583.3132 | www.michels.us

COMPANIES/ORGANIZATIONS COMMENTS

CO25 – Teamsters Local Unions 20, 92, 299, and 348 (cont'd)

EXHIBIT E

R-339

COMPANIES/ORGANIZATIONS COMMENTS

CO25 – Teamsters Local Unions 20, 92, 299, and 348 (cont'd)



National Safety Council announces local Defensive Driving Course Training Center **IL Teamsters/Employers Apprenticeship & Trng Fund Afftl/Joint Council 25** is an award winner of the following:

Trend Setter NSC PTD

On October 15, 2016 during the National Safety Council's Congress and Exposition in Anaheim, California IL Teamsters/Employers Apprenticeship & Trng Fund Afftl/Joint Councils 25&65 of Joliet, IL will receive honors for their 2015 Defensive Driving Course training.

The National Safety Council's Defensive Driving Course, the first name in life saving driver safety courses, began in 1964. With over 8,000 instructors worldwide, the Defensive Driving Courses have graduated over 70,000,000 drivers.

James A. Solomon, Subject Matter Expert for NSC Defensive Driving Courses, will personally congratulate representatives from IL Teamsters/Employers Apprenticeship & Trng Fund Afftl/Joint Councils 25&65 at the Council's Annual DDC Training Center & Instructor of the Year Awards Celebration for their hard work in making the highways safer.

Press Release

R-340

COMPANIES/ORGANIZATIONS COMMENTS

CO25 – Teamsters Local Unions 20, 92, 299, and 348 (cont'd)



June 8, 2016

Michael Borjas
IL Teamsters/Employers Apprenticeship & Trng Fund Affili/Joint Councils 25
990 NE Frontage Rd
Ste 4
Joliet, IL 60431
Customer Number: 699382

Dear Michael Borjas,

We are extremely pleased to announce that your organization has been chosen as a DDC Award recipient for your outstanding training efforts in 2015. The award(s) being presented to your organization are:

Award
Trend Setter

Curriculum
NSC PTD

National Safety Council would like to recognize your training center at the 2016 NSC Congress and Exposition in Anaheim, CA. We invite you to be our guest at the Annual DDC Training Center & Instructor of the Year Awards Celebration to be held on Saturday evening, October 15th, 2016.

To help us prepare for the awards ceremony, please pre-register your organization for the event online at www.nsc.org/2016DDCAwards. We will need your organization's customer number as well as the proper spelling of your organization's name and how it should appear on the award(s). If you are unable to attend, please be sure to go online to pre-register, indicating you cannot attend, and providing shipping information for the award(s). We appreciate your prompt response no later than end of day, June 24, 2016.

In the meantime, if you have any questions, please give our office a call at 800-621-7619 ext. 52041. A formal invitation will be sent in July with final registration instructions.

To help your organization broadcast its success to your community, we have enclosed a press release and an awards definition page. Also enclosed is a FAQ sheet that will help to answer any remaining questions you may have regarding the awards celebration. We congratulate you and look forward to seeing you in Anaheim!

Sincerely,

A handwritten signature in cursive script, appearing to read "James A. Solomon".

Subject Matter Expert for NSC Defensive Driving Courses
Enclosure

R-341

COMPANIES/ORGANIZATIONS COMMENTS

CO26 – Homerville KOA Campground

Homerville KOA Campground
11450 Crawford Rd.
PO Box 26
Homerville, OH 44235-0026

Office: (330) 625-2817
Fax: (330) 625-5502
Cell: (330) 416-2755
homervillekoa@gmail.com

RE: DOCKET NO. CP16-22-000

I am a business owner in Homer Twp, Medina County and a resident of Coventry Twp, Summit County. The NEXUS project will be impacting me both at home and in my business. While I am opposed to some of the methods used to collect and transport natural gas, I understand that it is necessary to the growth of our nation and our economy. I feel that with proper study and compromise, we can find the best route for this project.

R-342
CO26-1 I fully support the planned Nexus Route *if* the Oak Openings and Canton B Alternatives are implemented. These are small adjustments to make that address the bulk of the City of Green Alternate's environmental issues without needing a complete reroute. I realize that the commission has recommended that neither of these alternatives be considered noting that, "we do not find the Alternative to have an environmental advantage when compared to the corresponding segment of the proposed route and do not recommend that this alternative be incorporated as part of the Project." (3.3.6) However, the alternative does not present a disadvantage either. It simply "represents a shift of impacts from one area, group of landowners, and set of resources to another area, group of landowners, and set of resources." (3.3.6) In this case the set of lands that the project is shifted *from* are some of the rarest and most fragile in our great state of Ohio. Both Singer Lake and Oak Openings/Maumee State Forest are microscopic remnants of once expansive and thriving ecosystems. Now, many of the plants and animals that can survive nowhere else are listed as threatened or endangered because of the progress of man. Indeed they are small, fragmented, and, in some cases, far from pristine, but that is what makes these areas that much more important to preserve. If we are to have any chance at restoring these types of habitat for the experience of future generations, these tiny incubators of life must be saved to act as the nucleus of that growth. I realize that there are trade-offs whenever a route alternative is proposed, but I feel that the fragility of these areas merits alternating the proposed route. To risk either of these areas is a gamble that should not be taken.

CO26-2 I have been informed that, should the City of Green Alternative be adopted, the pipeline may be routed through my business/property. Because a campground is such a dynamic business that is difficult to put into any other category, I have very specific concerns. My business does not fit into any one model. We are part service industry, part hospitality. We have short-term stays and long-term stays. People count on us to provide an escape to nature but with all the conveniences of the city. Because of that, a pipeline on our property would greatly limit how we use our land in both the short and long term. On the short term, we would immediately have to close campsites that were within the right of way. This would not only cause immediate loss of revenue, but create long term issues with the customer. Campers want to feel that they are in a safe and serene environment. Having a large pipeline on the property would negatively affect our image, which would impact my business in a way that would be very difficult to measure until it showed up in our bottom line and was too late to counteract. In addition, any right of way on our property would prevent us from future expansion because we would

CO26-1 See section 3 of the EIS for a discussion of the environmental impacts associated with the Oak Openings and Canton B alternatives.

CO26-2 The Homerville KOA Campground would be about 0.1 mile west of the alternative route (see section 3.3.3). Based on our review, we did not find the City of Green Route Alternative provides a substantial environmental advantage when compared to the corresponding segment of the proposed route and did not recommend that it be incorporated as part of the Projects.

COMPANIES/ORGANIZATIONS COMMENTS

CO26 – Homerville KOA Campground (cont'd)

R-343

CO26-2
(cont'd)

not be able to construct campsites, buildings, pools, utilities and essentially every other thing that is required for us to do business over the right of way.

As mentioned in 3-23, one of the most important considerations in routing a gas line is the impact on the use of the land. Consider that, in our case, the land is multi-use. Some folks use it as a getaway or a vacation. For others we're just a quick overnight to rest before the next leg of a journey. But we also have a number of families (currently 17, but it has been as high as 30 over the years) that *reside* here for the full 6 months that we are open. Snowbirds return from the southern US every year and the Homerville KOA is their home. Then there is the core of our business: a very high number of long-term stays or seasonal campers. Currently 132 families pay to leave their RV on a site for the entire 6 months we are open. They may only be here on weekends or they may spend weeks or months at a time here as a vacation. It is these customers that, I feel, will choose to leave if the pipeline comes through. They will feel much more impacted because of the amount of time they spend in the campground. More time near the pipeline means more exposure to the risks associated. I have already been approached by several long-term customers who have seen the proposed City of Green Alternative. Each of them has voice to me their opinion and it was the same each time. To paraphrase, they are not willing to camp *anywhere near* a gas pipeline. This is because, unlike other businesses where consumers go to recreate, spend some time and go home, at a campground, *they stay*. They spend nights, weeks, months or even entire seasons. If we were a campground that relied heavily on travelers or short term stays, I would feel more at ease with the idea of a pipeline because that type of customer would be here for too short a period of time to even notice the right of way. With our business relying so heavily on long-term stays, I believe that a pipeline would be extremely damaging to our core business.

CO26-3

It is for these reasons that I request this: if the City of Green Alternative is adopted and approved, I wish to propose a "Homerville KOA Variation" that would spare my business from the pipeline, allowing me to continue to operate a successful campground with no restriction on how I use my land and no negative affects on my customer base.

I appreciate you giving me this forum to voice my concerns. I hope that they will be considered and compromises can be reached.

Regards,

Greg Emmert

Owner/Manager, Homerville KOA Campground, Homer Twp, Medina County
Resident of Coventry Twp, Summit County

CO26-3 See response to comment CO26-2.

COMPANIES/ORGANIZATIONS COMMENTS

CO27 – Ohio Chemistry Technology Council

R-344

Ohio Chemistry Technology Council

Good evening. I am Jenn Klein, and I serve as the President for the Ohio Chemistry Technology Council. We appreciate the opportunity to provide an overview of why we strongly support the NEXUS project.

Since 1988, the Ohio Chemistry Technology Council (OCTC) has been the leading advocate for our state's significant chemical technology industry—the second-largest manufacturing industry in Ohio and the sixth-largest chemical manufacturing state in the U.S.

CO27-1 | Natural gas is essential to chemical production. Having a reliable, affordable source of natural gas will not only help our member companies keep their energy costs low, it will also cut the costs of a critical raw material, as natural gas serves as an important feedstock for a huge number of chemical products. The NEXUS project can provide this source of energy – and the company's draft Environmental Impact Statement (DEIS) has demonstrated that it will have a minimal impact on community's along the pipeline route.

CO27-2 | Of course, other manufacturing sectors in Ohio also rely on natural gas for heating, cooling, and electricity. They, too, stand to gain from lower energy prices. And natural gas is also used in the production of a wide variety of consumer goods, from fertilizer and fabrics to plastics and pharmaceuticals. The NEXUS project will help Ohio-manufactured goods of all kinds be more competitive in the global marketplace, helping to create jobs and growth back home.

CO27-3 | But those are the "downstream" jobs we can expect from the NEXUS project. In the shorter term, the project will generate 6,800 jobs, more than \$650 million in wages, and \$830 million in total economic activity. In its first year in operation in Ohio, NEXUS would generate an estimated \$83 million in tax revenue, of which approximately \$57 million would go directly to local Ohio school districts. These economic benefits will greatly help our state economy as a whole, which means they will also benefit our industry, workers, and the consumers who benefit from our products.

CO27-4 | Given all the benefits to our state, region, and nation, we are also concerned that FERC or other government bodies will impose unnecessarily restrictive limitations on the project's implementation that could hinder its positive impacts. Natural gas pipelines are the safest and most efficient way to transport natural gas from where it is produced to where it is consumed. According to a United States Congressional Committee report, pipelines are safer than roads, rails and barges for the transportation of natural gas. More than 300,000 miles of pipeline nationwide reliably bring clean-burning natural gas to our homes, businesses and factories every day. Once the NEXUS pipeline and related facilities are placed into service, NEXUS will monitor the pipeline 24 hours a day, 7 days a week, 365 days a year.

FERC addressed a wide range of concerns in the DEIS, including market demand, energy corridor, safety, security, health, pipeline system alternatives, induced upstream O&G production, life-cycle impact analysis, climate change, Oak Openings, electric compressor units, proximity to homes, setback variances, and a host of major and minor alternatives.

We are grateful for the chance to lay out our reasoning regarding why the NEXUS pipeline is not only good for our state's chemical manufacturing industry, but also for the State of Ohio as a whole. We look forward to hearing your decision in the near future.

CO27-1 | Comment noted.

CO27-2 | Comment noted.

CO27-3 | Comment noted.

CO27-4 | Comment noted.

COMPANIES/ORGANIZATIONS COMMENTS

CO28 –IUOE Local 18

Jacob Siesel
IUOE LOCAL 18 Business Representative
3515 Prospect Ave
Cleveland, Ohio 44115

Good Evening my name is Jacob Siesel, and I am here to speak on behalf of the Operating Engineers Local 18 and our 15,000 members.

Local 18 has already electronically submitted to the FERC our official support letter on the NEXUS pipeline however I am here this evening to add additional comments and testimony for the NEXUS Pipeline project.

I wanted to say that first and foremost, Local 18 supports the NEXUS Pipeline project and recognizes the need for the pipeline. Local 18 and its members ultimately support the portions of the project that their fellow members and local work force will be working on. Members of the IUOE are the most qualified, best trained and most importantly the safest workforce in the Industry.

- CO28-1 The NEXUS pipeline will be a safe method of transporting gas and will be a significantly less impact on the environment than transporting gas by road or rail. All of the requirements by the FERC and other agencies involved will not only be followed by NEXUS, they will be over- followed. This will prove to the communities and groups in question of the project they care about where they operate and will maintain a safe and efficient pipeline.
- CO28-2
- CO28-3 If the NEXUS pipeline is approved, the pipeline spreads installed by our members and fellow trades men and women will be installed safe, efficiently and correct the first time. This is theirs, fellow family and community member's backyards so they will take pride in their work. As it stands now, the NEXUS if approved will be installed by local union members on at least 3 of the 4 proposed spreads.
- CO28-4 The only concerns Local 18 has on the project are the portions to be installed by contractors who utilize someone other than an Operating Engineer or fellow trades men and women on the project. The beginning pipeline spread is scheduled to be installed by MG Dyess from Bassfield, Mississippi. MG Dyess will utilize a workforce that is 100 % out of state and has no ties to Ohio at all. Local 18 does not support this decision by NEXUS and questions whether or not they are qualified to be involved with the NEXUS project.

Although we are not happy with the overall contractor selection, we support the NEXUS pipeline. Please join Local 18 in supporting the NEXUS Pipeline and approve the project.

CO28-1 Comment noted.

CO28-2 Comment noted.

CO28-3 Comment noted.

CO28-4 As discussed in section 4.10.3, Texas Eastern estimates that 40 to 60 percent of the construction workforce would be local hires (i.e., 128 to 282 local employees). Additionally, NEXUS estimates that over \$449.6 million would be spent toward direct local construction labor income with approximately \$400.6 million in Ohio and approximately \$49 million in Michigan.

NEXUS' and Texas Eastern's estimate of local hiring and payroll is just an estimate. The source of final worker hires would depend on the existing pool of available workers at the time of construction. This will include local labor and trade expertise, including agricultural inspectors and train tile repair professionals to the extent practicable.

R-345

COMPANIES/ORGANIZATIONS COMMENTS

CO29 – IUOE Local 18

Michael Cramer
IUOE LOCAL 18 Business Representative
1721 Triplett Blvd
Akron, Ohio 44306

Good Evening my name is Michael Cramer, and I am here to speak on behalf of the Operating Engineers Local 18 and our 15,000 members.

Local 18 has already electronically submitted to the FERC our official support letter on the NEXUS pipeline however I am here this evening to add additional comments and testimony for the NEXUS Pipeline project.

I wanted to say that first and foremost, Local 18 supports the NEXUS Pipeline project and recognizes the need for the pipeline. Local 18 and its members ultimately support the portions of the project that their fellow members and local work force will be working on. Members of the IUOE are the most qualified, best trained and most importantly the safest workforce in the Industry.

- R-346
- CO29-1 The NEXUS pipeline will be a safe method of transporting gas and will be a significantly less impact on the environment than transporting gas by road or rail. All of the requirements by the
 - CO29-2 FERC and other agencies involved will not only be followed by NEXUS, they will be over-followed. This will prove to the communities and groups in question of the project they care about where they operate and will maintain a safe and efficient pipeline.
 - CO29-3 If the NEXUS pipeline is approved, the pipeline spreads installed by our members and fellow trades men and women will be installed safe, efficiently and correct the first time. This is theirs, fellow family and community member's backyards so they will take pride in their work. As it stands now, the NEXUS if approved will be installed by local union members on at least 3 of the 4 proposed spreads.
 - CO29-4 The only concerns Local 18 has on the project are the portions to be installed by contractors who utilize someone other than an Operating Engineer or fellow trades men and women on the project. The beginning pipeline spread is scheduled to be installed by MG Dyess from Bassfield, Mississippi. MG Dyess will utilize a workforce that is 100 % out of state and has no ties to Ohio at all. Local 18 does not support this decision by NEXUS and questions whether or not they are qualified to be involved with the NEXUS project.

Although we are not happy with the overall contractor selection, we support the NEXUS pipeline. Please join Local 18 in supporting the NEXUS Pipeline and approve the project.

- CO29-1 Comment noted.
- CO29-2 NEXUS' and Texas Eastern's estimate of local hiring and payroll is just an estimate. The source of final worker hires would depend on the existing pool of available workers at the time of construction. This will include local labor and trade expertise, including agricultural inspectors and train tile repair professionals to the extent practicable.
- CO29-3 Comment noted.
- CO29-4 As discussed in section 4.10.3, Texas Eastern estimates that 40 to 60 percent of the construction workforce would be local hires (i.e., 128 to 282 local employees). Additionally, NEXUS estimates that over \$449.6 million would be spent toward direct local construction labor income with approximately \$400.6 million in Ohio and approximately \$49 million in Michigan.

NEXUS' and Texas Eastern's estimate of local hiring and payroll is just an estimate. The source of final worker hires would depend on the existing pool of available workers at the time of construction. This will include local labor and trade expertise, including agricultural inspectors and train tile repair professionals to the extent practicable.

COMPANIES/ORGANIZATIONS COMMENTS

CO30 – Canton Regional Chamber of Commerce

My name is David Kaminski, and I represent the Canton Regional Chamber of Commerce at 222 Market Ave. N, Canton, OH 44702. We are a regional business organization of 2,100 members, and we have been encouraging energy development in the Utica since 2012.

CO30-1 | I have come here tonight to speak in favor of the NEXUS pipeline because of the economic development benefits it will bring.

According to estimates I have received, the construction of the pipeline will generate 5,300 jobs in Ohio worth \$565 million in wages. It will generate \$390 million in local tax revenue, with \$116 million going to local schools.

In Stark County, where Canton is located, the total economic impact is estimated at \$53.4 million and 400 jobs.

CO30-2 | The pipeline will bring Utica Shale gas to markets that need it, in Ohio and elsewhere. Specifically, it will give potential industrial sites in Ohio the access to large quantities of gas that could grow sustainable, long-term jobs.

The Utica Shale is proving to be an immensely valuable resource for North American energy security. But the only way that the resource will prove its value is if we are able to deliver it to market.

Therefore, we at the Canton Regional Chamber support the Utica pipeline projects now under federal regulatory review. We know there are disagreements about the specific route that NEXUS should take. We trust that NEXUS Pipeline and federal regulators will work to resolve the issues that have arisen.

CO30-3 | We know that well-built, well-regulated pipelines are the safest way to transmit gas, that pipelines are already under our feet wherever we go, and that we ought to build more.

Thank you.

CO30-1 Comment noted.

CO30-2 Comment noted.

CO30-3 Comment noted.

R-347

COMPANIES/ORGANIZATIONS COMMENTS

CO31 – Oil Change International

Federal Energy Regulatory Commission (FERC),

6584 people have signed an Oil Change International petition calling on you to reject the Spectra NEXUS pipeline and all future gas pipelines that fail the climate test and endanger communities.

Here is the petition they signed:

- CO31-1 Energy policy should align with climate science – it's common sense, and it's the only way we can keep our promise to the American people and meet the commitment we made in Paris to do our part to save the climate. New research shows that approving new fracked gas pipelines is incompatible with a safe climate.
- CO31-2 FERC and all federal agencies must make decisions on fossil fuel infrastructure that assume success in reaching our climate goals, not failure. We call on the government to withhold approvals for all proposed pipelines until it is proven that they are safe for the climate and for the communities they would pass through.

You can view each petition signer and any additional comments they left you below.

Thank you,
Matt Maiorana Oil Change International

1. **Debbie Thomas** (zip code: 89406) 2. **Douglas Frye** (zip code: 11232) 3. **bret daugherty** (zip code: 37274) 4. **Phyl Morello** (zip code: 37890)
5. **Barbara Doucet** (zip code: 30263) 6. **Thomas Sanders** (zip code: 06441) 7. **L. Engle** (zip code: 88352) 8. **Voncie Ferguson** (zip code: 27410) 9. **Mary Cooper** (zip code: 30291) 10. **Jeff Rivencbark** (zip code: 19808)
11. **Joanne Snyder** (zip code: 92123) 12. **Gary Smith** (zip code: 06614)
13. **PK Tret** (zip code: 80222) THINK about what you are proposing which will literally make a world of difference to what our children/grandchildren have to live in. Shall we party today and leave the very expensive tab for them to pay? Look at your family. Don't you care that they are already getting bathed in poisons daddy? How much, how long, before we tip the scale just that bit and leave our families to pay the price, so rich corps can get richer. Is that worth your great grandson's ability to breath, move, think? Go slowly and DO NO MORE HARM.
14. **Peter DeLorenzo** (zip code: 30307) 15. **Lesley Schultz** (zip code: 94610) 16. **Sant Subagh Khalsa** (zip code: 25545) 17. **Jeanne Nix** (zip code: 8502) 18. **David Zahrt** (zip code: 89703) 19. **Carol Gorecki** (zip code: 04463) 20. **KM Shaub** (zip code: 08618) 21. **Aaron Novack** (zip code: 85281) 22. **Julie Takatsch** (zip code: 12771) 23. **Arthur Kirby** (zip code: 95010) 24. **R. D. Peterson** (zip code: 34436) 25. **Theresa Morningstar** (zip code: 49120) 26. **Henri Vallancourt** (zip code: 03048) 27. **N. Dunser** (zip code: 11769) 28. **William Howard** (zip code: 33957) 29. **Sandra Smith** (zip code: 98122-5706)
30. **Suzanne a Becket** (zip code: 95014) 31. **Tina Ann** (zip code: 94924-0265) 32. **Judy Fairless** (zip code: 07059) 33. **Sima Bakalian** (zip code: 20852) 34. **Alissa Sollitto** (zip code: 13760)
35. **Ann Rogers** (zip code: 49686) Climate Change is happening at a faster rate. It's time to get rid of all fossil fuels and embrace clean energy.
36. **Andrew Arellano** (zip code: 60534) 37. **ann batley** (zip code: 76133) 38. **Arnold Gatti** (zip code: 94550) 39. **Anne Roda** (zip code: 98118)
40. **Anton Solber** (zip code: 21136) 41. **Amy Tsjdari** (zip code: 32224) 42. **Art Wagner** (zip code: 21122)
43. **Marilyn Miller** (zip code: 52704-1073) I can't imagine that FERC is still pushing fracking knowing that it has poisoned underground drinking water, caused earthquakes, water coming out of taps in people's homes are like torches because the water burns from the tap, it is not safe to drink, take a bath in or do laundry. Stop this because it is also interfering with our battle against climate change goals because IT IS JUST ANOTHER FORM OF FOSSIL FUELS. GET WITH THE PROGRAM AND THE PEOPLE WHO WANT TO SURVIVE ON THIS PLANET. Enough of pushing this to enrich the pockets of the oil and gas Barron's who don't care about the future of this planet only about their own enrichment.
44. **Aleta Bruzzone** (zip code: 15237) 45. **Andrew Cadot** (zip code: 4101) 46. **Audrey Fairchild-Ehm Fairchild-Ehm** (zip code: 55113-6106) 47. **A L** (zip code: 14809)

- CO31-1 See the response to comment FA2-34.
- CO31-2 Comment noted. The EIS is not a decision document. The Commission will consider the findings of the final EIS and the results of staff's review of the Project's design, market demand, costs, financing, and rates before making its decision on whether to authorize this Project.

COMPANIES/ORGANIZATIONS COMMENTS

CO31 – Oil Change International (cont'd)

R-349

48. Aaron Campbell Campbell (zip code: 18612) 49. Aaron Dukes (zip code: 97031) 50. Aaron Fuller (zip code: 78256) 51. Aaron Mencla (zip code: 33183)
52. Anne Yoshino (zip code: 85718) 53. Alan Bartl (zip code: 95401) 54. abigale wool (zip code: 90805) 55. Arthur Connor (zip code: 92549) 56. Ann Bein (zip code: 90064)
57. Mary A Borchers (zip code: 26757) 58. Lilthe Magdalene (zip code: 95461) 59. Alex Vollmer (zip code: 94901) 60. William Wilson (zip code: 45420) 61. acadia lawson (zip code: 10471)
62. Anthony Capobianco (zip code: 15102) 63. Ashley Carter (zip code: 40322) 64. Alison Bonn (zip code: 90049) 65. J.T. Smith Smith (zip code: 18960-1422) 66. catherine garneski (zip code: 19702) 67. adam floegel (zip code: 53406)
68. Adam Christians (zip code: 52403)
69. Adam Baker (zip code: 27001) NO TRANS PECOS PIPELINE!
70. adam kaplan (zip code: 92651)
71. Adam Ludwig (zip code: 11222)
72. Jenna Adams (zip code: 02053)
73. Adam Williams (zip code: 48198)
74. Adaya Walsh (zip code: 93023)
75. Arielle Black-Foley (zip code: 2420)
76. Jackie Bowers (zip code: 21161)
77. Adele Reynolds (zip code: 99101) We must do our part to mitigate climate warming.
78. Hugh Hampton (zip code: 85712-5515) 79. RICHARD PROCIDA (zip code: 10567) 80. June stepansky (zip code: 91367) 81. Steve Adler (zip code: 60525)
82. Annette Dominique (zip code: 30189) 83. Adrian Castillo (zip code: 33155) 84. adrian landon (zip code: 10024) 85. Adrian Smith (zip code: 27559)
86. Anne Dugaw (zip code: 92627) 87. Ava Harrison (zip code: 78602) 88. Amy Zink (zip code: 94606)
89. AE DeWitt (zip code: 30324)
90. A Frey (zip code: 37069)
91. Anne Fatze (zip code: 60302)
92. Roberto de Medici (zip code: 33180) government to withhold approvals for all proposed pipelines until it is proven that they are safe
93. Kathy Rusch (zip code: 12303) 94. Andrew Fischer (zip code: 2446) 95. Alexander Kemper (zip code: 37042) 96. Arlene Flaherty (zip code: 6897) 97. Ahmad Foroughi (zip code: 86336) 98. Arlene Forward (zip code: 11743) 99. Alva Pingel (zip code: 55068) 100. Heidi Cochran (zip code: 22920) 101. Jerome Comeau (zip code: 55408) 102. Agasog@mac.com Evan (zip code: 60650) 103. Aaron Gayken (zip code: 57165) 104. Agda Simpson (zip code: 90049) 105. Abigail Gindele (zip code: 03801) 106. Agnes Witter (zip code: 32132) 107. Agnes Matenos (zip code: 02184) 108. Andrew Gordon (zip code: 32605) 109. Anne Gross (zip code: 95351)
110. Art Hanson (zip code: 48917) However, you MUST do MUCH more. We MUST keep ALL climate-changing fossil fuels in the ground!
111. Anne Harvey (zip code: 92130) 112. Ana Herrero (zip code: 78260) 113. Andrew Hinz (zip code: 21217) 114. Andrea Axelrod (zip code: 33064-2519) 115. Clara Thomas (zip code: 19973)
116. Aida Sheets (zip code: 33710) 117. Aimee Smith (zip code: 92078) 118. Angela Munoz (zip code: 94709) 119. Alxa Fielder Fielder (zip code: 90016) 120. alena jorgensen (zip code: 91780) 121. Aja Willowleaf (zip code: 44113)
122. Annette Bork (zip code: 92612)
123. Allen Cohen (zip code: 17036)
124. Andre Gregoire (zip code: 6066)
125. Art St. Clair (zip code: 90405)
126. Judy Mason (zip code: 98008) You should have all the data needed now to show you our land must e protected.
127. ANNE KILEY (zip code: 14874) 128. Al DeRoy (zip code: 15235) 129. Al Krause (zip code: 10025-6931)
130. Diane Janicki (zip code: 69417) 131. Katherine Kelly (zip code: 82941) 132. A. Utzman (zip code: 94941) 133. Allen Rapata (zip code: 55413-1132) 134. Alan Wojtalik (zip code: 21234)
135. Alan Naylor (zip code: 2118) 136. Alan Arnold (zip code: 08691) 137. Alan Brown (zip code: 10034-6414) 138. Alan Gonzalez (zip code: 55417) 139. Franny Alani (zip code: 43022) 140. Alan Johnson (zip code: 96819) 141. Alan LaPoyver (zip code: 19119) 142. r alban (zip code: 33149) 143. alicia ciuffo (zip code: 07095) 144. Al Ferrucci (zip code: 15206) 145. Albert Gamble (zip code: 2835) 146. Amy Hayworth (zip code: 15108) 147. Gary Alderette (zip code: 95401) 148. Richard Aldred (zip code: 19342) 149. Alec Hendrickson (zip code: 55410) 150. Andrew LeFort (zip code: 98362)
151. Alek Williams (zip code: 32839) 152. SERGIO DURAN (zip code: 79905) 153. Mark Alexander (zip code: 72701-3274) 154. Alex Barnes (zip code: 46256) 155. Sam Austin (zip code: 95446) 156. Alexander Gaya (zip code: 55057) 157. Alexis Ostroski (zip code: 96740) 158. Alex Mendelsobhn (zip code: 4043) 159. Alexander Clark (zip code: 04105) 160. Alfred Lupton (zip code: 06804) 161. Amy Griffin (zip code: 16801) 162. Jeanne Artaxet (zip code: 88101)
163. alicia brown (zip code: 02021) The idea that a gas pipeline would be built in our backyards in Canton, Ma. is imbecille and a path chosen by corrupt politicians , when we have a leaking gas line already that has already taken out several homes. If Ray State Gas would fix their leaks, thousands of them, we would get ample gas. The gas going through these proposed gaslines isn't for us anyhow. It's to sell overseas . To add the cost of building these pipelines is to have the taxpayer provide the gun to kill himself.
164. Alicia Snow Snow (zip code: 94117) 165. Alicia Barmon (zip code: 21791) 166. Lisa Lewis (zip code: 74074) 167. Alison Carville Carville (zip code: 33967) 168. Alison Miller (zip code: 08550)
169. Susan Marnich (zip code: 80127)
170. Alxine Sasonoff (zip code: 98166) 171. Alix Keast Keast (zip code: 10025) 172. Alan Jasper (zip code: 11566-5025)
173. Albert Kopec (zip code: 14837) 174. Allan Smld (zip code: 2736)
175. Al Chazin (zip code: 11367) Fracking accelerates global warming, no if, and, or butsi!!!

COMPANIES/ORGANIZATIONS COMMENTS

CO31 – Oil Change International (cont'd)

176. Allen Rozelle (zip code: 95060) 177. Allen Elliott (zip code: 98257) 178. Allen Isola (zip code: 29910) 179. Jean Allgond (zip code: 52245) 180. Allie Tennant (zip code: 33905) 181. Allison Fradkin (zip code: 60062) 182. Allison Petrocchia (zip code: 99577) 183. Seeley Kaplan (zip code: 98014) 184. Allycia Godbee (zip code: 36013) 185. Alma Bill (zip code: 46750) 186. Charles Almack (zip code: 92231) 187. Jacqueline Sowa Colyer (zip code: 19320) 188. Andy Lopez (zip code: 56308) 189. alpe adria green (zip code: 64270) 190. Elaine Eudy (zip code: 30344) 191. Al Roesch (zip code: 19446) 192. Alie Stokes (zip code: 33647) 193. Al Sim (zip code: 87107) 194. Alvera Pritchard (zip code: 33139) 195. Alyce Fritch (zip code: 98125) 196. Alyce Harper (zip code: 3303) 197. Allison Guzman (zip code: 02860) 198. Alan Mack (zip code: 14423) 199. Amalia Bodkin (zip code: 85740) 200. amanda osborne (zip code: 32258) 201. Amanda Collins (zip code: 75204) 202. Amanda Schmidt (zip code: 95628) 203. Amber Max (zip code: 64115) 204. Dorothy Lynn Brooks (zip code: 76013) 205. Amanda McNeill (zip code: 81321) 206. Andrew McPherson (zip code: 32803) 207. Anthony Mehle (zip code: 44406) 208. Anthony Mendousa (zip code: 2653) Green energy only from now on! 209. Amy Wiesner (zip code: 06905) 210. Alina Grinshpun (zip code: 44124) 211. A. M. Heines (zip code: 13440) 212. Jorge Arauz (zip code: 53521) We need to move away from the old road leading to catastrophe, and onto the new road of sustainability and safety for all. 213. Amit Shoham (zip code: 94606) 214. a kasbarian (zip code: 07033) 215. Anthony Monarert (zip code: 91602) 216. Ann Marie Paglione (zip code: 14120) 217. Christopher Walker (zip code: 72015) 218. amrit khalsa (zip code: 90278) 219. Anna-Marie Soper-O'Rourke (zip code: 30329) 220. Aaron Ucko (zip code: 20850) 221. Amy Carpenter (zip code: 97401) 222. Amy Spude (zip code: 55358) 223. Amy Grace (zip code: 55082) 224. Amy Cordero (zip code: 84404) 225. Amy Hernandez (zip code: 77038) 226. amy Schumacher (zip code: 45440) 227. anne gruetzner (zip code: 44135) 228. Lane King (zip code: 97526) 229. Ana Herold (zip code: 94044) 230. Karen Hewell (zip code: 48051) 231. Betty Anders (zip code: 03461) 232. Dan Anderson (zip code: 95747) 233. Andie D (zip code: 11215) 234. andi gibson (zip code: 01040) Stop polluting our planet for money! 235. Andrea Speed (zip code: 98445) 236. Andi Shotwell (zip code: 80033) 237. Andre Pessis (zip code: 94925) 238. Andrew Rolnicki (zip code: 60661) 239. Andrew Arrabaca (zip code: 12601) 240. Andrew Costigan (zip code: 02062) 241. Lisa Keim (zip code: 60453) 242. andreas ohland (zip code: 33141) 243. Andy Winger (zip code: 75082-4957) 244. Andy Westerhold (zip code: 98103) 245. Andrea Kaufman (zip code: 95446) 246. George Levesque (zip code: 01851) 247. Sharli Anderson (zip code: 97439) 248. Andrew Lee (zip code: 94090) 249. Kevin Hughes (zip code: 98221) 250. Angee Sylvester (zip code: WFP) 251. Beth Angel (zip code: 86424) 252. stuart wisong (zip code: 34109) 253. Angela Armstrong (zip code: 98312) 254. Michael Mack (zip code: 13315) We should stop building more pollution infrastructure and ONLY build replaceable power supplies re- solar,hydro,wind power. 255. Angelita O'Connor (zip code: 77550) 256. Angie Burnham (zip code: 80302) 257. William Turechek (zip code: 13825) 258. Angus McCormick (zip code: g16 6qn) 259. Anikia Phillips (zip code: 71107) 260. Cori Bishop (zip code: 08215) 261. Anita Waters (zip code: 40206) 262. Anita Li (zip code: 80392) 263. Ann Jacobs (zip code: 63116) 264. Ann Atwater (zip code: 12033) 265. T.A Anderson (zip code: 97333) 266. Annabelle Herbert (zip code: 05719) 267. annabelle nye (zip code: 91307) 268. Ann Mahoney (zip code: 93103) 269. Ann Marie DeMeo (zip code: 02871) 270. Anne Carbone (zip code: 22003) 271. Anne Watts (zip code: 95401) 272. Anne Fisher (zip code: 02420) 273. Anne Gunderson Gunderson (zip code: 7756) 274. anne wilson (zip code: 42732-9098) 275. Anne Preston (zip code: v4b1c2) 276. Anne Montgomery (zip code: 20009) Adaptation of the earth, humanity and our remaining flora and fauna cannot occur in the face of thoughtless, evidence-denying policy. There is little time left for bold action. It is not a political issue, it's a matter of the survival of our grandchildren. 277. Anne Huber (zip code: 95092) 278. Ann-Elizabeth Barnes (zip code: 1230) 279. Annmarie Meyer (zip code: 19547) 280. Anne Wisniewski (zip code: 21783) 281. Anne Barker (zip code: 94961) 282. Anne Ozar (zip code: 68131) 283. Anne Roberts (zip code: 31421) 284. Anne Settanni (zip code: 61761) 285. Annette Hartsborne Hartsborne (zip code: 53711-6496) 286. Annette Ancel-Wisner (zip code: 54871) 287. Ann Horwath (zip code: 96706) 288. Anni Crofut (zip code: 1236) 289. Annie Wilder (zip code: 62037) 290. Ann Ewing Ewing (zip code: 38305) 291. Ann Eastman (zip code: 01460) 292. Ann Smith (zip code: 80751) we shall soon be able to get away from gas and oil as new innovative methods will make them obsolete 293. Ann Ellis (zip code: 13732) No more pipelines! 294. Ann Rushon (zip code: 91423) The time is now-- we must take climate change seriously! 295. Ann Saad (zip code: 24121) 296. Ann Stockdale (zip code: 98335) And now, I am hearing that fracked water is being used on our food supply. Shameful. 297. Ann Luke (zip code: 80206) 298. Willi Tetelbaum (zip code: 02882) 299. Antonio Sarmiento (zip code: 62200) 300. Art Smoker (zip code: 28754) 301. Ansula Press (zip code: 97211) 302. Anthony Svihula (zip code: 34491) 303. Anthony Martinez (zip code: 10036) 304. Ella Robson (zip code: 59037) 305. Ann Wright (zip code: 48197) 306. Allison Matthews (zip code: 30022) 307. Ashley Parker (zip code: 19426) 308. Andrea Carty (zip code: 17554) 309. Arlene Dreste (zip code: 85321) 310. Alice Neuhauser (zip code: 90266) 311. Angela Porsch (zip code: 33716) 312. Tony Greiner (zip code: 87110-1439) 313. Pam Scowille (zip code: 07421) 314. Ann Prentice (zip code: 30906) "Keeping America Safe" is not consonant with allowing gas pipelines to run through our country. Gas pipelines threaten individual citizens, whole communities, entire regions of the nation, and, ultimately, the safety of this planet! PLEASE, REJECT THESE PROJECTS!

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COMPANIES/ORGANIZATIONS COMMENTS

CO31 – Oil Change International (cont'd)

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315. Andrea Presson (zip code: 78732) 316. Diana Washburn (zip code: 1453) 317. Sandy Fox (zip code: 97089) 318. Angel Raudner (zip code: 34120) 319. Amanda Raymond (zip code: 33702) 320. Kelly Arellanes (zip code: 72022) 321. Andrew Frey (zip code: 91106)
322. Alan Hoefler (zip code: 85205) 323. Aria McKenna (zip code: 07307) 324. Ariana Gabriel (zip code: 26803) 325. Ariane Sullivan (zip code: 60107) 326. Annie Richardson (zip code: 33711) 327. Ariel Dickinson (zip code: 14420) 328. Amy Henry (zip code: 01166)
329. Arkady Vyatchanin (zip code: 32607) 330. Gabriel Sheets (zip code: 95341) 331. Arlene Wolf (zip code: 47714)
332. arlene griffin (zip code: 87540) 333. Arlys Fones (zip code: 97219)
Save our earth. Please do not be a party to it's destruction. 334. Karl armens (zip code: 52245) 335. STACIE CHARLEBOIS (zip code: 95472) 336. Arnold Haber (zip code: 78732)
337. arnold roman (zip code: 37215) 338. Arnold Welber (zip code: 33351) 339. Harold Arns (zip code: 57719) 340. Arnold Lippin (zip code: 11201) 341. Arthur Rosenberg (zip code: 55405) 342. Arthur Kennedy (zip code: 93117) 343. Andrew Polltzer (zip code: 06801) 344. Art Jacobson (zip code: 80209) 345. Sarah Arvio (zip code: 21409)
346. Aryt Alasti Alasti (zip code: 02138)
347. Antoinette Saletta (zip code: 97219) The future is NOW, and it's renewable energy sources. Invest in NOW. Invest in renewable energy sources.
348. Paul Lau (zip code: 89431) 349. Joseph Corbett (zip code: 02814) 350. Ash (zip code: 21043) 351. Gregory Freeman (zip code: 85625)
352. Anna Shenk (zip code: 02143) Yes, dear people - Let's put our energy and effort into building solar and wind!!! - the wave of the future!!!
353. aron shevis (zip code: 11218) 354. Carol Ashley (zip code: 56433) 355. Aeyrie Eagle (zip code: 92886) 356. Alice Polesky (zip code: 94107) 357. Andrew Sledd (zip code: 60643) 358. W. Andrew Stover (zip code: 17201) 359. Elizabeth Assicar (zip code: 80540) 360. Sheila Ward Ward (zip code: 00927) 361. Robert Chasteen (zip code: 60565) 362. Amy Staats (zip code: 23607)
363. A.L. Steiner Steiner (zip code: 90063)
364. Anne Streeter Streeter (zip code: H3R 2R9)
365. Alan Gonzalez (zip code: 90815)
366. anita weinstein (zip code: 10025)
367. Anita Faulkner (zip code: 75007)
368. Art Tanderup (zip code: 68756)
369. Renee Locks (zip code: 94941)
370. George Loveday (zip code: 95949) IT'S SIMPLE. JUST STOP WHOERING YOURSELVES TO CORPORATE AMERICA.
371. Angela Lyon (zip code: 96734)
372. Ann McMullen (zip code: 84093) 373. Audra Soulias (zip code: 60108) 374. Audrey Gurtman (zip code: 11753) 375. Audrey Ledesma (zip code: 92113) 376. Audrey Newcomb (zip code: 14610) 377. Audrey Sommer (zip code: 32608) 378. Toni Moore (zip code: 91104)
379. Arthur Chan (zip code: workingfam) 380. Wendy Sundberg (zip code: 15690) 381. Vernon Batty (zip code: 81147) 382. Lisa Vandermy (zip code: 98058) 383. Mike Hojzan (zip code: KOB1HO) 384. John Tovar (zip code: 50613)
385. An anonymous signer (zip code: 60659-3676) 386. alessandra visconti (zip code: 60202) 387. Avis Deck (zip code: 67002) 388. Louis Avrami (zip code: 07960)
389. Arnold Ruiz (zip code: 85043-7580) 390. Al Buitenwerf (zip code: 60482) 391. Robin Patten (zip code: 73115) 392. Audrey William (zip code: 12054)
393. Andrew Schelling (zip code: 10576) 394. Elizabeth Park (zip code: 77591) 395. Judith Smith (zip code: 94601) 396. Ayana Baltrip (zip code: 94132)
397. Pamela A. Lowry (zip code: 94704) 398. Dave Swihart (zip code: 85225) 399. Bruce Donnell (zip code: 87506) 400. Brad Miller (zip code: 67003)
401. Barry Zuckerman (zip code: 10940) 402. Barry Eshkol Adelman (zip code: 32967) 403. Brian Hartman (zip code: 22944) 404. Barbara Jo Mullis (zip code: 29609) 405. Brenda Marshall (zip code: 01501) 406. Barry Fass-Holmes (zip code: 92109) 407. Craig Browning (zip code: 94501) 408. Barbara Mcheel (zip code: 98642) 409. Jenny Gelb (zip code: 44622) 410. Erin Rowe (zip code: 95521) 411. Barbara Blen (zip code: 21093) 412. John Lundquist (zip code: 86020) 413. Hildy Ismail (zip code: 33009)
414. Marietta Scaltrito (zip code: 10312) 415. Richard Defazio (zip code: 16502) 416. Robert Bacher (zip code: 96817) 417. David Laverne (zip code: 18519) 418. Jean Bacuzzi (zip code: 39503) 419. Boyd A Davies Jr (zip code: 67206) 420. Kyra Humphrey (zip code: 98382) 421. Barbara Cicalese (zip code: 19003) 422. Lisa Koerner (zip code: 95553) 423. Brett Holland (zip code: 90026) 424. Nelly Baldan hadia (zip code: 10022) 425. Frances Wesson (zip code: 92545) 426. Lilinoe Smith (zip code: 96741)
427. Michael Leeling (zip code: 18964) 428. Bjoern Mannsfeld (zip code: 80205) 429. Jackie Gray (zip code: 27510-1327)
430. Zoran Banjanin (zip code: 98006) 431. Barbara Whitehair (zip code: 01844) 432. Barbara Owens (zip code: 37067)
433. Barbara Rabinowitz (zip code: 27518) 434. Barb Andersen (zip code: 98133)
435. Barbara Zilles (zip code: 52245) We can invest in clean energy instead!
436. Barbara Albert (zip code: 94117) 437. Barbara Gross (zip code: 98115) 438. Barbara Larcom Larcom (zip code: 21214) 439. Barbara McKenzie (zip code: 19147) 440. Barbara Diederichs (zip code: 92064) 441. Barbara Sullivan (zip code: 60004) 442. Barbara Casey (zip code: 94010) 443. Barbara Woodward (zip code: 18104) 444. Barbara Turner (zip code: 98036) 445. Jane Barbarow (zip code: 94519)
446. Barbara Gohn (zip code: 52010) We cannot afford to make any more mistakes re climate change - it's here and we don't have a lot of time to act against it if we want to leave a livable world for our children and grandchildren. It is a moral imperative that trumps corporate profits and greed. Do the right thing.

COMPANIES/ORGANIZATIONS COMMENTS

CO31 – Oil Change International (cont'd)

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447. Barbara Canning (zip code: 33803) 448. Barbara Goodale (zip code: 13077) 449. Robert Kennedy (zip code: 60638)
450. Barbara Giorgio (zip code: 33774) 451. Barbara Quatrano (zip code: 28607) 452. Barbara Bates (zip code: 33907)
453. Barbara Jacobsen (zip code: 95476) 454. Barbara Bogard (zip code: 94941)
455. Barb Powell (zip code: 55904) 456. Wendy Holland (zip code: 97420) 457. Dogan Ozkan (zip code: 99701) 458. Bruce
Ross (zip code: 80302) 459. Barri Clark (zip code: 90038) 460. Barry Meehan (zip code: 60048) 461. Barry Plaxen (zip code:
12721) 462. Barry Anderson (zip code: 27948) 463. Barry Marchessault (zip code: 94066) 464. BARTON MIX (zip code:
08016) 465. Barbara Bartsch (zip code: 97267) 466. Deborah Lyons (zip code: 45056) 467. Dominik Hauser (zip code:
91030) 468. Brad Walker (zip code: 62025) 469. Beverly Williams (zip code: 97504-5259)
470. Thomas Bejgrowicz (zip code: 17602) It's time to turn away from antiquated notions like drilling and pipelines and
focus on sustainable, long-term energy solutions.
471. Robert Basker (zip code: 80130) 472. Boo Boucher (zip code: 16828) 473. Barbara Bennigson (zip code: 94301) 474.
Bettina Bickel (zip code: 85302)
475. Babette Bruton Bruton (zip code: 33707) 476. Belle Sprague (zip code: 91709) 477. William Buss (zip code: 87048-
1185) 478. Brenda Cameron (zip code: 45240)
479. Mary E Campbell (zip code: 28759) stop this insanity
480. Betsy Maestro (zip code: 86325) 481. Brooke Crowley (zip code: 45220) 482. BC Shelby (zip code: 97214) 483. John
Cairns (zip code: 19462) 484. Bruce Dassel (zip code: 49009) 485. Elizabeth Bogaca (zip code: 97239) 486. Barry De Jasu
(zip code: 01351) 487. William Davis Davis (zip code: 37160)
488. Barbara Forauer (zip code: 05461) Please reject any gas pipeline that jeopardizes our climate goals or poisons
communities in any way. Their installation is disrupting our wildlife, our homes and communities, our earth, our water
supplies.
489. Lori Smith (zip code: 92234)
490. B. and Gerry Manderscheid (zip code: 85715) We have unsafe pipelines crisscrossing the country and it's time to stop,
to focus on clean energy instead of appeasing billionaires who line the pockets of our legislators. No more pipelines, PERIOD.
Let's move into the future and concern for the safety of our planet, or do you have a Planet B? Yesterday marked the day
when the planet absorbed all of the carbons, toxins, etc. It can absorb for the year without moving us still closer to our
destruction. For the love of God, stop worshipping money and start caring about saving the world.
491. Nate Marino (zip code: 98226)
492. Beatrice Clemens (zip code: 63119) 493. Doyle Sebesta (zip code: 72701) 494. Jessica Rogers (zip code: 37075) 495.
John A Beavers (zip code: 60625) 496. Barbara Schlitz (zip code: 94002) 497. Rebecca Brown (zip code: 95124) 498.
Rebecca LaPrade (zip code: 27320) 499. Becky Bell-Greenstreet (zip code: 97459) 500. Rebecca Calhoun (zip code: 24201)
501. Becky Daiss (zip code: 22201) 502. Rebecca Martin (zip code: 80123) 503. Beth Darlington (zip code: 12604) 504.
Bette Paradis (zip code: 01860) 505. JM Kirby Kirby (zip code: 11225) 506. Dennis Whipple (zip code: 49668) 507. Donna
Campbell (zip code: 95476) 508. Benita Moore (zip code: 98229) 509. Benita Crow (zip code: 23323) 510. Benjamin Short
(zip code: 95019) 511. Benjamin Lashbaugh (zip code: 96067) 512. Benjamin Joannon Jr (zip code: 33150)
513. Benno Friedman (zip code: 1257) 514. Ben Schlein (zip code: 37214) 515. Karen Stone (zip code: 14225) 516. Steven
Berman (zip code: 94703) 517. Bernard Richter (zip code: 96046) 518. Bernhard Roesen (zip code: 47652) 519. Bernadette
fazio (zip code: 80027) 520. Bernita B Smith (zip code: 34109) 521. Laura Ann K BERNSTEIN (zip code: 10530) 522. Carlos
Barradas (zip code: 80224-2913) 523. Roberta Anderson (zip code: 60069)
524. Bruce Sadowskas (zip code: 19606) 525. Ronald Ratner (zip code: 57104)
526. Sherrie Roznicke (zip code: 43015) What the Frack!
527. Bet Cecil (zip code: 03745) 528. Carrie Williams (zip code: 13088) 529. Elizabeth Walters (zip code: 60048) 530. Beth
Bannon (zip code: 60302) 531. Beth Wallace (zip code: 37881) 532. Beth Lapides (zip code: 92262) 533. Beth Hawesd (zip
code: 78666)
534. Elizabeth Stanoch (zip code: 53207) 535. Elizabeth Werner (zip code: 6514) 536. Betsy Germanotta (zip code: 02140)
537. Betty Miller (zip code: 80107)
538. BETTY BARNETT (zip code: 60142-7898) We have to stop thinking about today and start thinking about the impact this
is having on our earth and on generations to come.
539. Nanda Coleman (zip code: 95130) 540. elizabeth armstrong kolodziejski (zip code: 33714-2621) 541. Betty Noguees
Noguees (zip code: 94020)
542. Betty Palme (zip code: 45236) If the money spent on all these fossil fuel projects was spent instead on wind and solar
power and the needed long-life battery for storage, we would already be fossil fuel free.
543. Betty Trentlyon (zip code: 10011) 544. Beverly Farr (zip code: 93117) 545. Beverly Morris (zip code: 32931) 546.
Beverly Janowitz-Price (zip code: 85014) 547. Beverly Mitchell (zip code: 83709)
548. Beverly Thompson (zip code: 24430) 549. Laurel Beyrer (zip code: 92506) 550. Beverly Bradshaw (zip code: 22408)
551. Bette Feltham (zip code: 43311)
552. Ben F. Garcia, Ph.D.-ABD Garcia, Ph.D.-ABD (zip code: 80206) 553. Brian Fink Fink (zip code: 19130)
554. Barbara Fite (zip code: 35548)
555. Barbara Gaman (zip code: 94937)
556. Raymond Lampe (zip code: 30033)
557. Barbara Bonfield (zip code: 98407)
558. Brenda Cooper (zip code: 77019)
559. Robert Goings (zip code: 93265)
560. Brian Paradise (zip code: 32082)
561. Georgeanne Samuelson (zip code: 97463)
562. Pauline Haggerty (zip code: 94014)
563. Bob Hamburg (zip code: 19038)
564. Bhaskar Banerji (zip code: 94704)

COMPANIES/ORGANIZATIONS COMMENTS

CO31 – Oil Change International (cont'd)

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565. William Heebsh (zip code: 49259) For the love of this planet, please stop with the fossil fuels and work harder for clean energy.

566. Brian Henning (zip code: 55431) 567. Birgit HERMANN (zip code: 94117) 568. Brad Higgs (zip code: 66549) 569. Erica Himes (zip code: 33709)

570. Barbara Hodik (zip code: 28731) We've got a history of short-term legislation to favor polluting energy industries and barely any history of long-term legislation to engage in renewable energy for a healthy environment in the future. We need to start paying attention to long-term behavior to save the environment.

571. Beverly Holton (zip code: 20743) 572. Brian Hull (zip code: 49683) 573. vinaya alahan (zip code: 30721)

574. Blanca Benincasa (zip code: 20910)

575. Irv Balto (zip code: 54621)

576. Elsbette Grove (zip code: 14590)

577. Christiane Freer-Parsons (zip code: 85250) Instead of laying more pipe lines we should be actively working on renewal energy sources.

578. Jerry Bierens (zip code: 48381) 579. Adam D'Onofrio (zip code: 23803) 580. Patricia Cipolla (zip code: 07420) 581. Kevin Metcalf (zip code: 60056) 582. Valerie Bigelow (zip code: 21030)

583. Mike Ruell (zip code: 99816) End fossil fuel subsidies. It is PAST TIME to NATIONALIZE to DIRTY, CORRUPTING energy industries and MOVE ON to renewable CLEAN ENERGY

584. EDWARD G. MRKVICKA (zip code: 80004) 585. Stephen Appell (zip code: 11230) 586. Helen Schafer (zip code: 8889) 587. Bill Holt (zip code: 78736)

588. bill liddle (zip code: 12306) 589. William Steele (zip code: 55709) 590. William Hance (zip code: 19063) 591. Bill Russell (zip code: 59917) 592. Bill Russell (zip code: 30208) 593. William Schmidt (zip code: 44906)

594. Bill Leyrer (zip code: 98109) 595. Deborah Beck (zip code: NY) 596. Bill Couch (zip code: 30014) 597. Bill Deckhart (zip code: 19030)

598. William Glickman (zip code: 06033) Storage of CO2 is not a good idea as it could be released by nuclear blast, mete hit, earthquake or terrorists. The only way to be safe from CO2 is not to burn fossil fuels for electricity and just use clean renewable energy from the sun, wind, and hydro (dams and wave).

599. Bill Hazel (zip code: 77459) 600. Bill Hilton (zip code: 94087) 601. Bill McLarney (zip code: 28734) 602. William Smith (zip code: 83651) 603. William C. Vohwinkel (zip code: 48456) 604. William Wright (zip code: 45241) 605. Bill Christie (zip code: 85719) 606. Loretta Wrobel (zip code: 06278) 607. Littlebird Parks (zip code: 59911) 608. Birgit Sharp (zip code: 20779) 609. Brenda Amlashi (zip code: 01824)

610. Burton Jaffe (zip code: 02116) WE need to get our UN pledge traduce CO2...fracked gas is a hindrance to meeting our pledge. Renewables are what we need.

611. Bobb Akre (zip code: 52241) Please see the Bigger Picture of our children's future, beyond energy/profits. Thank you.

612. Brian Jay (zip code: 68104) And increased scrutiny of existing pipelines to ensure they do not leak, and are properly maintained and managed.

613. Betty Dunbar (zip code: 34224) This is just wrong, wrong, wrong! Clean energy only for the future.

614. Barbara Kopelman (zip code: 60062) 615. BLAIR MOSELEY (zip code: 61259) 616. BJ Novitski (zip code: 97402) 617. Beth Jochum (zip code: 12156)

618. Bettemae Johnson (zip code: 87112) 619. Ben Johnson (zip code: 300923806) 620. Robert Sapp (zip code: 65203) 621. J Butler (zip code: 83836)

622. Brian Kelly (zip code: 19044) 623. Bob Kipka (zip code: 54875) 624. Rebecca Steinmetz (zip code: 44134) 625. Robert Black (zip code: 20855) 626. Kate Blair (zip code: 01070) 627. Richard Blain (zip code: 92592) 628. Cara Schwartz (zip code: 98106) 629. blanchard1949@aol.com Blanchard (zip code: 03842) 630. Patricia Blank (zip code: 99827) 631. Elizabeth Bullock (zip code: 60640)

632. Pamela Stewart (zip code: 95423) 633. Nancy Fomenko (zip code: 95135) 634. Lisa Brooks (zip code: 24401) 635. Barbara Kantola (zip code: 49120) 636. Joseph Bivins (zip code: 32751) 637. Kim Block (zip code: 07090)

638. Barbara Lothian (zip code: 92126) 639. Benita Smith (zip code: 94708) 640. Irena Franchi (zip code: 33160) 641. Rob Carroll (zip code: 75033)

642. Raven Vergara (zip code: 28078) 643. Mike Krouse (zip code: 44107) 644. Carol McMahon (zip code: 95667) 645. Susen Shaprio (zip code: 08215) 646. Midori Furutate (zip code: 10040) 647. Lynne Preston (zip code: 94107) 648. Patti Windecknecht (zip code: 37919) 649. Carl Gendvll (zip code: 10304)

650. Bob Rushford (zip code: 11769) 651. Rick Hartley (zip code: 44485) 652. Constance Ruby (zip code: 33908)

653. Lisa Ann Kelly & Family (zip code: 93101) 654. T. K. McCranie (zip code: 92603) 655. Scott Blum (zip code: 45342) 656. Bradley Winch (zip code: 92333)

657. Barbara MacAlpine (zip code: 80517) 658. Bonnie Lynn MacKinnon (zip code: 78626) 659. Brunilda Betancourt (zip code: 32309) 660. Richard Jacobel (zip code: 93644) 661. Bonnie McElvy (zip code: 33604) 662. Brian Merten (zip code: 91601) 663. Brent Foret (zip code: 71360) 664. Sue Slinic (zip code: 60612) 665. Beverly Poncia (zip code: 95457-0971)

666. Bernie Salfner (zip code: 15241) 667. Barbara Mueser (zip code: 80503) 668. Bill Muncie (zip code: 32264) 669. Bonnie Weber (zip code: 11901) 670. Matthew A Weaver (zip code: 43430) 671. Bo Bergstrom (zip code: 88061)

672. Bob Schildgen (zip code: 94703) We simply don't need more gas or oil pipelines. We need clean energy, and pipelines merely circulate dirty energy.

673. Robert Muller (zip code: 13335) 674. Robert Duckson (zip code: 92543) 675. Robert Rees (zip code: 02451) 676. Bob Atwood (zip code: 96003) 677. Robert Burk Burk (zip code: 90024)

678. Barbara Gridley (zip code: 72903) We need to protect our Nation against abrogators that destroy our Nations Lands, Waters, Air and Sea's!

679. Robert Fingerman (zip code: 37256) 680. Robert Carpenter (zip code: 44132) 681. Robert Clarke (zip code: 06798)

682. Thomas Brewer (zip code: 86004) 683. bob gunn (zip code: 93105)

684. Robert Balley (zip code: 48170)

685. Robert Mathews (zip code: 37027)

COMPANIES/ORGANIZATIONS COMMENTS

CO31 – Oil Change International (cont'd)

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686. Robert. D. Missimer. Jr. Missimer.
687. Bob Patterson (zip code: 35802)
688. Bo Breda (zip code: 96778-8327)
689. Robert Snyder (zip code: 13212)
690. Robert H. Wilcox (zip code: 63130)
Jr. (zip code: 19355)
691. Janet Robinson (zip code: 33433) No more pipelines and fracking in our communities.
692. Nancy Bauer (zip code: 60304)
693. Kathleen Sumida (zip code: 92120) 694. margo wyse (zip code: 88041)
Just how stupid are you?
695. Bonita Sierra (zip code: 32168)
696. Bonna ettie (zip code: 49768)
697. BONNIE LONG (zip code: 908038608)
698. Bonnie Jean Brown (zip code: 26505)
699. Bonnie Andrus (zip code: 70433) Reject these pipelines for our country and for our children.
700. Bonnie McGraw (zip code: 95534) 701. Bonnie Odiorne Odiorne (zip code: 06700) 702. Karen McCall (zip code: 27517) 703. Pete Barron (zip code: 97403) 704. Bonnie Shelley (zip code: 95409) 705. Faye Donovan (zip code: 19460) 706. Jennifer schongar (zip code: 03048) 707. Irene Huskisson (zip code: 72764) 708. ellen terry (zip code: 29407) 709. Pam Borso (zip code: 98240) 710. Frank Glasser (zip code: 52577) 711. Ailsa Hermann-Wu (zip code: 02451) 712. Michael A Bourbina Jr (zip code: 39001)
713. Joan Bowers (zip code: 13905) 714. William Buring (zip code: 91786) 715. Jonathan Boyne (zip code: 96822) 716. Bob Layton (zip code: 97201) 717. Bonnie Piestrak (zip code: 19067) 718. An anonymous signer (zip code: 61821) 719. Brad Bennett (zip code: 12503) 720. Brady Watson (zip code: 37205) 721. Brandon Hall (zip code: 98354) 722. Barbara King (zip code: 90029) 723. B Blume (zip code: 93555) 724. Bruce McGraw (zip code: 92104)
725. Rene Breier (zip code: 87219) No more fracking No more fossil fuels Keep it in the ground
726. Brenda Allen (zip code: 52040) 727. Brenda Lahm (zip code: 68017) 728. Brenda Michaels (zip code: 98027) 729. Brenda Young (zip code: 85014) 730. Brent Rocks (zip code: 97201-6132) 731. Brett Dennison (zip code: 92840) 732. Brian Ainsley Ainsley (zip code: 32714-1283)
733. Brian Fink (zip code: 11215) 734. brian mattson (zip code: 94947) 735. Brian Farrow (zip code: 94618) 736. Brian Gingras (zip code: 02184) 737. Brian Long (zip code: 94121) 738. Brian Schwartz (zip code: 07076) 739. Brian Voglesong (zip code: 08055) 740. Brie Gyncld (zip code: 98122) 741. Brie Atman (zip code: 03060)
742. Honora-Bright Aere Aere (zip code: 97326-9702) The point has passed when it can be allowed for pipelines to be built and these substances disturbed in face of climate disaster.
743. Rick Brigham (zip code: 49406)
744. Lisabette Brinkman (zip code: workingfam)
745. Jade Brite (zip code: 90004)
746. Brittany App (zip code: 93422)
747. Barbara Nagy (zip code: 90503)
748. Bruce Robison (zip code: 98366)
749. Virginia brobyn (zip code: 10025)
750. Frank Velasquez (zip code: 94335) Do we save our planet? Or do we watch it die all around us?
751. Brock Herren (zip code: 50266) 752. Bob Rolsky (zip code: 98392)
753. Bob McDonald (zip code: 90019) 754. Brooke Kane (zip code: 22101) 755. Mark Brooker (zip code: 60637) 756. Bill Rosenthal (zip code: 11374) 757. Jason Brostus (zip code: 14120) 758. Charles Brotman Brotman (zip code: 27613) 759. Robert M. Brown (zip code: 21234)
760. Beatrice Simmonds (zip code: 10462) 761. Burton Steck Steck (zip code: 60618-6016) 762. Bruce Eggum Eggum (zip code: 54128) 763. bruce fowler (zip code: 35016) 764. Vlk Leafa (zip code: 27106) 765. Bruce Rhoades (zip code: 60515) 766. Bruce Bennett (zip code: 94044) 767. Bruce Cratty (zip code: 80210) 768. Bruce Harvey (zip code: your zip c) 769. Bruce Krawisz Krawisz (zip code: 54449-6000) 770. Bruce Lowrey (zip code: 64055) 771. Bruce Olson (zip code: 66213) 772. Bruce Ross (zip code: 77449) 773. Nelleke Bruyn (zip code: 46260)
774. Bryan Bennett (zip code: 30144)
775. Bryce verdier verdier (zip code: 95136)
776. Bryna Fuchslocher (zip code: workingfam)
777. Sandra Thompson (zip code: 97703)
778. Barbara Schnubel (zip code: G6W1X5)
779. Barbie Scott (zip code: 97219) Just this simple: No Fracking.
780. Robert Gates (zip code: 01960) 781. bov sigmund (zip code: 31406) 782. Bret Sher (zip code: 60061) 783. Bruce Spring (zip code: 90965) 784. Shirley Pullen (zip code: 63935) 785. Bruce Stotts (zip code: 80525) 786. Beulah White (zip code: 45044) 787. Betty Cohen (zip code: 49006) 788. Barbara Tucker (zip code: 33414) 789. David Brame (zip code: 51652)
790. Ken Bechtel (zip code: 80503) 791. Deborah Chill (zip code: 92398) 792. Lin Tumin (zip code: 98446)
793. Therese DeBing (zip code: 93950) 794. Bob Sherwood (zip code: 07803)
795. Thomas Delegal (zip code: 32207) 796. DOLORES K (zip code: 66215) 797. Roslyn Jones (zip code: 92506) 798. James Wartle Wartle (zip code: 28704) 799. Joe Lampka (zip code: 32003)
800. Hiedi Tan (zip code: 60108) 801. Arthur Schurr (zip code: 11201) 802. Marie Jensen (zip code: 10024)
803. Sherry Miller (zip code: 44675) Stop allowing greedy gas companies to steal hard working families homes and allowing them to put compressor stations and gas plants near our schools! One day soon it will be too late to save our climate and our children... stop the greed! start the green!
804. Sharon Burge (zip code: 97306)
805. s l (zip code: 33401)

COMPANIES/ORGANIZATIONS COMMENTS

CO31 – Oil Change International (cont'd)

806. Kathryn Burns (zip code: 90620)
807. John BurrIDGE (zip code: 02914) I am a retired chemical engineer well acquainted with the problems.
808. Lawrence Turk (zip code: 28793) 809. Howard Rouser (zip code: 33161) 810. David Butler (zip code: 61802) 811. Jane Butler (zip code: 25427) 812. Kevin Hunter (zip code: 84116) 813. Leuse Crumble (zip code: 60624) 814. Bruce velley (zip code: 92201)
815. William Von Zangenberg (zip code: 34685) We don't need more possible spills. Let's move forward to clean energy
816. Brian Smith (zip code: 94530) 817. Barbara Waksman (zip code: 01742) 818. Bonita Weis (zip code: 1066) 819. William Welkowitz (zip code: 22202) 820. Bruce White (zip code: 95067) 821. Betsy Wolf (zip code: 87571) 822. BENNIE WOODARD (zip code: 33881) 823. Heidi Brugger (zip code: 81321) 824. Byron Pierce (zip code: 17327) 825. Cat Ransom (zip code: 86326)
826. Charis Tebbetts (zip code: 02025) Pipelines that service fossil fuels must not be built. Renewable sources need encouragement and the support of the government/people. Fracked gas is dangerous to the neighborhoods that it will travel through, and to our climate and future generations. There are plenty of jobs to be created by keeping this gas in the ground - building the infrastructure for wind solar and hydro, for instance!
827. Charles Mullen (zip code: 44718-1070) 828. c Iascula (zip code: 91942) 829. Colleen Lenihan (zip code: 98305) 830. Cordale Brown (zip code: 60827)
831. Carol Rahbari (zip code: 48197) 832. Carlos Cabezd (zip code: 92143) 833. Carol Cook (zip code: 94402)
834. Cathy Buckley (zip code: 2090) 835. Jeri Tatum (zip code: 28753) 836. Bande Mandelblatt (zip code: 19111) 837. Carroll Dartz (zip code: 77057) 838. Carol Devoss (zip code: 60174) 839. meade cadot (zip code: 03449) 840. Elaine Ciardello (zip code: 32502) 841. Sheila Suarez (zip code: 91320) 842. Ian Marshall (zip code: 91030) 843. Diane Calkins (zip code: 19131) 844. Callie Lockwood (zip code: 14224) 845. VICKI & ROD KASTLIE (zip code: 92107) 846. Carolinne Christy (zip code: 6357) 847. Nicole Shaffer (zip code: 80917) 848. Sherry Massaro (zip code: 44406) 849. C. Mendel (zip code: 43214) 850. Cassie A. Murphy (zip code: 93465) 851. Wayne Steffes (zip code: 96001)
852. Camilla Bowman (zip code: 46052) Let's get into the 21st century and get away from these pipelines. We can do better with clean energy--solar, wind, biomass. This is the time. Let's take it.
853. Camille Hall Hall (zip code: 97330-9118)
854. Camille Jackson (zip code: 97005) 855. Barbara Campbell (zip code: 77662-4816) 856. Bonnie Mitchell (zip code: 97231) 857. Richard Blakemore (zip code: 95338) 858. Maurine Canarsky (zip code: 97214) 859. Candy Bowman (zip code: 95823-1931) 860. Candace Batten (zip code: 90031) 861. Candace Rocha (zip code: 90031) 862. Candace LaPorte (zip code: 98315) 863. Candra Neff (zip code: 95370) 864. Candy Rocha (zip code: 90033) 865. Diana Sheen (zip code: 94530) 866. Karen Pike-Roberts (zip code: 13440) 867. Cheryl Williams (zip code: 60543) 868. Candice Barnett (zip code: 99405) 869. Carol Miller (zip code: 20158) 870. C Frantz (zip code: 55628) 871. Maria White (zip code: 97007) 872. Joan Holt (zip code: 2666) 873. Lynette Ridder (zip code: 94521) 874. Ron Harris (zip code: 37814)
875. Dlane Nunez (zip code: 94801) We need to protect our Nation against abrogators that destroy our Nations Lands, Waters, Air and Sea's!
876. Phil Tompetrini (zip code: 34442) 877. Catherine Rivera (zip code: 33418) 878. Virginia Caraco (zip code: 29020) 879. Carol Fly (zip code: 78727)
880. Carina Chadwick (zip code: 91107)
881. Carole Knoles (zip code: 97365)
882. Carl Grenadier (zip code: 48023)
883. Carl Kaiserman (zip code: 32951) Keep it in the ground
884. Carla Bloom (zip code: 49685) 885. Carleen Greenman (zip code: 24059) 886. F. Carlene Reuscher (zip code: 92626)
887. Carl Green (zip code: 74462) 888. Patricia Carlton (zip code: 87505)
889. Carol Ducey (zip code: 91107) I know you're not listening because you continue to build these pipelines in the face of continued " accidents " that have caused thousands of lives to be disrupted and the health of as many to be affected. I'm writing because I'm hoping that this round of emails will stir that unfamiliar feeling for the welfare of the citizens of this country. Concern that is greater than the desire for profits.
890. Carol Maghakian (zip code: 29588) 891. Carol Patton (zip code: 94708) 892. Carol Savary (zip code: 94131)
893. Carol Lind (zip code: 94117) 894. Carol Woodruff (zip code: 07905) 895. Carole McElhannon (zip code: 30605)
896. Carole Mark (zip code: 60201) We need to be a democracy, not an oligarchy. Now, we are placating big business but we can encourage renewables and create jobs at the same time and in the end continue our life on earth.
897. Carol Gold (zip code: 94920) 898. Carol Gottesman (zip code: 44425) 899. Carol Hinkelman (zip code: 14616) 900. Caroline Wallace (zip code: 29412) 901. Carol J. Loomis (zip code: 97233) 902. Carol Marston (zip code: 06234) 903. Carol Myers Myers (zip code: 11572) 904. Carol Roberts (zip code: 03086) 905. Carol Royce (zip code: 68810) 906. Carol Newman (zip code: 97103) 907. Carol Wyndham (zip code: 34567) 908. Carolyn Bullard (zip code: 75057) 909. Carolyn J. Ridpath Ridpath (zip code: 05602) 910. Carolyn Vaughan (zip code: 85251-5144)
911. Carolyn Moser (zip code: 85749) There have been too many pipelines exploding and causing sever personal and property damage. Stop approving gas pipelines which cause devastating damage and climate impact.
912. Carrie Darling (zip code: 85022)
913. A. McDonald (zip code: 86336) 914. Carroll Campbell (zip code: 39531) 915. Ann Carroll Henry (zip code: 97034) 916. Kevin Carroll (zip code: 60626) 917. Carson Montelth (zip code: 27609) 918. Marlan Carter (zip code: 91791) 919. Carol Walker (zip code: 02152) 920. Caryn Cowin Cowin (zip code: 91030) 921. Caryn Dieter (zip code: 43566) 922. Caryn Graves (zip code: 94702) 923. Andrew Gutierrez (zip code: 94707) 924. Casey Danson (zip code: 90049) 925. Charles Wieland (zip code: 94583) 926. Cassandra Zampini (zip code: 2139) 927. Cassandra Bogue (zip code: 30088) 928. T. Cassidy Cassidy (zip code: 83031) 929. Catherine Lambreau (zip code: 25705) 930. Henry Garrison (zip code: 97212) 931. Beth Doherty (zip code: 21769-7543) 932. Annie Katzman (zip code: 10014) 933. Lily Swartz (zip code: 18938)
934. Catherine Saint-Clair (zip code: 94553) 935. John Viacrusis (zip code: 56560) 936. Catherine Corwin (zip code: 90404)
937. Cathie Ernst (zip code: 85262)

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COMPANIES/ORGANIZATIONS COMMENTS

CO31 – Oil Change International (cont'd)

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this is wrong **938. Micheal Stewart** (zip code: 48433) **939. Cathi Woodward** (zip code: 80401) **940. Gordon Illig** (zip code: 80228) **941. Catherine Whiteside** (zip code: 77450) **942. Cathy Nelson** (zip code: 07010) **943. Cathy Strickler** (zip code: 22801) **944. Sandra Lawrence** (zip code: 78028)

945. Kathleen Maher (zip code: 07712) Please stop enabling the dying fossil fuel industry. They are determined to squeeze out every last cent of profit no matter how many deaths they cause.

946. Cecelia Nelson (zip code: 32763) Guess WE won't be happy till WE DESTROY the AIR, LAND, WATER... The EARTH & all (including INNOCENT animals) of us... SHAME ON US.

947. Jeanne Sheats (zip code: 15239) **948. Lynne C.** (zip code: 27529) **949. Linda Smith** (zip code: 97537) **950. Charles Banks** (zip code: 91259) **951. Carol Barre** (zip code: 28412) **952. Carol Raschick** (zip code: 80701)

953. Carmen Druke (zip code: 77008) **954. Connie Jones** (zip code: 30316) **955. Cara Morris** (zip code: 11104) **956. C. Bower** (zip code: 85715)

957. C. DeBeer (zip code: 08055) **958. Suzanne Smith** (zip code: 95476)

959. Charles Brexel Sr. (zip code: 30188-3558) * As of 6/13/16, according to a new forecast by Bloomberg New Energy Finance, the use of nat gas, coal and oil will be in a terminal decline by 2025 and "There will be No Golden Age of Gas."

* According to data from same forecast, by 2027, "building new wind farms and solar fields will often be cheaper than running the existing coal and gas generators."

* Given above three points and more info, it is extremely imprudent and harmful to waste money on fracked gas pipelines and nat gas power plants.

* In 2015, about 90% of all installed, new electrical power in world was solar and wind power. * Trends are perfectly clear that world is now, quickly, installing only solar and wind.

960. Craig Brown Brown (zip code: 55431) **961. Carol Taggart** (zip code: 94025) **962. Connie Colvin** (zip code: 11369) **963. Crista Doty** (zip code: 94928)

964. Costa Chitouras (zip code: 2144)

965. Chrissy Hoffman (zip code: 94705) No more gas/oil pipelines! Stop building them today! Anyone who tries has been purchased by big oil!

966. Clarice Correll (zip code: 94110) **967. Charles Cotter** (zip code: 27042) **968. Clyde Williams II** (zip code: 97267)

969. Clem Davis (zip code: 47201-3101) **970. Constance Dayton** (zip code: 04105) **971. Dudley and Candace Campbell** (zip code: 91401) **972. Catherine DeFoney** (zip code: 08054) **973. Cynthia Quinonez** (zip code: 92101) **974. Carmen Dinescu** (zip code: 08902) **975. Chris Ducey** (zip code: 94973) **976. C Barnes** (zip code: 48867) **977. e c** (zip code: 90606)

978. Cecelia McCarty (zip code: 92128) HOW MANY TIMES DO WE HAVE TO TELL YOU - NO MORE FRACKING, NO MORE PIPELINES AND NO MORE BOMB TRAINS???

979. Cecelia Samp (zip code: 60176) **980. Cecile Ieneman** (zip code: 94704) **981. Cecilia Brown** (zip code: 94611) **982. Oceanah D'amore** (zip code: 97540) **983. Caolan Eder** (zip code: 22181)

984. Christine Smith (zip code: 89128) **985. Charlotte Gallardo** (zip code: 90631) **986. Charles Jenkins** (zip code: 37830)

987. Celia Kutcher (zip code: 92624) **988. Celia O'Kelley** (zip code: 36401)

989. Celia Candlin (zip code: 10028) **990. Carol Elias** (zip code: 13662) **991. Deb Keegan** (zip code: 54703) **992. Mary Cellucci** (zip code: 19008) **993. Claude Cornuschi** (zip code: 02467) **994. Theresa Shiels** (zip code: 94015)

995. Carol Steinhart (zip code: 53726) Pipelines break. Pipelines spill. Pipelines encourage further production of climate-destroying fuels that we dare not use. We should not build any more pipelines. Ever.

996. Edith Trygstad (zip code: 58104) **997. Cheryl Fahlman** (zip code: 20879) **998. Charles Feldman** (zip code: 02903) **999. Colleen Ingerman** (zip code: 08046) **1000. Carl Fischer** (zip code: 35226) **1001. Chuck Fisher** (zip code: 94611) **1002. Catherine Noyce** (zip code: SP2 81P) **1003. Cindy Spoon** (zip code: 76207)

1004. Patricia A Locke (zip code: 75901) **1005. Charles Happel Happel** (zip code: 46224) **1006. Christina Hoagland** (zip code: 81501)

1007. Gayle Janzen (zip code: 98133) It is appalling that the US govt pretends like it wants to curb climate change, yet over and over again it continues to help the fossil fuel industry frack, drill and mine everywhere. Putting in dozens of gas pipeline across the eastern US would be yet another giveaway to the gas industry as it would encourage more and more fracking while putting hundreds of communities at risk of exploding gas pipelines. GAS IS NOT A CLEAN ENERGY, so please quit trying to increase this dirty, toxic industry. If you really think fracking is benign, then you'd be more than happy to live right next to a fracking site, correct??

1008. christine gladish (zip code: 91024)

1009. Carol Gloor (zip code: 61074) Permits should be going to solar and wind facilities, and environmentally sound river dams, not to pipelines with the last squeezed fossil fuel running through them. What will our children think, never mind our grandchildren?

1010. robert ostrow (zip code: 27278) **1011. Charlie Graham** (zip code: 97124) **1012. Margaret Gyuro** (zip code: 85730)

1013. Chad Leming (zip code: 70114)

1014. Stephen Dempsey (zip code: 19330-1773) **1015. John Seeburger** (zip code: 98501) **1016. Joyce Harvey** (zip code: 27856) **1017. Charles Huber** (zip code: 21157)

1018. Corinne Italiano (zip code: 11563) **1019. Charleen Steeves** (zip code: 90290) **1020. Christopher Aycock** (zip code: 94116)

1021. Charlene Woodcock (zip code: 94709-1315) When we know it is the mining, transport, and burning of fossil fuels that drives climate change, we must CEASE to facilitate the oil corporations' destruction of our habitat. No more oil/gas pipelines!

1022. Charlene Davies Davies (zip code: 99201) **1023. Charles Byrne** (zip code: 60540) **1024. Charles Olmsted** (zip code: 80634)

1025. Charles Price (zip code: 07002) **1026. Charlie Burns** (zip code: 6850)

1027. Charles Berger (zip code: 80503) Wanting a future for my grandchildren. Thank you.

1028. Charlie Bergstedt (zip code: 94133)

1029. Charlie Donnus (zip code: 59101) Between the groundwater damage caused by fracking, transportation dangers, and the climate change accelerated by burning the fracked gas, any fracked gas facilitation is unconscionable.

COMPANIES/ORGANIZATIONS COMMENTS

CO31 – Oil Change International (cont'd)

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1030. Charlotte Sutherland (zip code: 98007) 1031. Charlotte Vardan (zip code: 90028) 1032. William Koch (zip code: 97330) 1033. Eric Schelthagen (zip code: 75229) 1034. Charles Gilliland (zip code: 32821) 1035. Elliot Chase (zip code: 80220)

1036. Carol Hatfield (zip code: 46227) 1037. Noel Crim (zip code: 85375) 1038. Claudia Hellke (zip code: 46304) 1039. Cheryl Young (zip code: 75206) 1040. Cherle Warner (zip code: 99163) 1041. Cheryl Bourguignon (zip code: 59802) 1042. Cheryl Whittaker whittaker (zip code: 19348) 1043. Cheryn English (zip code: 93109)

Also, no taking of private citizens land by eminent domain. 1044. Deanne Swaringen (zip code: 63389)

1045. Carmen Andrews (zip code: 33027) 1046. Chester Gustafson (zip code: 53340) 1047. Chester Mahan (zip code: 49713) 1048. Mark S Smith (zip code: 80538) 1049. Chozna Warner (zip code: 63126) 1050. Cherri Cowan (zip code: 80538)

1051. Ed Covington (zip code: 77584) 1052. don wittsie (zip code: 12477)

1053. Chip Sharpe Sharpe (zip code: 95524) 1054. Andrea Chisari (zip code: 32780) 1055. Chloe Barbier (zip code: NW10 STY) 1056. Tina M M (zip code: 10040)

1057. James Stone (zip code: 32459) 1058. kathy getchell (zip code: 80123) 1059. Colin Hart (zip code: 73080) 1060. Chonna Delaney (zip code: 95033) 1061. Elisabeth Murawski (zip code: 22307) 1062. Evelyn Chorush Chorush (zip code: 77019) 1063. Catherine Palmer (zip code: 48101)

1064. Chris Monti (zip code: 44039) 1065. Christopher Ebert (zip code: 94708)

1066. Christopher Miller (zip code: 33574) 1067. Chris Dietrich (zip code: 95117) 1068. chris boernke (zip code: 98244)

1069. Chris Worcester (zip code: 96160) 1070. Chris Leacock (zip code: V8S 5B3) 1071. chris danne (zip code: 32608)

1072. Christopher Long (zip code: 92592) 1073. Chris O'Connell (zip code: 60640) 1074. Chris Pruvot PRUVOT (zip code: 56150) 1075. Christopher Riff (zip code: 60657)

1076. christel bel (zip code: 21403) 1077. Chris Evans (zip code: 80020) 1078. Christiane Meyer (zip code: 83709) 1079. Christianna Nelson (zip code: 11217) 1080. Christine Macpherson (zip code: 12018) 1081. christine beaudry (zip code: 02453) 1082. Christopher Ritt (zip code: 80218) 1083. Christopher Sessa (zip code: 85202) 1084. Christopher Loch (zip code: 55405) 1085. Chris Scholl (zip code: 07753) 1086. Christopher Tuch (zip code: 78130)

1087. Christy Anderson (zip code: 97213)

1088. Chris Schmitthenner (zip code: 20659)

1089. J Wyatt (zip code: 97814)

1090. Chrystal Schivell (zip code: 08540)

1091. Charles Gaulke (zip code: 53029)

1092. Chuck Aragon (zip code: 94550)

1093. Charles Bouscaren (zip code: 92398)

1094. Charles Ellenberger (zip code: 98031)

1095. Louise Outley (zip code: 02184)

1096. Charles Levin (zip code: 1027)

1097. Chuck Massoud-Tastor (zip code: 13413)

1098. Chuck Oatman (zip code: 17518)

1099. Jean Chun (zip code: 90045)

1100. Carrie Mullen (zip code: 10962)

1101. Anne Henry (zip code: 34210)

1102. cindy curran (zip code: 04008) The planet is already too warm...stop this madness

1103. Dr. C. Grace (zip code: 95501) 1104. Lucinda Utesch (zip code: 90241) 1105. Cindy Bushway (zip code: 34953)

1106. Cynthia Campbell (zip code: 13320) Fracked gas is not the bridge to the future it is a very costly mistake

1107. Cindy Lance (zip code: 96822)

1108. Cindy Mannhalter (zip code: 85123)

1109. Cindy Eichacker (zip code: 11772)

1110. Cynthia Wuerth (zip code: 47630)

1111. Carolyn Harding (zip code: 43209)

1112. Cinzia Paganuzzi (zip code: 90405)

1113. Charlene Perry (zip code: 28805)

1114. Charles Comer (zip code: 22842)

1115. C.Jean Boomershine (zip code: 50322)

1116. Courtney Stefano (zip code: 10805)

1117. Colleen & Joe - Working Families O'Meara (zip code: 55411)

1118. Rita Salner (zip code: 92284)

1119. Carol Jurczewski (zip code: 60546) There need to be brakes put on all these pipeline projects!

1120. Cheryl Kallenbach (zip code: 83555) Fracking pollutes ground water - proven fact. Fracking causes earthquakes - Ask Oklahoma. Fracked gas adds to global warming - no questions there. So - you want to tell me again why you are thinking about approving any more pipelines ? ?

1121. Clinton Chamberlain (zip code: 75224) 1122. Chad Johnson (zip code: 90806) 1123. courtney keppelman (zip code: 92651)

1124. Cyndi Kerr (zip code: 34207) Stop this insanity - how anyone thinks fracing is safe is beyond me. The process literally will tear this planet up and cause inhospitable conditions on this earth.

1125. Cynthia Kester (zip code: 68142-1608)

1126. Charles Keuler (zip code: 54130) 1127. Kevin Grady (zip code: 22980) 1128. Art Stroede (zip code: 53216) 1129. Carol KieKow (zip code: 56069) 1130. Carol Kodner (zip code: 8550) 1131. Charleen Kubota (zip code: 94611) 1132. Claudia Kuehl (zip code: 11959) 1133. Carol Kuelper (zip code: 94602) 1134. Claire Hall (zip code: 14564)

1135. Claire McGowan (zip code: 40094) 1136. Claire Garden (zip code: 65203)

I plan to get rid of all my gas appliances because I'm that opposed to fracking. 1137. Clairone Delaney (zip code: 20708)

COMPANIES/ORGANIZATIONS COMMENTS

CO31 – Oil Change International (cont'd)

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1138. **Christina Lane** (zip code: 80123) As a Colorado resident, I see how quickly fracking wells are going up and it reminds me how little the industry is regulated. I avoid living in areas where I know the gas and chemicals used can contaminate drinking water and feel horribly for those who live near wells. In 2016, United States citizens should not have to be thinking about where they are living because of the possibility of contaminated water. Lastly, the constant expansion of pipelines is taking away the rights of too many people for the profit of too few.

1139. **Barbara Clark** (zip code: 55127) 1140. **Clark Peters** (zip code: 06340) 1141. **Ted Clark** (zip code: 30507) 1142. **Jude Clark Warmisher** (zip code: 93402) 1143. **Claude Guillemard** (zip code: 21093)

1144. **Claude Lingen** (zip code: 78745) 1145. **Claudia Richner** (zip code: 64089) 1146. **Carolyn Massey** (zip code: 62301) 1147. **John Clay Clay** (zip code: 78681) 1148. **Gretchen Clay** (zip code: 98225) 1149. **MaryAnn Nellis** (zip code: 13317) 1150. **Carol Blaney** (zip code: 92373) 1151. **Christopher Lee** (zip code: 60626-2676) 1152. **James Cleek** (zip code: 75081) 1153. **Bruce L Wallace Wallace** (zip code: 92084-4207) 1154. **robert clemens** (zip code: 11559) 1155. **Richard Clemens** (zip code: 12345)

1156. **Clifford Phillips** (zip code: 01360) The US has committed to restraining greenhouse gas emissions as a means of protecting human survival as the climate warms and grows more unstable. When FERC works to approve the development of new pipelines for carbon fuels, it is knowingly thwarting this necessary climate protection. Therefore, FERC is wantonly abetting carbon energy companies to control the energy supply while endangering life on the planet. FERC is a rogue agency.

1157. **Clive Smith** (zip code: 07901) 1158. **Cindy Moeckel** (zip code: 06278)

1159. **Carol Neill** (zip code: 66223) more fracking = more pollution + more earthquakes!

1160. **George Summers** (zip code: 98144) 1161. **Don Cloud** (zip code: 34235) 1162. **Lawrence Lintner** (zip code: 33954) Stop poisoning our water and land

1163. **Lawrence Lintner** (zip code: 33954) No more fossil fuels!

1164. **Chris Lumpkin** (zip code: 22401) 1165. **Wendi Myers** (zip code: 34683) 1166. **Charlene Maker** (zip code: 02837) 1167. **Cristina Malcolmson** (zip code: 04103) 1168. **Charles Marslett** (zip code: 78660) 1169. **Claudia Martins** (zip code: 33015) 1170. **Cheryl McColley** (zip code: 55071) 1171. **colleen mcwilliams** (zip code: V6H1P2)

1172. **Clare Deucher** (zip code: 01430) It is time that FERC stopped working for oil/gas company interests, and started representing the needs and desires of the nation's citizens.

1173. **Carol DiPirro** (zip code: 03054) 1174. **Christopher Ware** (zip code: 94539) 1175. **Cynthia Merkey** (zip code: 34476) 1176. **Christine Harris** (zip code: 48152)

1177. **Constance Mitchell** (zip code: 28804) Let's quit the gas business and focus on renewables! Too many dangers with getting, moving and using fossil fuels. Period!

1178. **martin niemi** (zip code: 99824) 1179. **Carol Mock** (zip code: 94536) 1180. **Cindy Moczarnay** (zip code: 60707) 1181. **Corrine Mohnasky** (zip code: 20724)

1182. **Jeff Moore** (zip code: 31406) I approve of the pipelines. Fracked gas is clean energy. Pipelines are safe and dependable. More fracking! More pipelines. Greenhouse gasses are a small and manageable part of air quality.

1183. **Carlotta Ripley** (zip code: 49120) 1184. **Connie Stomper** (zip code: 93101) 1185. **Carol Smerling** (zip code: 33433) 1186. **Matthew Franck** (zip code: 08904) 1187. **Lowell Huber** (zip code: 54732) 1188. **Suzanne Pruden** (zip code: 98465) 1189. **Jean G. Cochran** (zip code: 91767-2075) 1190. **Courtney England** (zip code: 77043) 1191. **Marcia Halligan Halligan** (zip code: 54665) 1192. **Elan Morin** (zip code: 97477)

1193. **daniel cohen** (zip code: 11360) 1194. **Carolyn Kendall** (zip code: 17543) 1195. **Steve Coker** (zip code: 90034) 1196. **Paul Cole** (zip code: 33460) 1197. **Colette Slade** (zip code: 48103) 1198. **Colin Fiske** (zip code: 95519) 1199. **Colin Kay** (zip code: 60477) 1200. **Jason Fish** (zip code: 95355)

1201. **Colleen McMullen** (zip code: 84741) 1202. **Colleen Carter** (zip code: 91387) 1203. **Collin Rees** (zip code: 68845) 1204. **Richard Kite** (zip code: 12345) 1205. **Judy Price** (zip code: 43614)

1206. **Joyce Cotter** (zip code: 30033) 1207. **Johni Prinz** (zip code: 98520) 1208. **Paula Neville** (zip code: 14626-1345) 1209. **ronald brown** (zip code: 80501-5504) 1210. **KM Smith Smith** (zip code: 46256)

1211. **LuMarion Conklin** (zip code: 86005) Have you heard those in power to make change??? Science tells us Global Warming needs immediate attention if we intend to survive the life, on this beautiful planet, that we have been accustomed to.

1212. **Constance Lombardo** (zip code: 28806) 1213. **Constance Engle** (zip code: 28739) 1214. **Constance Fiske** (zip code: 59634) 1215. **Bruce Blackwell** (zip code: 32608) 1216. **Patty Martin** (zip code: 78633)

1217. **Joy & Mike Cook** (zip code: 30143) 1218. **robert luke** (zip code: 95603) 1219. **Joelle Cooper** (zip code: 13042) 1220. **Katherine Cooper** (zip code: 45385)

1221. **Carotyn Cooper** (zip code: 19138-2115) 1222. **Ann Davidson** (zip code: 60613) 1223. **Patty Corbett** (zip code: 59801) 1224. **Bruce Smith** (zip code: 48216)

1225. **Johanna Miller** (zip code: 29455) 1226. **Corrine DiMarco** (zip code: 32812) 1227. **Corinna Hasbach** (zip code: 89502) 1228. **Constantine Bogios** (zip code: 94597) 1229. **Gérard COUCHOUD** (zip code: 91120) 1230. **Sammy Low** (zip code: 98292)

1231. **mike schuster** (zip code: 98244) 1232. **John Coughlin** (zip code: 60546) 1233. **Brad Davis** (zip code: 25438) 1234. **William Sosa** (zip code: 93033) 1235. **Yves Decargouet** (zip code: 95458) 1236. **Dick And Muriel Cowing** (zip code: 97267)

1237. **Carol J. Painter** (zip code: 14850)

1238. **Carole Pappas** (zip code: 48439) 1239. **Carol Pennington** (zip code: 78652) 1240. **Chas Griffin** (zip code: 27376) 1241. **Carol Plantamura** (zip code: 92121-1905)

1242. **donald taylor** (zip code: 95628)

1243. **Cynthia Loewy** (zip code: 11104)

1244. **Christine Popowski** (zip code: 55408)

1245. **carole gathman** (zip code: 94949)

1246. **Craig Provost** (zip code: 84103)

1247. **Conrad Prybe** (zip code: 60631)

1248. **Phillip J Crabill** (zip code: 75068)

1249. **Craig James** (zip code: 80004) Enough!

COMPANIES/ORGANIZATIONS COMMENTS

CO31 – Oil Change International (cont'd)

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1250. Craig Parker (zip code: 76137) 1251. Craig Officer (zip code: 60649) 1252. Dr. Craig Coelho Coelho (zip code: 02915)
1253. Craig Peariso (zip code: 83702) 1254. Carina Ramirez (zip code: 79907) 1255. Lawrence Altman (zip code: 02141) 1256. Cynthia Bauer (zip code: 15229) 1257. Kurt Haumesser (zip code: 85712)
1258. Robert Elliott (zip code: 89108) like all addicts, Americans need to stop living in denial & stop using their substances of choice & we MUST force ourselves to make the break from fossil fuel to alternatives, post haste.
1259. Sandra Lynn (zip code: 78620) 1260. Cathy Cretser (zip code: 95688) 1261. Kathleen Cridge (zip code: 95975)
1262. Colleen McGlone (zip code: 34655) 1263. Dena Radley (zip code: 24590) 1264. F Cronshaw (zip code: 87059) 1265. Clare Rosenfield (zip code: 10530) 1266. Bob Haugen (zip code: 55422) 1267. C S (zip code: 10625)
1268. Cassio Saverino (zip code: 85381) 1269. Curt Sayers (zip code: 3077) 1270. Carol Berkowitz (zip code: 33498) 1271. Cyprienne Schroepel (zip code: 96303)
1272. Cheryl Rawson Rawson (zip code: 98116) Do the right thing-Stop shilling for these greedy corporations that have suppressed clean energy for over 100 years. They have destroyed the planet, bought off politicians and change is imperative-embrace it
1273. Carolyn semiglasow (zip code: 78748) * these pipelines would be a disaster for the climate, as well as huge risks to communities threatened by explosive pipelines and fracking dangers.
1274. Anne Springall (zip code: 73120) 1275. Carol Steinsapir (zip code: 11210) 1276. Carol Stokrocd (zip code: 33004)
1277. Carolyn Summers (zip code: 10706) 1278. CT Bross Bross (zip code: 94597) 1279. Chris B. (zip code: 90746)
1280. Christine Telega (zip code: 32110) Please stop this. The sooner we start working on other ways of producing energy the better. There are jobs that will be created and a whole new industry that will require supply businesses and other forms of employment. We should be moving FORWARD, not back into the 18th century. Our land and water is finite.
1281. CYNTHIA FEINBERG (zip code: 72227) 1282. Craig Todd (zip code: 45224) 1283. Calum Traveler (zip code: 80401) 1284. Dr William M Smith Jr (zip code: 33042) 1285. Victor Vuyas (zip code: 94109)
1286. Carmen Redding (zip code: 21206) 1287. Marcia Curry (zip code: 78641) 1288. Curtis Eckstein Eckstein (zip code: 54311)
1289. Curtis Hageland (zip code: 98221) Fighting the climate crisis will cost billions. Failing to fight the climate crisis will cost untold trillions, and billions of people will die. Our Earth will suffer unimaginably, important and iconic animal species will become extinct, our descendants will revile us for doing nothing while our only home burns. DO SOMETHING, NOW!
1290. Anna Cushman (zip code: 49024) 1291. Vic Burton (zip code: 64113) 1292. Caroline Duley (zip code: 37208) 1293. Catherine O'Brien (zip code: 87145) 1294. Lynn Armstrong (zip code: 94530) 1295. Carrie Walker (zip code: 5301) 1296. Chris Washington Washington (zip code: 10019) 1297. Wesley Wolf (zip code: 60010)
1298. Christine Wight (zip code: 01944)
Stop the non-renewable nonsense. It is entirely unethical. It represents a bunch of hoodlums ignoring worldwide goals and agreements for which we are accountable. I'm not speechless, I am insulted at the insufferable audacity of immature govt. actions. Stop it.
1299. Conrad Willeman (zip code: 01950-3124) 1300. Christopher Wilson (zip code: 05150) 1301. Celeste Winterberger (zip code: 27616) 1302. Sandra Boylston (zip code: 32773)
1303. Cynthia Liss (zip code: 11228) 1304. Cynthia McMath (zip code: 95415) 1305. Cynthia Papermaster Papermaster (zip code: 94703) 1306. Cynthia Williams (zip code: 83706) 1307. Mary Davis (zip code: 97206) 1308. Josh Cupriks (zip code: 08904) 1309. David saul (zip code: 97405) 1310. David Goldsmith (zip code: 98502) 1311. Donna Lober (zip code: 56101) 1312. Don Bush (zip code: 9066) 1313. Dacia Murphy (zip code: 85295) 1314. Dwight Cope (zip code: 37694) 1315. Deb Fritzer (zip code: 24521) 1316. Dagny SanMiguel (zip code: 55615) 1317. Karen Dahn (zip code: 45701) 1318. David A Lawrence (zip code: 07950) 1319. Norman Haussner (zip code: 31030) 1320. Dale Lacognata (zip code: 46256) 1321. Dale Lacognata (zip code: 46038) 1322. Dale Matlock (zip code: 95065-1226) 1323. dave alexander (zip code: 90706) 1324. Daniel Beltran (zip code: 06905) 1325. dennis allen (zip code: 93103)
1326. Dalton Valerio (zip code: 87107)
1327. Doug McGee (zip code: 98204)
1328. Laura Dame (zip code: 12983)
1329. Dennis Nagel (zip code: 80304)
1330. Dan Streiffert (zip code: 98630)
1331. Dan Brennan (zip code: 07073)
1332. Dana Beck (zip code: 74631)
1333. Lilli Ross (zip code: 10024)
1334. Mark Peltan (zip code: 48035)
1335. Sandy Rasich (zip code: 87507) No more leaky pipelines, exploding trains, fracked water supplies, leave it in the ground.
1336. Robert Bruckman (zip code: 19280) 1337. Debra McCullough (zip code: 60563) 1338. Ann Distin (zip code: 00000) I am so concerned about the change in the weather we are already experiencing and feel that this whole project should be held off until the safty can be assured and further investigation into free energy is looked at more thoroughly
1339. Daniel Wilkinson (zip code: 90908) 1340. kay morgan (zip code: 98814) 1341. Daniel Freese (zip code: 55447) 1342. Dan Dowdall (zip code: 96761) 1343. Daniel Schlagel (zip code: 10036) 1344. Danielle Donaldson (zip code: 80305) 1345. daniel huser (zip code: 37405)
1346. kent driskell (zip code: 33461)
1347. Daniel North (zip code: 19702) Fossil fuels are now obsolete compared to any renewable energy source. So why are we going backwards by approving any fossil fuel pipelines?
1348. Daniel Demetzy (zip code: 44039) 1349. Dan Goldberg (zip code: 95960) 1350. Daniel Grossberg (zip code: 17043)
1351. Nancy D'Antuono (zip code: 46617) 1352. Daphne Lambright (zip code: 33647) 1353. Dara Murray (zip code: 10065)
1354. Darlene Bordwell (zip code: 14527) 1355. Darcy Parsons (zip code: 90230) 1356. Darcy Bergh (zip code: 55115)
1357. Darcy Schreiner (zip code: 48158)

COMPANIES/ORGANIZATIONS COMMENTS

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1358. Ron Vanuszewski (zip code: 19966) 1359. Gall Tinsley (zip code: 93117) 1360. Darlene Hissem (zip code: 76234) 1361. Diana Rothman (zip code: 95060) 1362. Anne Golub (zip code: 19056) 1363. Daryl Denning (zip code: 14830) 1364. Dan Schwartz (zip code: 18014) 1365. Sally Kille (zip code: 43560) 1366. David A. Smith (zip code: 92617) 1367. D E SMITH (zip code: 55432) 1368. Dale Shero (zip code: 32034) 1369. Deborah Auer Auer (zip code: 96145) 1370. Kelly Reed Daulton (zip code: 93465) 1371. David Dorn (zip code: 94551) 1372. David Allington (zip code: 49333) 1373. David Goodlin (zip code: 05661) 1374. David Allen (zip code: 14867-9769) 1375. Dave Clemens (zip code: 17847) 1376. David Doering (zip code: 94109) 1377. Dave Weinkauff (zip code: 16406) 1378. David Zaccagnino (zip code: 91786) This country needs to transition to being completely powered by clean/renewable/solar energy ASAP and "retiring" the fossil fuel industry immediately!!!!!!!!!!!!!!!!!!!!!! 1379. David Zajac (zip code: 06010) 1380. David Gilbert (zip code: 10954-2527) 1381. David Bursky (zip code: 19096) 1382. David Greene (zip code: 15642) 1383. Helen Gill (zip code: 22151) 1384. David Jackson (zip code: 98204) 1385. David Levy (zip code: 94133) 1386. David Turnbull (zip code: 94609) 1387. David Scharf (zip code: 90039) 1388. David Boggeman (zip code: 59718) 1389. David Stetler (zip code: 98034) 1390. David Landskron (zip code: 33884) 1391. David Neuendorff (zip code: 43620) 1392. Dave Seaborg (zip code: 94598) 1393. David Newlin (zip code: 20132) 1394. Sharon Davidson (zip code: 61523) 1395. David Zebker (zip code: 94102) 1396. Jacqueline D. Davis (zip code: 98926) 1397. David Joseph (zip code: 68505) 1398. Dawn Albanese (zip code: 60007) 1399. Dawn Malone Malone (zip code: 98148) 1400. Peter Dachs (zip code: 98125) 1401. David Braun (zip code: 94619) 1402. David Ball (zip code: 01060) 1403. Debra Barnhardt (zip code: 55422) No more lip service- the actions of the federal government must align with stated goals. 1404. Donald Cooney (zip code: 87505) 1405. Dan Crawford (zip code: 24018) Our only future depends upon reducing fossil fuel use. Pipelines go in the wrong direction. 1406. Deirdre Brownell (zip code: 91504) 1407. Dana Beebe (zip code: 98106) 1408. David Kagan (zip code: 17740) It is clear that we need to FND hydraulic fracturing as a source of the nation's energy. It is too damaging to the environment in a number of ways, and dangerous to human health. 1409. Barbara Kwassin Kwassinik (zip code: 7834) 1410. Diane Bolman (zip code: 94949) 1411. David Nelson (zip code: 85715) 1412. Dorothy Boxhorn (zip code: 53188) 1413. DeLane Bredvik (zip code: 80809) 1414. David Vigil (zip code: 81089) 1415. Dotty Caldwell (zip code: 04476) 1416. Deborah Cheek (zip code: 61054) 1417. Dorian Carl-Jones (zip code: 10029) 1418. Dori Grasso (zip code: 21030) 1419. Diane Chaffigny (zip code: 01950) 1420. David Arntson (zip code: 98012) 1421. Diane Petrillo (zip code: 06518) 1422. Daniel Podell (zip code: 95404) 1423. Donna Crane (zip code: 96007) 1424. Robin Gorges (zip code: 5602) 1425. deborah cady (zip code: 6042) "It is horrifying that we have to fight Our Own Government to save the Environment." Ansel Adams 1426. G wagner (zip code: 80226) 1427. Donette Erdmann (zip code: 53081) 1428. Dan Degoyer (zip code: 2144) 1429. Danielle J (zip code: 84017) 1430. Dan Doecker (zip code: 44883) 1431. Dianne Douglas (zip code: 85042) 1432. daniel chauvin (zip code: 85029) ALL pipelines leak. Just look to Kinder Morgan. All their pipes are leaking all the time. 1433. Don Dumond (zip code: 97402) 1434. Dorothy Dwight (zip code: 60626) 1435. Elizabeth Barwell (zip code: 07731) fossil fuels need to be left in the ground== sustainable energy and birth control are needed for a sound planet and human survival 1436. Deanka Grisham Grisham (zip code: 30236) 1437. Sue E. Dean Dean (zip code: 85266) 1438. Amy Nelson Nelson (zip code: 95035) 1439. Deb Lincoln (zip code: 50322) 1440. Deb Lincoln (zip code: 50322) 1441. Debra Cook (zip code: 32904) 1442. Debbie Bonnet (zip code: 32176) 1443. debbi pratt (zip code: 98199) 1444. Deborah Cook (zip code: 02025) 1445. Deborah Goodman (zip code: 02446) 1446. Debbie Lynch (zip code: 33957) 1447. Debra Hoven (zip code: 18064) 1448. Debi Darnell (zip code: 38565) 1449. Debra Combs (zip code: 30033) 1450. Deborah Lipman (zip code: 2906) 1451. Deborah Parker (zip code: 08638) 1452. deborah frankel (zip code: 90049) 1453. DEBORAH SMITH (zip code: 73112) I AGREE!! 1454. Deborah Bernhardt (zip code: 81082) 1455. Deborah Colotti (zip code: 95472) 1456. Deborah Fexis (zip code: 3290) 1457. Deborah Stacy (zip code: 06825) We simply must do everything humanly possible to reverse climate change. 1458. Deborah Steiner (zip code: 28227) 1459. Don Dieckmann (zip code: 62002) 1460. Diane Danby (zip code: 80542) 1461. Dorothy Wilkinson Wilkinson (zip code: 90027-5722) 1462. Donna Geathouse Neet (zip code: 98045) 1463. Deenie Tallant (zip code: 75077) 1464. Lisa Schoutr (zip code: 71929) 1465. Daniel Higgins (zip code: 02170) 1466. Dawn Wilson (zip code: 97202) Stop burying your heads in the wells! We have a responsibility to humankind and the planet to make changes NOW, because you (WE) won't get a second chance. 1467. Jon Drucker (zip code: 19143) 1468. Nancy Henderson (zip code: 01773) 1469. Dorothy Anderson (zip code: 23185) When we know better, we are required morally and intelligently to do better. We DO NOT have the right politically or for profit to destroy the only planet we have. What makes us think we have the power or politically or moral right to do so? 1470. Del Hardesty (zip code: 22306) 1471. George Ball (zip code: 90301) 1472. Danny Ellsworth (zip code: 92111) 1473. Del Gomes (zip code: 06489) 1474. Tim DeLong (zip code: 50312) 1475. Priscilla Rocco (zip code: 92626) 1476. Mary Nelson (zip code:) 1477. Denia Price (zip code: 13104)

COMPANIES/ORGANIZATIONS COMMENTS

CO31 – Oil Change International (cont'd)

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1478. Denise Thomas (zip code: 55118-2243) 1479. DENISE KASTNER (zip code: 46356) 1480. Denise Fogel (zip code: 55409)
1481. Denise Kobylarz (zip code: 07440) We need LESS fracking and pipelines and more energy spent on safer solutions. The fossil fuel industry's only concern is their bottom line - not the safety of people and certainly not their destruction of ecosystems and the environment.
1482. Dennis Desmarais (zip code: 06033) 1483. dennis b (zip code: 94007) 1484. Dennis Kent (zip code: 96726) 1485. Dennis Yee (zip code: 85250)
1486. Dennis Alamen (zip code: 55113) 1487. Kathy Dervin (zip code: 94707) 1488. Tom Smith (zip code: 92105) 1489. Desiree Crownover (zip code: 43212) 1490. D Durham (zip code: 70124)
1491. Deborah Pert (zip code: 94930) 1492. DONALD BURGESS (zip code: 03038) 1493. Deb Federin (zip code: 92037) 1494. David Gardner (zip code: 90405) 1495. Dick Gary (zip code: 84060) 1496. Don Glass (zip code: 77365) 1497. Dan LeMieux (zip code: 54311)
1498. Don Gawronski (zip code: 53207) 1499. Dick Gray (zip code: 81401) 1500. Daniel Thayer (zip code: 87144) 1501. Marc Silverman (zip code: 90068-3071) 1502. Theresa Owens (zip code: 95501) 1503. Debra heatherly (zip code: 60047) 1504. Domingo Hermosillo (zip code: 98117) 1505. Donna Hernandez (zip code: 65616) 1506. Dianne Herrick (zip code: 14554)
1507. Denis Langhans (zip code: 98502) 1508. Deborah Howe (zip code: 32919) 1509. David Holmes (zip code: 33407)
1510. Darcia hurst (zip code: ARLINGTON) 1511. Don Hyatt (zip code: 43221)
1512. Smith (zip code: 55109)
1513. DIA REDMAN (zip code: 55411)
1514. Diana Douglas (zip code: 10033)
1515. Diana Gazzola (zip code: 6241)
1516. Diana Smith (zip code: 97759) Please, NO MORE pipelines!
1517. D. ROWE (zip code: 90403) 1518. Diana Munch (zip code: 49033)
1519. diana sue (zip code: 39564) Please helpys help you.
1520. Diane Wesson (zip code: 91945)
1521. Diane Brown (zip code: 55109)
1522. D Berl (zip code: 18080)
1523. Diane Hoffman (zip code: 06514)
1524. Diane Huffine (zip code: 80435)
1525. Diane Luck (zip code: 97212) We need CLEAN ENERGY, not dirty coal. Please don't allow any more pipelines!
1526. Diane Nowak (zip code: 86324) 1527. Diane Wright (zip code: 60201) 1528. Diane Vandiver (zip code: 60440) 1529. Dianne Miller (zip code: 92103) 1530. Dick Dierks (zip code: 54911) 1531. Richard Franken (zip code: 53713) 1532. Steve Dickman (zip code: 13850) 1533. Diana Crowson (zip code: 87031) 1534. Diego Almora (zip code: 91423) 1535. Judith Shane (zip code: 48840) 1536. S. Robertson (zip code: 01545) 1537. Diana Gordon (zip code: 13126) 1538. Tristan Barber Barber (zip code: 75650)
1539. Ian Murray (zip code: 95405) 1540. DIRK REED (zip code: 95073) 1541. Dirk Faegre (zip code: 4607) 1542. Samuel LaSalle (zip code: 83703-7017) 1543. Jennifer Cox (zip code: 40222)
1544. Patricia Dishman (zip code: 37221) 1545. Joyce schwartz (zip code: 32714) 1546. k* (zip code: 60618) 1547. Tim Baxter (zip code: 36696)
1548. Debbie Sterchio (zip code: 34655)
1549. LINDA K DIVITTORIO (zip code: 02645)
1550. James & Yvonne Title (zip code: 10462-2461)
1551. Dennis Ivy (zip code: 30305-2104)
1552. Dawn Demaske (zip code: 55106)
1553. donald hnatowich (zip code: 02446)
1554. Alex Oshiro (zip code: 96822)
1555. david sorkin (zip code: 06511)
1556. Dorothy Varellas (zip code: 94124) No fracking, no clean fresh water for fracking, no more oil! We need to save our planet!
1557. Donald Wilson (zip code: 19111) 1558. David Kalb (zip code: 13068) 1559. David Kallechey (zip code: 30308)
1560. David Kannerstein (zip code: 19444) 1561. david kissinger (zip code: 08330)
humans cannot do it right
1562. David Klingel (zip code: 48169-9016)
1563. K Lyle (zip code: 98335)
1564. Daniel Marks (zip code: 44122)
1565. Donald Lagherza (zip code: 11375)
1566. donna dombrowski (zip code: 54407)
1567. Diane Millican (zip code: 98033)
1568. Dorothea Leicher (zip code: 16914-7610) If we don't keep it in the ground our children won't have q world to live in (just living hell)
1569. Terry S.C. (zip code: 93455) 1570. Diane Yanas (zip code: 92313) 1571. Darlene Young (zip code: 55414) 1572. Dean Webb (zip code: 98199) 1573. Dena Maguire Young (zip code: 30533) 1574. David Cobb (zip code: 32257) 1575. Barbara Mason (zip code: 95008) 1576. Diane Bernardi (zip code: 60068) 1577. Dorothy Jackson (zip code: 08550) 1578. Debra Greenberg (zip code: 75967) 1579. Donna Martin (zip code: 25571)
1580. Mary Schultz (zip code: 54982) 1581. Denise Tschann (zip code: 97520) 1582. Donald Nelson (zip code: 21133)
1583. Diane Kingsolver (zip code: 34667) 1584. Donald Noel (zip code: 52217-5968)
1585. Dorothy Rocklin (zip code: 2176) There should be NO pipelines approved. We MUST reach our climate goals and more pipelines and fracking are not compatible with these goals!

COMPANIES/ORGANIZATIONS COMMENTS

CO31 – Oil Change International (cont'd)

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1586. Douglass Reeves (zip code: 10003)
1587. Stan Miller (zip code: 63343)
1588. Jonathan Hartman (zip code: 33069)
1589. Robert Gabriel (zip code: 98506)
1590. Diane O'Donnell (zip code: 10301) Keep it in the ground!
1591. Patricia Sanitate (zip code: 97448) 1592. Kayleigh Wilson (zip code: LAM 1Z4) 1593. Kathleen Alexander (zip code: 77007) 1594. Mark Miser (zip code: 48879)
1595. Loretta Henger (zip code: 85351-3186) 1596. Leigh Hart (zip code: 27514) 1597. Dollie Moir (zip code: 85546) 1598. Lols Kaufmann (zip code: 32960) 1599. Dolores Arndt (zip code: 79423)
1600. Dolores Zieser (zip code: 52001)
1601. Don van Rhyn (zip code: 06878)
1602. DONALD ALTER (zip code: 94611)
1603. Don Patterson (zip code: 21012)
1604. Donald Munn (zip code: 98208)
1605. Donald Dimock (zip code: 97361)
1606. Donald Shaw (zip code: 33703-3418)
1607. Donald Seeger (zip code: 40214)
1608. David Horne (zip code: 78209) basta! nomasno!
1609. Joanne Linden (zip code: 07016) 1610. Donna Becker (zip code: 30327) 1611. Don Barth (zip code: 23005) 1612. Donna Kerpelman (zip code: 21093) 1613. donna panza (zip code: 95949)
1614. donna b (zip code: 33604) We are having earthquakes because of fracking. STOP! Protect our environment before it becomes unable to sustain human life.
1615. Donna Blue (zip code: 40502) 1616. Donna Carr, M.D. Carr, M.D. (zip code: 92024-2241) 1617. Donna D'Arco (zip code: 34236) 1618. Donna Fountain (zip code: 90242-3637) 1619. Donna Hanson (zip code: 99163)
1620. Donna Leavitt (zip code: 98026) 1621. Donna Malvin (zip code: 23185) 1622. Donna Bonetti (zip code: 80303) 1623. Donnell Sutherland (zip code: 65043) 1624. Donnie Bryan (zip code: 93447) 1625. Donovan Williams (zip code: 77449)
1626. Donald Hunt (zip code: 85143)
1627. Donald J. Shaw (zip code: 13210-2704) 1628. Don Grierson (zip code: 90046) 1629. Don Vergara (zip code: 06907) 1630. Don Der (zip code: 37043)
1631. dorinda kelley (zip code: 97220) 1632. Doris J. Katzen Katzen (zip code: 95001-1284) 1633. Dorothy Edwards (zip code: 33020) 1634. Dorothy Lambert (zip code: 37202) 1635. Dorothy Roeder (zip code: 85050) 1636. Dorothy Stoner (zip code: 60103) 1637. Elaine Dough Johnson (zip code: 53538) 1638. dorian canallzo (zip code: 34655) 1639. William, Margaret Holcomb and FAMILY (zip code: 28782-4547) 1640. David Osterhoudt (zip code: 92688)
1641. Peri Doubleday (zip code: 72207) 1642. Douglas Luthly (zip code: 80537) 1643. Douglas Godfrey (zip code: 01833) 1644. Doug Ross (zip code: 19010) 1645. Michaels Patricia (zip code: 80525) 1646. Debbie Peters, JD (zip code: 10471) 1647. david ashbaugh (zip code: 4832-0175) 1648. David Passmore (zip code: 95421) 1649. DuWayne F. Paulick (zip code: 14606) 1650. dan pedrick (zip code: 18414)
1651. Don Hon (zip code: 55418) 1652. Charlotte Pirch (zip code: 92708) 1653. David Plum (zip code: 44685) 1654. David Miller (zip code: 02130) 1655. Dennis Pocekay (zip code: 94952) 1656. Darlene Townsend (zip code: 99202) 1657. Mike Ferguson (zip code: 56001) 1658. Thaddeus Sonnenfeld (zip code: 87801) 1659. Sandra Sobanski (zip code: 11218) 1660. Linda McKillip (zip code: 08081) 1661. Dragos Alondru (zip code: 11303)
1662. A. Obermeier (zip code: 87123-5785) 1663. Debbie Rasmussen (zip code: 95966) 1664. Deborah Barnes (zip code: 74023) 1665. William Kildall, Ed. D. (zip code: 98362) 1666. Clifford Rot (zip code: 60123)
1667. Daphne Figueroa (zip code: 92107) 1668. Andrea Stllwell (zip code: 95409) 1669. Cinthia Davey (zip code: 54638)
1670. Emily Rothman (zip code: 87110)
1671. Donna Etheridge (zip code: 27607) Keep it in the ground. This current economic model is not sustainable and will come crashing down eventually, sooner rather than later. Wake up! Greed is making you stupid.
1672. David R. Hirst (zip code: 98401) 1673. Danielle Rice (zip code: 32789) 1674. carol fertig (zip code: 14424) 1675. Derek Monroe (zip code: 99501) 1676. Dr. Cynthia Lewis (zip code: 93465) 1677. Mr & Mrs Dennis Roderigues (zip code: 33781) 1678. Bro Green (zip code: 01851)
1679. Stephen Urciuoli (zip code: 06883) 1680. David Quinn (zip code: 30033)
1681. mary Snow (zip code: 32118) As a nation, we should be building our renewable infrastructure. Methane is 21 times more potent a greenhouse gas than carbon dioxide over the short term and 86 times more in the long term. WHY would we want to build carbon pipelines and not transmission lines for solar and wind? Thin film solar should be mass produced and sold at the low cost its originator, Stan Ovshinski, made possible. Gasoline from crude oil, coal and MTR, methane and its extreme extraction method, fracking, are retro and archaic. Fossil fuels stink!
1682. Donald Ruehlow (zip code: 53821)
1683. Lena Guyot (zip code: 13337) Other modern countries have demonstrated that fossil fuel energy is not only backward, but something that can be replaced by renewable energy strategies, so why is the US clinging to the stupidity of the last century?
1684. Duane Grindstaff Grindstaff (zip code: 98042-5706) 1685. Julie Viergutz (zip code: 44109)
Greedy oil and gas companies cannot be allowed to destroy our environment. No more fracking!! 1686. S. Deirdre Sandstrom (zip code: 97214) 1687. D Schoech (zip code: 76012) 1688. Ruth Darden (zip code: 98115)
1689. Sally Gergely (zip code: 44057) 1690. Dona LaSchiava (zip code: 85741)
Our planet can no longer sustain this system!!!!!! 1691. Debra Slater (zip code: 97219) 1692. Deborah Freeman (zip code: 24018) 1693. Daniel Stillwaggon (zip code: 97215)
1694. David Stirling (zip code: 01890) 1695. Susan Torres (zip code: 10512)

COMPANIES/ORGANIZATIONS COMMENTS

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1696. **Dee Storms** (zip code: 21210) Fracking in Pennsylvania polluted the water that a relative had in her home, and she had to buy bottled water until she was able to sell the property for almost nothing. Ended up living in a trailer until she died, heartbroken. The FRRC and other agencies need to stop this proposed new cracked gas pipelines.

1697. **David P Tapscott** (zip code: 01569) 1698. **Donna Thelander** (zip code: 97211-4649) 1699. **dawn turner** (zip code: 21921) 1700. **Duane Welsch Welsch** (zip code: 91711)

1701. **Monica DuClaud** (zip code: 94107) Fracked gas is NOT clean fuel. The extraction process is highly toxic and dangerous. If we are to have a livable future (your too!), you must move away from fracking.

1702. **Aileen McEvoy** (zip code: 14892) 1703. **C K K** (zip code: 53147) 1704. **Dulce Manzini** (zip code: 33186) 1705. **Susan Dunham** (zip code: 01098) 1706. **Rachel Leweks** (zip code: 22802) 1707. **Sister Luanne Durst** (zip code: 54601) 1708. **Duskey Mallory** (zip code: 80003) 1709. **Dylan Nguyen** (zip code: 95035)

1710. **Jorge Tamargo** (zip code: 33165) WHO IS STUCK WITH THE POLLUTION.

1711. **David Hagler** (zip code: 93906) 1712. **Douglas Wagoner** (zip code: 83854) 1713. **david walseth** (zip code: 98684) 1714. **Diana Ward** (zip code: 33713) 1715. **Dwayne Munar** (zip code: 96792) 1716. **Patricia Becton** (zip code: 32003) 1717. **Donald W. Henderson, Ph.D.** (zip code: 14850) Global warming and climate change are driven by the human use of fossil fuels. This fact is no longer debatable. The government must broaden its perspective and include this reality in the consideration and siting of new fossil fuel infrastructure. There is no other viable alternative.

1718. **Douglas Whitbeck** (zip code: 03048) 1719. **David Wodhams** (zip code: 92503) 1720. **David Curarie** (zip code: 44122) 1721. **Diana Young** (zip code: 94609) 1722. **Jennifer Alden** (zip code: 10025) 1723. **Donna Cosgrove** (zip code: 19103) 1724. **Eileen Cantrell** (zip code: 48048) 1725. **Eugene Howard** (zip code: 37064) 1726. **Evan Skallerud** (zip code: 32962) 1727. **Earl Williams** (zip code: 94571) 1728. **ethan Sullivan** (zip code: 73047) 1729. **Ernest Canning** (zip code: 91362) 1730. **Eleanor Anderson-Miles** (zip code: 94804) 1731. **John Earl** (zip code: 35401)

1732. **Etta Robin** (zip code: 93312) 1733. **Mha Atma S. Khalsa Khalsa** (zip code: 90035-3314) 1734. **Dianne Burns** (zip code: 93921) 1735. **Stephanie Scherr** (zip code: 03447) 1736. **jeanne clark** (zip code: 11795)

1737. **Keith Johnson** (zip code: 53573) 1738. **Emily Alma** (zip code: 95928)

The house is burning down - we've got to stop this fire! 1739. **Anita Moloney Moloney** (zip code: 27278) 1740. **Eric Ashley** (zip code: 33334) 1741. **Elaine Benjamin** (zip code: 91901)

1742. **Eric Binder** (zip code: 32803) 1743. **Elaine Cefola** (zip code: 92056) 1744. **Elaine Chaback** (zip code: 12477) 1745. **Ellen Jahos** (zip code: 3602) 1746. **Ellen Henry** (zip code: 14534) 1747. **Edna Cabcabin Moran** (zip code: 94501) 1748. **Elaine Neth** (zip code: 19462)

1749. **eco Actors** (zip code: 234052)

1750. **Scott A. Weir, PhD (Economics)** (zip code: 27704) Remember, for a planet undergoing rapid warming due to the well-understood greenhouse effect, natural gas, especially gas obtained by intensive use of fracking, is NOT an alternative to fossil fuels, just as for an alcoholic beer is not and alternative to whiskey. In both cases, the addict just uses more.

1751. **Dave Scartles** (zip code: 53520-1760)

1752. **Edward Dombroski** (zip code: 05465)

1753. **Edward Armm** (zip code: 07849-1779) I am a disabled veteran and I vote

1754. **ed davie** (zip code: 97116) 1755. **Ed Bruner** (zip code: 63379)

1756. **Edward Goral** (zip code: 91020) 1757. **Edward Day** (zip code: 32829)

1758. **Edgar Kyle** (zip code: 24018) The proposed pipelines would be extremely destructive to natural areas and private property simply to line the pockets of wealthy people. Most or all of the gas is designated for export, so it would not benefit US citizens. Gas will more scarce within a decade or so, especially if we can reduce or eliminate fracking. The destructive pipelines would be for naught.

1759. **Muriel Edgerton** (zip code: 19436) 1760. **Edward Hubbard** (zip code: 53705) 1761. **Edith Ortenberg** (zip code: 90403) 1762. **Edith Frank** (zip code: 10471) 1763. **Edith Ogella** (zip code: 93111) 1764. **Edith Quevedo** (zip code: 92504-3494) 1765. **Jacqueline Scully-clark Scully-Clark** (zip code: 7062) 1766. **Kathleen Edlich** (zip code: 14220)

1767. **Edna Mosig** (zip code: 68847) 1768. **Ed Perry** (zip code: 78132) 1769. **Edguna Thompson** (zip code: 35068) 1770. **Edmund Skowronski** (zip code: 18360) 1771. **Bob Jordan Jordan** (zip code: 63112) 1772. **edward Goldberg** (zip code: 11372) 1773. **Esther Weaver** (zip code: 12528) 1774. **Judith Edwards** (zip code: 60096) 1775. **Edward McGraw** (zip code: 18504)

1776. **Edwin Hurwitz** (zip code: 80305) We are already in danger of blowing past the limits of CO2 emissions that would cause irreparable harm to human life on our planet. As the father of a 4 year old, I hate the idea of having to explain to him in 15 years why we didn't do all we could to keep the carbon in the ground. There is no reason to build this infrastructure except to protect the short term profits of a few at the cost of everyone's future. We should be investing in renewable infrastructure or at the very least infrastructure that is convertible to use for renewables.

1777. **Edwina Nuccio** (zip code: 10710-5002) 1778. **Ed Norris** (zip code: 1775) 1779. **Edward Wolfsohn** (zip code: 28804)

1780. **Edye Calderon** (zip code: 79707) 1781. **Eric Esten** (zip code: 18346)

1782. **Eedy Nicholson** (zip code: 92130) 1783. **Elizabeth Enright Enright** (zip code: 85251-7006)

1784. **Elizabeth Seltzer** (zip code: 19015) STOP DESTROYING OUR PLANET!

1785. **Kellie Martin** (zip code: 53715) 1786. **Marcia Miller** (zip code: 33445)

1787. **Elaine Fischer** (zip code: 24018-2625) ALL pipelines LEAK!

1788. **Erica Frank** (zip code: 98284) 1789. **Eileen Cohen** (zip code: 94702) 1790. **Esther Garvett** (zip code: 33186) 1791. **Gerritt and Elizabeth Baker-Smith** (zip code: 18301) 1792. **Melissa Katterson** (zip code: 15081)

1793. **Emily McDonald** (zip code: 67215)

1794. **Evelyn Griffin** (zip code: 82523) 1795. **Ed Gruver** (zip code: 17601) 1796. **Elke Hoppenbrouwers** (zip code: 06512)

1797. **John Ehrman** (zip code: 32456)

1798. **GRETCHEN EICK** (zip code: 67203) Fracking has produced numerous small earthquakes affecting my Wichita, KS home. Plaster falls off the walls, nails come up from the floor boards. I viewed a documentary on fracking and am very concerned about the long term damage to people.

1799. **Eileen Thompson** (zip code: 22153) Please honor our commitments to the Paris Accord --and to ourselves.

COMPANIES/ORGANIZATIONS COMMENTS

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1800. Eileen Rence (zip code: 97215) 1801. Eileen Macmillan (zip code: 94549) 1802. Eileen Brown (zip code: 19074)
1803. Kerry Leonard (zip code: 53072) 1804. Eliza Anderson (zip code: 05494) 1805. Eric Nilsson (zip code: 95926) 1806.
Earle Kasrejs (zip code: 04275) 1807. Lyn Younger (zip code: 95111) 1808. Eileen Chieco (zip code: 97520) 1809. Edward
K Fujimoto (zip code: 95765) 1810. Lea Ekman (zip code: 22307) 1811. Emmett McMahon (zip code: 92139) 1812.
Elizabeth Williams (zip code: 22924) 1813. Sven Furberg (zip code: 10002)
1814. Elaine Hatsls (zip code: 03904) 1815. Elaine Berg (zip code: 93065) 1816. Elaine Benvenuto (zip code: 80304) 1817.
elaine edell (zip code: 41362)
1818. Elaine Wunderlich (zip code: 20904) 1819. Elaine Wilson (zip code: 90501)
1820. Elaine Becker (zip code: 24018-2625) We ALL need Clean Water and Clean Air! We MUST focus on Clean Renewables
like Solar & Wind power!
1821. Elaine Golden (zip code: 07305) 1822. Dorothy Laub (zip code: 33884) 1823. M. Struble (zip code: 19146) 1824.
Ernest Cooper (zip code: 46203) 1825. Eugene Combs (zip code: 44120) 1826. Edward Colley (zip code: 98926) 1827.
Kelley Matthews (zip code: 85749) 1828. eleanor arons (zip code: 10001) 1829. Eleanor Weisman (zip code: 16335) 1830.
Eleanor Dowson (zip code: 98012) 1831. Elena ALFANDARI SCILLA (zip code: 11552) 1832. Ellen Roth (zip code: 52556)
1833. Elena ennouri (zip code: 94061)
1834. j chenoweth (zip code: 95969)
1835. Erma Lewis (zip code: 11204)
1836. Erma Lewis (zip code: 11204)
1837. Eric Lezotte (zip code: 80220)
1838. Elfie Elms (zip code: 25414)
1839. Cris G (zip code: 20152)
1840. Lacey Hoover (zip code: 33157)
1841. Elihu Cohen (zip code: 13212)
1842. Eliot Brown (zip code: 81435)
1843. Lisa Armendariz (zip code: 92703)
1844. Donald Coppert (zip code: 13157) Please have respect for the environment and all life and stop the pipelines.
1845. Liz Baum (zip code: 65804) 1846. Elizabeth Lowry Lowry (zip code: 98105) 1847. Elizabeth Watts White (zip code:
11563) 1848. Elizabeth Stancilffe (zip code: 60449) 1849. Elizabeth Lyle (zip code: 28743) 1850. Elizabeth Bettenhausen
(zip code: 93428) 1851. Elizabeth Kiernan (zip code: 6877) 1852. Elizabeth Hegarty Hegarty (zip code: 11225) 1853. E
Lopez (zip code: 32750) 1854. Elaine Mayer (zip code: 55901)
1855. Eleanor Rosapapan (zip code: 90278) 1856. Ellen Bardo (zip code: 17756) 1857. Ellen McNeirney (zip code: 20814)
1858. Ellen Berkman (zip code: 20176) Which came first the chicken or the egg ? so also which came first the pipeline or the
fracking ? You can't have one without the other !
1859. Ellen Dionna (zip code: 17315) 1860. Ellen Johnson (zip code: 01119)
"Just say 'NO'."
1861. Ellen Kennedy (zip code: 16505)
1862. Ellen Mayer (zip code: 01085)
1863. Ellen Winer (zip code: 90025)
1864. Ellen Zapf (zip code: 13606)
1865. ellen zapf (zip code: 13606)
1866. Elliot Daniels (zip code: 22206)
1867. Elliot Clymer (zip code: 80211)
1868. Susanne Ellis (zip code: 94112) just can't understand why this isn't obvious to all
1869. Eric Moore (zip code: 85718) 1870. E Robbins (zip code: 19087)
1871. Eloise Swenson (zip code: 06804) These pipelines will encourage fracking, further damaging the environment. This
anti-earth corporate greed is a here-today-ignore-tomorrow attitude that has a day of reckoning awaiting all life on this planet
in the not so distant future. There is a price to be paid for plundering earth's resources and not caring how much damage is
inflicted on the planet in the process. Stop these pipelines. Please.
1872. Eloise Nelson (zip code: 80303)
1873. Esther Racousin (zip code: 14850) 1874. Steve Wise (zip code: 30317-2325) 1875. Elsie Rhodes (zip code: 13326)
1876. Eric Lau (zip code: 60991)
1877. David Elwell (zip code: 20011) 1878. Eileen Mahood-Jose Mahood-Jose (zip code: 7643) 1879. Edward Mainland
(zip code: 94949) 1880. Naomi Baln (zip code: 10002) 1881. Judith Embry (zip code: 01247) 1882. Elaine Cavanaugh (zip
code: 1469) 1883. Elena Carleo (zip code: 27615) 1884. RED MC KENNA (zip code: 11106) 1885. Elena C (zip code:
11360) 1886. Eml Lnk (zip code: 01330) 1887. Emilio Brunetti (zip code: 89084) 1888. Ed Miller (zip code: 12209) 1889.
Emily Hall Hall (zip code: 35209) 1890. Emily Willoughby (zip code: 98188-3250) 1891. Emily Decker (zip code:
49006) 1892. Emily Yang (zip code: 91007) 1893. Elisabeth Hart (zip code: L1J1B7)
1894. Erika Mohs (zip code: 08530) 1895. Emily Dickinson-Adams (zip code: 06093) 1896. eric vance (zip code:
85051) 1897. Kris Aaron (zip code: 80907) 1898. Emma Myles (zip code: 48207)
1899. Eric Norris (zip code: 60649-2732) Fracking is bad for the environment. Fracking pipelines encourage fracking.
Pipelines that leak or burst are bad for the environment. Stop fracking. Stop building pipelines that encourage fracking.
1900. E. Dantuono (zip code: 07302) 1901. Justn McCullough (zip code: 92104) 1902. Norma Raymond (zip code:
78749) 1903. Mark Spevak (zip code: 92808) 1904. Gail Richardson (zip code: 59715) 1905. Enzo Bard (zip code:
11510) 1906. Ellen O'Connor (zip code: 22206) 1907. Elizabeth Handler (zip code: 13205) 1908. Ellen Poist (zip code:
19118) 1909. Paul Epperson (zip code: 34983-3436) 1910. Ellen Stauffer (zip code: 47401) 1911. Julia Marie Gillett Gillett
(zip code: 81432) 1912. Elizabeth Rahn (zip code: 57094) 1913. Ernst Strahm (zip code: 98006)
1914. Eric Lambert (zip code: 97217) 1915. Eric Feshburgh (zip code: 98112) 1916. Eric Dickson (zip code: 33021) 1917.
Eric Andersen (zip code: 54130) 1918. ERIC POLCZYNSKI (zip code: 81147) 1919. Eric Voorhies (zip code: 96746) 1920.
Erik Nielsen (zip code: 05036)

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1921. Erik Husoe (zip code: 92675) 1922. Erik Schnabel (zip code: 94134)
1923. Karl Hamann (zip code: 55066) 2016 is already the hottest year on record. Field workers in this country are dying, oceanic corals are bleaching, and ice sheets are melting at an unprecedented rate
1924. ernie boyd (zip code: 28801) 1925. Ernie Fiedler (zip code: V6K 1B3) 1926. Ernie Loreen (zip code: 98281)
1927. Ellen Taylor (zip code: 20910) FERC needs to radically pivot to ensure that the U.S. meets its commitments under the Paris Agreements.
1928. Liz Garratt (zip code: 46234) 1929. rhoda seidler (zip code: 91436) 1930. Brynn Marshall (zip code: 24333) 1931. Elizabeth Scadova (zip code: 3060) 1932. elisabeth hoffman (zip code: 21029-1233) 1933. Billie Lee Langley (zip code: 90501)
1934. Juanita Romero (zip code: 76106) Pipelines are a disaster for the climate, as well as huge risks to communities threatened by explosive pipelines and fracking dangers.
1935. ed sousa (zip code: 04921) 1936. E.S. Schloss (zip code: 10128)
1937. Sigrid Asmus (zip code: 98199) And what is the fossil fuel industry going to do when the temperature, day and night, is 110 degrees and no food can be grown? That is the real price of fracking, and the time to refuse to pay it is now -- before any leasing, drilling, or pipelines are put in place. I urge you to align your energy policy with climate science, not unaccountable fossil fuel energy interests. We need sustainable energy right now -- there is no Planet B.
1938. John Essman (zip code: 95448) 1939. Kathryn Johnson (zip code: 76201) 1940. E Moreno (zip code: 10977) 1941. Ed Werth (zip code: 78216) 1942. Sheryl Groenberg (zip code: 00831) 1943. Ellen Wolfe (zip code: 10027) 1944. Eugene Majerowicz (zip code: 90008) 1945. Edward La Londe (zip code: 34748-7826) 1946. Evan Oakley (zip code: 11215) 1947. Evan McDermitt (zip code: 92832) 1948. Evanne Christian (zip code: 60626) 1949. Yazmin Gonzalez (zip code: 90706)
1950. Eve Bittel bitte (zip code: 87505) 1951. Evelyn Gomez (zip code: 8534)
1952. April Armstrong (zip code: 70616) 1953. Lowell Palm (zip code: 43168) 1954. Ellen Wasfl (zip code: 19904) 1955. Ellen Williams (zip code: 98110)
1956. Ernie Williams (zip code: 98110) We've made a commitment to protect the climate, fracking is in direct opposition. I urge you to stop projects like Rover and NEXUS.
1957. Wynne Ewing (zip code: 30501) 1958. Bruce Dreyer (zip code: 53221) 1959. Beatriz Pallanes (zip code: 92704)
1960. Jessica Lavish (zip code: 85602) Fracking should be BANNED. What isn't everyone getting about CLIMATE CHANGE?? It's my planet too...we're supposed to be making decisions to SAVE the planet, not DESTROY it even faster. I VOTE NO on any more fracking.
1961. Jennifer Lowans (zip code: 17222) 1962. Laurel Leslie (zip code: 96734) 1963. Michele Langston (zip code: 72076) 1964. Wallace Rhine (zip code: 95421) 1965. Jeanine Fair (zip code: 53578) 1966. Jennifer Weiss (zip code: 14850) 1967. Francis Matri (zip code: 6516) 1968. Fann Harding (zip code: 20009) 1969. Elizabeth Farkas (zip code: 85716) 1970. Qayyum Johnson (zip code: 94965)
1971. Aloona Farrar (zip code: 92083) 1972. Dana Thomas (zip code: 94114) 1973. Blaise Brockman (zip code: 91007) 1974. Kate Kenner (zip code: 2130) 1975. Fay Bracken (zip code: 34108) 1976. Fay Coulouris (zip code: 80111) 1977. Faye Soares (zip code: 95726) 1978. fay forman (zip code: 10001)
1979. Fazilat Ahmadi (zip code: 92592) 1980. Frances Carpenter (zip code: 02903) 1981. Fred Welty (zip code: 44024)
1982. William Huggins (zip code: 89183) Without changing our energy system, we will never meet the targets we need to keep the planet from warming too quickly. As a parent, I would like to leave this place better than it was when I was born. Please work toward a much more rapid transition to clean energy.
1983. Sharon Lee (zip code: 99508) No fracked gas pipelines. They are destructive to the environment and escalate climate change!
1984. F Maria Elias (zip code: 60517) 1985. Felicia Dale (zip code: 98271) 1986. Felicity Devlin (zip code: 98406)
1987. Maggie Schafer (zip code: 80301) WE SHOULD NOT HAVE TO CONSTANTLY FIGHT THESE PIPELINES! YOU ACT LIKE THIS YOUR COUNTY AND YOURS ALONE AND IT IS NOT! YOU SAW THE OVERWHELMING OPPOSITION TO KXL AND YOU ARE SEEING IT AGAIN TO OTHER! THIS COUNTRY AND ITS RESOURCES BELONG TO THE PEOPLE - OUR RIGHTS ARE NOT YOUR TO WHORE AWAY!
1988. Carmen Sanchez (zip code: 95014)
1989. Sondra Sparapani (zip code: 32033) 1990. Greg Allbee (zip code: 76021) 1991. John DuBois (zip code: 98057) 1992. Linda S. Hamilton (zip code: 05445) 1993. Ferold Torchenot (zip code: 21045) 1994. Miguel Silva (zip code: 06095)
1995. Frances Ciollo (zip code: 07646)
1996. Frank McRae (zip code: 90010)
1997. Laurie Stoff (zip code: 85044)
1998. faith franck (zip code: 89135)
1999. Franz von Hirschmann, MBA (zip code: 98374) Building more pipelines will just enrich the kleptocrats by ruining our planet.
2000. Frenzel Gregory (zip code: 48202) 2001. Frances Hoenigswald (zip code: 19143-1869) 2002. Phillip Randall (zip code: 91367) 2003. Scott Finamore (zip code: 34433) 2004. Fiona Priskich (zip code: 90210) 2005. Tammarra Walden (zip code: 85201) 2006. Monica Firely (zip code: 34236) 2007. Deborah Parker (zip code: 98229) 2008. Quentin Fischer (zip code: 24018) 2009. Lori Rose (zip code: 25064)
2010. Mike Lepore (zip code: 91711) 2011. George Casner (zip code: 85023) 2012. nancy hh (zip code: 98520) 2013. Cher Johnson (zip code: 55344) 2014. Jim Campagna (zip code: 94954) 2015. Josephine & Frank Tosiello (zip code: 49684)
2016. Josephine and Frank Tosiello (zip code: 49684) 2017. Fred Karlson Karlson (zip code: 98248)
2018. Frances Marvel (zip code: 63379) 2019. Robert Fladger Fladger (zip code: 97465) 2020. cate renner (zip code: 45403) 2021. Kathleen Broderick (zip code: 14755) 2022. Rose Leather (zip code: 85016) 2023. Phillip Wood (zip code: 98133) 2024. FRED KAMM (zip code: 32703) 2025. Merrill Simring (zip code: 33009) 2026. Beth Wegner (zip code: 61554)
2027. Frankie Winchester (zip code: 21045-4860) We need solar and wind energy, not oil pipelines or gas from fracking. Europe is doing it why can't we? We could if we got oil money out of politics.
2028. frances lynch (zip code: 01907) 2029. Frank and Aimee MAZUCA (zip code: 33813)

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2030. Fred Bonnet (zip code: 96753) 2031. Francisco Dacosta (zip code: 08046)
N/A 2032. Fredrica Meltzen (zip code: 17325) 2033. Fran Molnar (zip code: 43551) 2034. Mir Scott (zip code: 64012) 2035. Floyd O'Brien (zip code: 95204) 2036. Karen Hardin (zip code: 37743-2452) 2037. marge dakouzzian (zip code: 10301)
2038. Kendal Shaw (zip code: 72758) 2039. David Dzikowski (zip code: 15301) 2040. Rick Shreve (zip code: 95571) 2041. Sylvia Forte (zip code: 67220) 2042. Patricia Lipmanson (zip code: 5) 2043. Olga Rose-Jones (zip code: 11236) 2044. Richard Ternes (zip code: 48846) 2045. Tamara Cain (zip code: 95826)
2046. Joel Carlson (zip code: 98516) Global warming fossil fuels must stay in the ground so we don't destroy life on earth in our current sixth great mass extinction. Almost all life on earth disappeared in previous mass extinctions. We must very quickly switch to renewable energy including solar and switch to renewable agriculture in order to sequester carbon in the soil and reverse climate change. Animal agriculture accounts for a lot of carbon pollution so that must be eliminated. Now is the time for action!
2047. Patricia Foxall (zip code: 44125) 2048. Jennifer Drenzo (zip code: 65464)
2049. Elisabeth Peterson (zip code: 55391) 2050. frank belcastro (zip code: 52001-6327) 2051. Francene Shed (zip code: 74076) 2052. Frances Blythe (zip code: 95620) 2053. Cheryl Frances (zip code: 79830) 2054. francie portnoy (zip code: 27410) 2055. frances hunt (zip code: 09128)
2056. Francine Larsteln (zip code: 95076) 2057. w francis Elling (zip code: 19130) 2058. Francy Elkins (zip code: 55553)
2059. Fran Divine (zip code: 12561)
2060. Frank Adamick (zip code: 11377)
2061. Frank Hartig (zip code: 27704)
2062. Frankie Demarco (zip code: 10014)
2063. Frank Sennett (zip code: 59457)
2064. Francine Loft (zip code: 80403) Global warming is real - time to ego off fossil fuels
2065. Francine Cantor (zip code: 63141) 2066. Susan Wayne (zip code: 92354) 2067. FRED BERING (zip code: 53575) 2068. Fred Fall (zip code: 08034)
2069. Carson Miller (zip code: 44675)
Stop building pipelines! Focus on renewable energy!
2070. Carter Miller (zip code: 44675) No gas pipelines!
2071. Frederica Huxley (zip code: 65203) 2072. Frederic Webster (zip code: 98112)
2073. Curt Frederick (zip code: 55011) If they aren't, then they should be barred permanently. Too many pipelines have intruded on people's lands and this also needs to be disallowed if anyone has valid objections to them on their property. Thanks for your considerations.
2074. Frederick Trast (zip code: 53020) 2075. Frederika Baln (zip code: 96822) 2076. Fred Geiger (zip code: 95060) 2077. R Kelly (zip code: 32162)
2078. John Fricovsky (zip code: 15211) 2079. Richard Friesenhengst (zip code: 43227-1405) 2080. John Peck (zip code: 04011) 2081. Eugene Kiver (zip code: 99004) 2082. Michael Cole (zip code: 80104) 2083. Deidra Caine (zip code: 33441) 2084. Florence Sandok (zip code: 55906)
2085. Francis Slider (zip code: 26149) I reside in the western section of WV, ground zero for Marcellus and Utica shale gas hydrofracturing. This area has become an energy sacrifice zone criss-crossed with thousands of pipelines. These pipelines add to water pollution through sedimentation. They fragment habitat for Threatened and Endangered Species such as the cerulean warbler. They also destroy rare plant habitat. These are just a few of my many concerns, especially when so many pipelines are being built with very little oversight.
2086. Francine Sutton (zip code: 66213) 2087. Fred Teal, Jr. (zip code: 20833) 2088. Elizabeth Tuminski (zip code: 06907)
2089. Michael Darling (zip code: 93225) 2090. Marion Geiges (zip code: 33021) 2091. REYNA BUTTON (zip code: 42262)
2092. Fran Clarida (zip code: 85044)
2093. frances h rogovin (zip code: 02493) 2094. Frances Walskler (zip code: 2140) 2095. Phil Matievic (zip code: 95954)
2096. Flo Wilder (zip code: 4640)
2097. Fay Wouk (zip code: 80304) 2098. Lawrence Wolfe K (zip code: 85251)
You are evil to Frack in any form. Death to you for the destruction and death you broadcast. 2099. Greg Carpenter (zip code: 98282)
2100. Betty J. Van Wicklen (zip code: 12189-2915) We need to stop using fossil fuels. Providing easy transport to trade centers and shipping it out of the country is not the answer - it will merely be burned elsewhere, compounding the problems we face. This is a true example of 'what goes around, comes around!' The pipelines are a little-disguised opportunity for the 'energy' companies to squeeze out a last bit of profit at the expense of public and environmental health. They've had 40 yrs. worth of lead time to develop and invest in clean energy and make their conversions to clean energy, but have chosen to ignore science and plain common sense, while lying to the public and obstructing every attempt to change our energy future. Hence our climate future, to something livable for the future of our planet. If they continue to act so irresponsibly regarding this huge problem, they should be made to pay for all the damage done by rising sea levels and the hugely damaging storms, floods and droughts resulting from the planet's struggle to deal with the problem itself!
2101. Gregory Rouse (zip code: 59444)
2102. John Gallagher (zip code: 11357) 2103. Gabriela Romanow (zip code: 2138)
Stop supporting the use of fossil fuels! 2104. Gabriel Bobek (zip code: 10012) 2105. Robin Wieder (zip code: 11518) 2106. Mike Gaddis (zip code: 80130)
2107. Don Richardson (zip code: 28712) Let's instead work for survival of The People, not the profits of psychopaths.
2108. Debbie Sequichie-Kerchee (zip code: 73527) 2109. Debbie McCarthy (zip code: 04966) 2110. Kimberly Jenkins (zip code: 20849) 2111. Grace Padelford (zip code: 90064)
2112. Gregory Penchoen (zip code: 98002)
2113. David Hand (zip code: 11772) No new pipelines until they clean up the existing methane leaks. Well Head Flaring, leaking wells, storage facilities etc.

COMPANIES/ORGANIZATIONS COMMENTS

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2114. Clyde Alan Locklear (zip code: 97221) 2115. Christine Pritchard (zip code: 37748) 2116. Pamela Evans (zip code: 75143) 2117. Kristen Gardner (zip code: 22046) 2118. alvaro garza (zip code: 95354)
2119. barbara garofano (zip code: 96795) make sure Hillary receives this information please.
2120. Garrick Stephens (zip code: 79843)
2121. Garry Fay (zip code: 54082)
2122. Gary and Judy Ewald (zip code: 13212)
2123. gary schenkel (zip code: 06782)
2124. GARY JONES (zip code: 91108)
2125. John gaspar Gaspar (zip code: 93535)
2126. John Gasperoni (zip code: 94703)
2127. Michael Mountney (zip code: 4127) Time to dump the polluters, ignore the corrupt lobbying and get with the clean energy program.
2128. Lorelei Stierlen (zip code: 75075)
2129. Annamay Waldman (zip code: 34982)
2130. Gina Gatto (zip code: 94546)
2131. Tom Gauntt (zip code: 19028)
2132. Gavin Dillard Dillard (zip code: 28711) Tired of fossil fuels. Stop it! Ocean turbines are the way to go.
2133. Gary Verville (zip code: 30188) 2134. Gayle B. Rosenberry Rosenberry (zip code: 21218-3525) 2135. Gay Williamson (zip code: 45013) 2136. Graciela Barajas Barajas (zip code: 92102) 2137. Gavin Bornholtz (zip code: 48439) 2138. Louise Rose Blume (zip code: 30527) 2139. Geoff Browne Browne (zip code: 07646)
2140. gwen irish (zip code: 1701) Clean energy and climate go together like bread and butter. Poisons are NOT wanted.
2141. Gerald Calnen (zip code: 06082) The time is long overdue to switch from fossil fuels to renewable energy sources. Our global climate will not wait for us to make up our minds. No matter how it is examined, fracked gas is not clean gas. Please do not allow the pipeline projects to continue.
2142. greg Varostow (zip code: 92373) 2143. George Chianese (zip code: 19144) 2144. george craciun (zip code: 33592-2660) 2145. G. D. (zip code: 19128) 2146. Gudrun Dennis (zip code: 32653) 2147. Gerard Dupin (zip code: 75016) 2148. Gwen Nordquist (zip code: 80226) 2149. Jerry Mastriano (zip code: 11375) 2150. Eugene Chin (zip code: 6103-1235)
2151. Eugene Bunch Bunch (zip code: 94501) 2152. Gene Lawson (zip code: 98036) 2153. Gene King (zip code: 97470) 2154. g h g (zip code: 98630) 2155. gennady shvartsfer (zip code: 11235) 2156. George Davis (zip code: 53950) 2157. Geoff Fisher (zip code: 55416) 2158. Geoffrey Pruitt (zip code: 63111) 2159. Geoffrey Salgn (zip code: 55116) 2160. William Geoghegan (zip code: 87505)
2161. George Anderson (zip code: 22395) 2162. George Kaufer (zip code: 10579) 2163. George Nagorny (zip code: 19380)
2164. Georgia Brithwaite (zip code: 86326) 2165. Georgia Johnston (zip code: 97009) 2166. Gary Purcell (zip code: 46042)
2167. Gerald Dalzell Dalzell (zip code: 7070) 2168. Geri Collecchia (zip code: 33027)
2169. Alessandro Piergentili (zip code: 01100) No more pipelines
2170. Gerton Westerop (zip code: 34112) 2171. Gilda Fuslier (zip code: 95831) 2172. G G Johnson (zip code: 20009) 2173. Edward & Gail Laurson (zip code: 80235-2979) 2174. Gary Granat (zip code: 81526-8654)
2175. Gary Greif (zip code: 54301) 2176. gail stamps (zip code: 47713)
natural gas might be a "clean" source of energy, but fracking for it isn't safe or clean. 2177. gary stillwell (zip code: 55438) 2178. Geoffrey Guttmann (zip code: 76107) 2179. Garret Hammond (zip code: 60515)
2180. G Hardiman (zip code: 30084)
2181. Lisa Gherardi Gherardi (zip code: 95032) 2182. Matthew Heizman (zip code: 90042) 2183. glenn hough (zip code: 27403) 2184. Virginia Mudd (zip code: 87565)
2185. Corinne Dowling (zip code: 94110) 2186. Peter Mounier (zip code: 93443) 2187. Robert Gifford (zip code: 60919) 2188. Lorri Goldman (zip code: 92833) 2189. Michael Denton (zip code: 94578-3806) 2190. Gillian Anderson (zip code: 95407) 2191. Gillie Guest (zip code: Hr2 0ba)
2192. Ginger Ikeda (zip code: 80304) 2193. Virginia Davts (zip code: 98072) 2194. vtrginia broadbeck (zip code: 22960-2715) 2195. Gisele Germahn (zip code: 85045-1724) 2196. Janet forman (zip code: 10011) 2197. Rebecca Stewart (zip code: 95033) 2198. Scott Coppola (zip code: 97495) 2199. Giuliana Mazzeo (zip code: 11563) 2200. James Gramm (zip code: 23503) 2201. Janice Dlugosz (zip code: 08722)
2202. Greg KImber (zip code: 04984)
2203. Gladys Eddy-Lee (zip code: 92115)
2204. Michael Glasheen (zip code: 99615)
2205. Hal Forssen (zip code: 92672) NO
2206. Glenn Ross (zip code: 95502) GET IT DONE NOW
2207. Glenn Freeman (zip code: 49546-7633) 2208. Glenna Gray (zip code: 97131) 2209. Glenn Moss (zip code: 74447) 2210. Glenn Gawinowicz (zip code: 19075) 2211. Glenn Thureson Thureson (zip code: 98116) 2212. Glen Zorn (zip code: 98112)
2213. George M Lewis (zip code: 93402)
2214. Georgia Libbares (zip code: 60611)
2215. Gloria Linda Maldonado (zip code: 94062)
2216. Georgia Mattingly (zip code: 80504-3908)
2217. Gloria Alvarado (zip code: 77099)
2218. Gloria Stacholy (zip code: 33134) KEEP IT IN THE GROUND!!! WE SAY HELL NO!!!!
2219. Gloria Morrison (zip code: 79772) 2220. Giortamaria Amalfitano Amalfitano (zip code: 92111) 2221. Peter Wong (zip code: 94131)
2222. Gordon MacAlpine (zip code: 80517) 2223. Gerhardus Malherbe (zip code: 06625) 2224. Judith Dove (zip code: 21037) 2225. Gary Massing (zip code: 94121)

COMPANIES/ORGANIZATIONS COMMENTS

CO31 – Oil Change International (cont'd)

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2226. Gregg Matson (zip code: 95624) 2227. Gary C Meixsell (zip code: 18072) 2228. Gina Caracci (zip code: 32926) 2229. George Milkowski (zip code: 60645) 2230. G Nimic (zip code: 22191)
2231. Warren Salyer (zip code: 92232) 2232. Gary Williamson (zip code: 62220) 2233. Gary Neely (zip code: 98532) 2234. Pat Long (zip code: 95825)
2235. Diane Pryor (zip code: 49058) 2236. Steven Solomon (zip code: 90046) 2237. Martha Strother (zip code: 72204)
2238. Judy McBride (zip code: 28175) Stop the fracking. I want my grandchildren to be able to grow up with out you destroying the world. Do not pass anything that allows you to make money on the well being of this country.
2239. Jane Goldman (zip code: 94019) 2240. Michele Johnson (zip code: 10598) 2241. Jeffrey Gomes (zip code: 02914)
2242. Heide Coppotelli (zip code: 28718) 2243. Gina Paisley (zip code: 95476) 2244. Randy Howe (zip code: 61350) 2245. David Brooks (zip code: 93438) 2246. Thomas Hoffman (zip code: 24134) 2247. Gordon Morrison (zip code: 01366) 2248. Gordon Harwell-Spaulding (zip code: 97230) 2249. Amanda Gordon (zip code: 32773)
2250. Tracey Fleming (zip code: 76116)
2251. Steve Gould Gould (zip code: 10014)
2252. Pat and Gary Gover (zip code: 36532)
2253. Gail DuPresne (zip code: 03461)
2254. Greyson Pannill (zip code: 01096)
2255. Grace Burson (zip code: 3264)
2256. George Quasha (zip code: 12507)
2257. Alexandra Graziano (zip code: 91360)
2258. Donna Gasharro (zip code: 54914)
2259. Grace Adams (zip code: 06226) Keep it in the ground to give everyone's grandchildren and great grandchildren a good chance at life.
2260. Grace Leal (zip code: 85719) 2261. Grace Weston (zip code: 97217) 2262. Gracie Roberson (zip code: 22963)
We need to stop future investments in fossil fuels and divert our energy investment efforts toward clean, renewable energies. PLEASE--no more pipelines!
2263. Grace Wong (zip code: 33023) 2264. Karen Johnson (zip code: 03458) 2265. Margaret Stapleton (zip code: 93003-6092)
2266. Dorothy Anderson (zip code: 2191) FERC has an unusual power. It can save us all from the pollution and global warming of pipelines. Please use your power for good.
2267. Barbara Arlen (zip code: 97330) 2268. Mary Lou Church (zip code: 81201/30575)
2269. Arda Pounds (zip code: 66504) We have to stop postponing the inevitable! Please reject the building of any more pipelines that carry fracked fuel! This is about our global commitment and responsibility as well as about the safety and well being of our own country and citizens. Just do the right thing: NOW!
2270. Star Star (zip code: 03878) you can't save the world AFTER it's too late!!!! you can only DOOM humanity with malice of forethought!!!
2271. Tim Owens (zip code: 85712) 2272. Brian Pierce (zip code: 54311) 2273. Grant Rich Rich (zip code: 94609) 2274. Gregory Duncan (zip code: 46804) 2275. Ann Kristal (zip code: 32216) 2276. Gregory Malueg (zip code: 53511) 2277. bita edwards (zip code: 94973) 2278. Chelsea Fields (zip code: 33618) 2279. Janet Taub (zip code: 87505)
2280. Louella Green (zip code: 70058) 2281. Drew Hudson (zip code: 29201) 2282. Ellen Darden (zip code: 24060) 2283. Thomas Rummel (zip code: 92104) 2284. Bruce Greene (zip code: 18822) 2285. Jill Greer (zip code: 64866)
2286. Glenda Kuhnhafer-Regan (zip code: 23322) 2287. Gregg Sparkman (zip code: 94301) 2288. Greg Meyer (zip code: 63139) 2289. G K (zip code: 55044)
2290. G Paxton (zip code: 10009) 2291. Judith Grell (zip code: 85704) 2292. Mark Hayduke Grenard (zip code: 85022)
2293. Greta Gaard (zip code: 55406) 2294. Gretchen Schneider (zip code: 97498) 2295. Mark Richmond (zip code: 87544) 2296. Kathleen Lawless (zip code: 19438) 2297. Patricia Kanter-Kennedy (zip code: 77099) 2298. Pam Griffin (zip code: 93012) 2299. Carl Griffith (zip code: 61726) 2300. Linda Stewart (zip code: 33914)
2301. Chris Grimley Grimley (zip code: 19454) 2302. John Cabe (zip code: 37771) 2303. Robert Oestreicher (zip code: 53551) 2304. Gary Marshall (zip code: 19522)
2305. Gregory Roll (zip code: 49878)
2306. Mark Grossman (zip code: 94301)
2307. Nancy Kean (zip code: 48183)
2308. David Bolman (zip code: 45856)
2309. Antonio Martinez (zip code: 91902)
2310. George Schneider (zip code: 92105)
2311. Scott Scott (zip code: 98122) Do the right thing!
2312. Greg Sells (zip code: 78741-6942) 2313. Glenda Lilling (zip code: 10573) 2314. George Stimpson (zip code: 19103)
2315. Earl Gregg Swem III (zip code: 36089) 2316. Glenn Embrey (zip code: 90278-2535) 2317. Thomas Frost (zip code: 46323)
2318. Gerson Lesser, M.D. (zip code: 10471) we have only one planet and are fast making it unlivable. We must do every single thing to reduce and potentially reduce use of fossil fuels.
2319. Ralph Notaro Notaro (zip code: 07067) 2320. Chris Hahn (zip code: 92653)
2321. Michael McCrorey (zip code: 15642)
2322. Gunnar Sievert (zip code: 5482)
2323. Anita Gunsallus (zip code: 55940)
2324. J. Barry Gurdin (zip code: 94122)
2325. Georgiam Young (zip code: 49085)
2326. Sue Nuccio (zip code: 13206-3145) This is our only home! Wake up!
2327. Guy Amsler (zip code: 72202) 2328. G.W. Cheney (zip code: 28607) 2329. George Weinkota (zip code: 11001-1923)
2330. George Wilder (zip code: 34102) 2331. Gary Larson (zip code: 99362)

COMPANIES/ORGANIZATIONS COMMENTS

CO31 – Oil Change International (cont'd)

2332. **Glenn Wright** (zip code: 13820-2703) Keep the pipelines away from farms and away from residential places. In other words: KEEP THEM UNBUILT!

2333. **Strouse Glen** (zip code: 89415) 2334. **Gwyn Williams** (zip code: 95476) 2335. **Ellen Brouillet** (zip code: 3901) 2336. **A. M. Brehm** (zip code: 63626) 2337. **Jena Reid** (zip code: 92592) 2338. **Heidi Bean** (zip code: 92663-2615) 2339. **Helen Templeton** (zip code: 47714) 2340. **Herman Diaz** (zip code: 2130)

2341. **Harriet Dressing** (zip code: 28401)

2342. **Curtis Hagerman** (zip code: 14441.1) We can breathe, eat, or drink money. Making profits on the degradation of our life sustaining resources is a mistake we as a species can no longer make.

2343. **Charles Haggin** (zip code: 98008) 2344. **Deb Hahn** (zip code: 75240) 2345. **c s S** (zip code: 34609) 2346. **Holly Kukkonen Kukkonen** (zip code: 52240) 2347. **Zack Hall** (zip code: 90068)

2348. **Nalei Kahakalau** (zip code: 96727) 2349. **Ms. Harley Sebastian-Lewis** (zip code: 95823) 2350. **Maureen Hamel** (zip code: 29926) 2351. **Janet Handford** (zip code: 02893) 2352. **Henry Newhouse** (zip code: 97429) 2353. **Edward Hanson** (zip code: 80022) 2354. **Hans Huang** (zip code: 94577) 2355. **richard hansen** (zip code: 93535) 2356. **STEPHEN HANSEN** (zip code: 93401) 2357. **Alice Hanson** (zip code: 55104) 2358. **Mark Feldman** (zip code: 95401) 2359. **Paul McCullough** (zip code: 48357) 2360. **Sandra Guillen** (zip code: 33616)

2361. **Gene Fox** (zip code: 27948) 2362. **C. Bostio** (zip code: 92649) 2363. **Howard Donaghy** (zip code: 98366) 2364. **Harmon Greenblatt** (zip code: 70125)

2365. **Jacquelyn Downing** (zip code: 97473) We Must Keep Doing All We Can To Stop This Insane Profitteering Destruction Of Our Whole Environment!!!!!!

2366. **William Layman** (zip code: 22939) 2367. **Regina Milione** (zip code: 19462) 2368. **James Keats** (zip code: 1119) 2369. **Harriet Miller** (zip code: 96049)

2370. **Lisa Harrison** (zip code: 10025) Do your job, FERCI! Stop being the rubber stamp of the fossil fuel industry. Say NO to all fracked gas pipelines, compressors, and power plants!

2371. **Harry Cursover** (zip code: 80112-6125) 2372. **Harry North** (zip code: 11229)

Ignorant greedy people will persist, persist, persist till the planet kills us. 2373. **Cynthia Hart** (zip code: 13158) 2374. **Brenda Hartman** (zip code: 19604) 2375. **Hartson Doak** (zip code: 96782)

2376. **Helen Stuehler** (zip code: 89508) 2377. **Alicia Haupt** (zip code: 15206) 2378. **Haven Knight** (zip code: 48306)

2379. **Dave Spencer** (zip code: 500497014) This opposition certainly applies to the Dakota Access Bakken pipeline, as well as other efforts.

2380. **Haydee Felsovanyi** (zip code: 94060) 2381. **Haydn Huntley Huntley** (zip code: 96768) 2382. **Bishop Dansby** (zip code: 22832) 2383. **Heather Benac** (zip code: 49004) 2384. **Helen Bryenton** (zip code: 37917) 2385. **Harold Copeland** (zip code: 77243) 2386. **Herb Evert** (zip code: 53527)

2387. **Harold Dickherber** (zip code: 65203) It's time again for the US to lead, to do our part in moderating climate change and, hopefully avoid climate disasters. It is critical for our own security.

2388. **D Smith** (zip code: 10001) 2389. **Harvey Metzger** (zip code: 33437) 2390. **Dana Rockwell** (zip code: 02816) 2391. **s richie** (zip code: 94602) 2392. **Leonard Hearne** (zip code: 98225) 2393. **ed atkins** (zip code: 95006) 2394. **Brenda Barbour** (zip code: 80533) 2395. **Ms. Linda A. Heath** (zip code: 44044) 2396. **Hector Quiles** (zip code: 34759) 2397. **heidi upgaard** (zip code: 55417) 2398. **Heike Brown** (zip code: 79938)

2399. **carol heiman** (zip code: 67601) BE RESPONSIBLE FOR YOUR ACTIONS!

2400. **HARVEY Eisen** (zip code: 20014) 2401. **shawn heiser** (zip code: 94132) 2402. **Helen Greer** (zip code: 85705-1465)

2403. **Helen Smith** (zip code: 49071) 2404. **Helen Rynaski** (zip code: 87571) 2405. **Helgaleena Healingline** (zip code: 53716) 2406. **Sherie Helstien** (zip code: 10044)

2407. **Mercedes Lackey** (zip code: 74017) 2408. **Marguerite Boyens** (zip code: 30033) 2409. **Sarah Kennedy** (zip code: 3076) 2410. **Heather Mack** (zip code: 17522) 2411. **Carmen Hendershott** (zip code: 10011) 2412. **Dawn Hendry** (zip code: 80127)

2413. **Henri Bowman** (zip code: 24401) 2414. **Henry Frank** (zip code: 19153) 2415. **John Herberg** (zip code: 97405) 2416. **Timothy Allen** (zip code: 5404) 2417. **Hermira Kann** (zip code: 97128) 2418. **Ramiro Herrera** (zip code: 55037) 2419. **Trevor Herrick** (zip code: 11222) 2420. **Jeff Crane** (zip code: 80524)

2421. **Holly Uitz** (zip code: 21030) 2422. **Judy Buelow** (zip code: 54937) 2423. **Manmeet toor** (zip code: 90024) 2424. **Wm Scott** (zip code: 16933) 2425. **Hezkiiah Johnson III** (zip code: 31721) 2426. **Herbert Farkas** (zip code: 65069) 2427. **Hod Gray** (zip code: 93109) 2428. **HOLLY Cohen** (zip code: 10509) 2429. **Hal Glidden** (zip code: 98225) 2430. **Heather Haverfield** (zip code: 98260) 2431. **HENRY H. WESTMORELAND MD** (zip code: 12594) 2432. **Christine Wiese** (zip code: 32601) 2433. **Doug and Jan Parker** (zip code: 81323) 2434. **Rob Schrock** (zip code: 59901) 2435. **Sue Hightower** (zip code: 32312) 2436. **Hilary Emberton** (zip code: 95945) 2437. **Hilary Jones** (zip code: 95404) 2438. **Hilary Mulligan** (zip code: 95667) 2439. **Hilda Foley** (zip code: 92705-2258) 2440. **Kathy Grant** (zip code: 95959) 2441. **rob good** (zip code: 66092)

2442. **Hillary Colby** (zip code: 60504) No more Fracking, no more pipelines and no more bomb trains. What kind of world do we want to leave to our children and grandchildren? I want mine to have clean air and drinkable water!

2443. **Martha Johnson** (zip code: 19732) 2444. **John Passante** (zip code: 07620) 2445. **Laura Magzis** (zip code: 3301) 2446. **r dean James** (zip code: 72034) 2447. **Hitomi K** (zip code: 30096)

2448. **Derek Johnson** (zip code: 21536) 2449. **Harold Brown** (zip code: 77573) 2450. **Harry Conrow** (zip code: 8108) 2451. **Harlan Lebo** (zip code: 90638) 2452. **Herbert Sayas** (zip code: 70115) 2453. **Henry Lahey** (zip code: 3833) 2454. **Howard Lanus** (zip code: 85283) 2455. **Howard Lepzelter** (zip code: 10462) 2456. **Helen Hays** (zip code: 97045)

2457. **Helen Huyffer** (zip code: 05482) 2458. **Hilary Malyon** (zip code: 7436) 2459. **Heather Johnston** (zip code: 91356)

2460. **Helen Mendoza** (zip code: 13480) 2461. **Huguette Moran** (zip code: 90815)

2462. **Helen Simpkins** (zip code: 07419) 2463. **Hector Amaro** (zip code: 97305) 2464. **Terri Rose** (zip code: 97502) 2465. **Natalie Van Leekwijck** (zip code: 68944) 2466. **Fred Hahweg** (zip code: 22206)

2467. **Alfred Lukasek** (zip code: 46342) 2468. **Holly Mosher** (zip code: 90405) 2469. **James Holman** (zip code: 60148) 2470. **Joel Quintance** (zip code: 77340) 2471. **Johnny Campbell** (zip code: 45424)

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COMPANIES/ORGANIZATIONS COMMENTS

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2472. Cheryl A Gross (zip code: 34232) 2473. Stephanie Joyner (zip code: 21228) 2474. Hope Carr (zip code: 11209) 2475. S Slayton (zip code: 98031)

2476. Tim Hopwood (zip code: 94043) 2477. Oren Horst (zip code: 36125) 2478. Richard Houle (zip code: 97221) 2479. Ryan Houlette (zip code: 2140) 2480. Steve Kent (zip code: 45011) 2481. Howard Cohen (zip code: 94306) 2482. Susan Porter (zip code: 18428)

2483. Hans-Peter Heinrich (zip code: 60435) 2484. William Phillips (zip code: 27330) 2485. Michelle Hofmann (zip code: 97203) 2486. Jean Johnston (zip code: 79912) 2487. Harold Holtzinger (zip code: 17402) 2488. Robin Harper (zip code: 98277)

2489. Robert Turner (zip code: 10710) 2490. Henry Schlinger (zip code: 91501) 2491. Howard J. Seigel (zip code: 97215) 2492. Veronica Stein (zip code: 10992)

2493. Hugh Sutherland (zip code: 93117) We should divert our focus to renewable infrastructure first, then determine if and how much more energy we need from fossil fuels. Delaying that approach jeopardizes civilization.

2494. Harry Grace (zip code: 14214) 2495. Geraldine May (zip code: 93432) 2496. Geraldine May (zip code: 93432) 2497. James Huffendick (zip code: 97302) 2498. Philip Shook (zip code: 85281-5820) 2499. Jean Hulme (zip code: 52246)

2500. Paul Hurricks (zip code: 92071) 2501. Leah Hunt (zip code: 84664) 2502. Adrienne Hochberg (zip code: 33477)

2503. David Hurley (zip code: 21015) 2504. Robert Miller (zip code: 85254) 2505. Huxley Coulter (zip code: 96011) 2506. Lloyd Guphill (zip code: 2790) 2507. Helen Dickey (zip code: 94530) 2508. Holly Gardner (zip code: 75220) 2509. Beverly Foster (zip code: 19087) 2510. Herbert W. Myers (zip code: 94025-6542) 2511. Helen Yeomans (zip code: 66212)

2512. Susan Jacques (zip code: 87501) 2513. Arlene Aughey Aughey (zip code: 7663) 2514. Jeff Wells (zip code: 92115-1717) 2515. James Cooke Cooke (zip code: 87106) 2516. Suzanne Peña (zip code: 92835) 2517. R. Brent Palmer Palmer (zip code: 22963) 2518. Iana Jones (zip code: 94901) 2519. Ben Goodin (zip code: 83615) 2520. Ieva Berzins (zip code: 15216) 2521. Ibrook Tower (zip code: 17404) 2522. Michael Daveiga (zip code: 94518) 2523. Elizabeth Bartholomew (zip code: 50613)

2524. Judi Batchelor (zip code: 32162) The gas, oil, coal, nuclear, diesel industry contaminate what we need to live now and in the future. That is a fact. All fossil fuel and nuclear industries and processes chemically contaminate what we need to live. Same people don't destroy what you need to sustain life only profit over people corporations do. If you want to continue all forms of life you better see the urgency to immediately transfer to only clean energy sources. Why? Do you want to live? What about your kids, grandkids and their needed life sustaining resources. The Chinese are coming to the USA because their pollution is so bad, that is what she said on TV. You want to see how China destroyed their life sustaining resources go to China, look at the deaths, contaminated water, on and on. No regulations, dump, pollute and contaminate what we need to live happens daily through the next government permit approval process. Soon we will be another polluted chemically contaminated country with people dying.

2525. Iana Dvorin (zip code: 10019)

2526. David LeRoy (zip code: 4240) Companies who intend to profit from their dangerous gas pipelines need to be stopped NOW! Our citizenry is more important than the profits for polluting fossil fuel companies!!!

2527. Gail Roberts Roberts (zip code: 91980) 2528. Igor Tandetnik (zip code: 11375) 2529. John and Cathy McClellan (zip code: 63116) 2530. Laura Sungens (zip code: 18709)

2531. Inderjit JaiPaul (zip code: 19342) 2532. Michael Robertson (zip code: 46166) 2533. I Kessler (zip code: 95448) 2534. Eugene Seymour (zip code: 13683) 2535. Debra Moore (zip code: 48420)

2536. Immariten Vogel (zip code: 02539) FRACKING DESTROYS WATER AND CONTAMINATES PERMANENTLY THE FRACTURED SHALE AND THE ADJACENT AQUIFERS. GAS AND FOSSIL FUEL EXTRACTION CONTAMINATE THE AIR, THERE IS NO RATIONALE TO JUSTIFY THE RISK. WE HAVE SOLAR NOW.

2537. Ilona James (zip code: 97544)

2538. Bonnie Fletcher (zip code: 33713)

2539. Kathy Moseley Moseley (zip code: 60647)

2540. Mike Alperin (zip code: 95005)

2541. Dodie Shepard (zip code: 91505)

2542. Susan Bailey-Pruc (zip code: 44333)

2543. A Wilson (zip code: 60628)

2544. Christopher Panay (zip code: 10101)

2545. David White (zip code: 04609) I own a small auto repair shop

2546. Mary Browne (zip code: 32081) 2547. Michael Carter (zip code: 97215) 2548. Connie Lippert (zip code: 29672) 2549. Indira Smith (zip code: 90069) 2550. Troy Windsor (zip code: 94601) 2551. Sharon Powell (zip code: 55604) 2552. Susan Silberberg (zip code: 80540) 2553. Susan Tatsul-D'Arcy (zip code: 95063)

2554. Chris Daum (zip code: 59870) If we cannot guarantee the safety of these communities and the surrounding area that must live with the pipeline, then they should not be built.

2555. Jack Ingersoll (zip code: 54664) 2556. Ingrid Wolf (zip code: 49525) 2557. Ingvild Christensen (zip code: 2624)

2558. K V (zip code: 46383) 2559. E. (zip code: 60618) 2560. Margot Borden (zip code: 85254)

2561. Frances Burke (zip code: 2114) No fracking you'll destroy the planet EARTH Stop

2562. Andrés Steinmetz (zip code: 95502) 2563. Ada Khoury (zip code: 28787) 2564. Gale Wallach (zip code: 11743) 2565. Marshell Copple (zip code: 90602) 2566. Raquel Buxton (zip code: 77093) 2567. Ira Gerard (zip code: 60177)

2568. Irene Kibsto (zip code: 8107)

2569. Elaine Ragsdale (zip code: 60504) We all know this has everything to do with large profits and nothing to do with energy savings for the people. The only thing the fossil fuel industry cares about is lining their pockets. And it will NEVER be enough money...they will destroy what they need to get the profits they want.

2570. Iris Meltzer (zip code: 44240) 2571. Alexa McMahan (zip code: 92649) 2572. Shafena Kong (zip code: 60616) 2573. Irwin Hoenig Hoenig (zip code: 20726) 2574. Mrs IB Pickering (zip code: 44122) 2575. Irwin Schpok Schpok (zip code: 08759-7031) 2576. Isabelle Segadelli (zip code: 45387)

COMPANIES/ORGANIZATIONS COMMENTS

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2577. **Beth Lewis** (zip code: 37221) There is simply nothing more important than cutting our greenhouse gas emissions. We have no choice.

2578. **Joyce Lewis** (zip code: 98282)

2579. **Susan Itampel** (zip code: 98245)

2580. **Steven Fedorko** (zip code: 98266)

2581. **Julia Steed Mawson** (zip code: 03076) Keep it in the ground ... analyze the need properly and support renewable energy.

2582. **Issie Ryans** (zip code: GU212BQ) 2583. **Brianna Kohlenberg** (zip code: 98390) 2584. **Martino Mendline** (zip code: 80904) 2585. **Gundolf Mathews** (zip code: 03149) 2586. **Pamela Magathan** (zip code: 90068) 2587. **Ivan Huber Huber** (zip code: 90045) 2588. **John golding golding** (zip code: 94619) 2589. **David Schwartz** (zip code: 2816) 2590. **Izabella Peszek** (zip code: 80026) 2591. **Jennifer Gary** (zip code: 34212) 2592. **Jo Ann Kunsman** (zip code: WY 82801) 2593. **Judy Bierbaum** (zip code: 87106) 2594. **Jean cameron** (zip code: 77845) 2595. **Jullanna Riley** (zip code: 94608) 2596. **Judy Genandt** (zip code: 60118-3038)

2597. **Jennifer Ho** (zip code: 96720) 2598. **James Stagnitta** (zip code: 80012) 2599. **Jim Jones** (zip code: 44275) 2600. **Robert Nieves** (zip code: 37215) 2601. **J Lukas** (zip code: 46143) 2602. **Javier Aguilar** (zip code: 61802) 2603. **Janice Banks** (zip code: 03225) 2604. **Judith Beltz** (zip code: 46350) 2605. **Jane Boyajian** (zip code: 98033) 2606. **Jack Gegner** (zip code: 21045) 2607. **Jacqueline Edwards** (zip code: 01730) 2608. **Jack Schonewolf** (zip code: 19130) 2609. **Audrey Skowronski** (zip code: 32566) 2610. **Jack Cogswell** (zip code: 02719) 2611. **Jack Kincaid** (zip code: 94546) 2612. **Jackie Demarais** (zip code: 76049) 2613. **Jacki masar** (zip code: 37932) 2614. **Jack Mohr** (zip code: 93013) 2615. **Daniella Jackson** (zip code: 10552) 2616. **Elaine Sorensen** (zip code: 47531) 2617. **Julie Coker** (zip code: 76226)

2618. **P.Jacquelyn Schmidt** (zip code: 01826) 2619. **Jacqueline Poncin** (zip code: 08540) 2620. **Jackie Hanser** (zip code: 48017) 2621. **Jacqueline wurn** (zip code: 80302) 2622. **Laura Vadaj** (zip code: 44147)

2623. **Jay Howell** (zip code: 14850)

2624. **Justin Barnett** (zip code: 81657) Life over death and money over people is your policy. You pander to the Devil for \$\$\$\$\$ and then lie to the public so you can cover up the real dangers. BURN baby BURN, all you wicked, evil greedy FUCKS!!!

2625. **Illian gestes** (zip code: 60630) 2626. **An anonymous signer** (zip code: 22903)

2627. **Jake W** (zip code: 01070) FERC, there is nowhere to hide. We stopped the pipeline in Massachusetts, we'll stop them everywhere.

2628. **Julie Klopfer** (zip code: 95050) 2629. **Lester and Judy Hoyle** (zip code: 97523)

Please do this for your grandchildren and everyone's future. 2630. **Joanne Kondratieff** (zip code: 74801) 2631. **Jared Mable** (zip code: 92264) 2632. **Barbara Root** (zip code: 95519)

2633. **James Perkins** (zip code: 90037)

2634. **James Dawson** (zip code: 95610) Please act now before its too late to stop runaway climate change and we will rapidly switch to an all renewable/sustainable energy system that will actually benefit everyone.

2635. **James Dixon** (zip code: 26764)

2636. **James brewer** (zip code: 72936)

2637. **James Balder** (zip code: 21053)

2638. **James Berge** (zip code: 50448)

2639. **James Dwyer** (zip code: 91711)

2640. **Jameseric McGee** (zip code: 90621) Renewables, carbon blocs.

2641. **James Lowe** (zip code: 70633) 2642. **Jim Marsden** (zip code: 55109-4843) 2643. **Mary Derbick-Johnson** (zip code: 60707) 2644. **James Ashcraft** (zip code: 95825) 2645. **Jan Robinson** (zip code: 94109) 2646. **Janice Stephens** (zip code: SETB 15G) 2647. **Jan Thomas** (zip code: 62966)

2648. **Janace henry** (zip code: N0A1H0) We don't need anymore environmental disasters. What will future generations have to look forward to. No water or land. Only destruction of mother earth. All in the name of money! BS!!!!

2649. **Joseph DeMarco** (zip code: 07420) We don't need another process to wreck our planet.

2650. **Barbara Harper** (zip code: 95012) 2651. **Judith gatlund gatlund** (zip code: 02300) 2652. **Stephen Mudrick** (zip code: 65203) 2653. **Jane Russel** (zip code: 20175) 2654. **Jane Wood** (zip code: 63108) 2655. **Jane Woods** (zip code: 24088)

2656. **Jane Gannon** (zip code: 94945) 2657. **Jane Davison** (zip code: 14456) 2658. **Jane Darrow** (zip code: 44138) 2659. **Jane Burch-Pesses** (zip code: 97123) 2660. **Janene Forcher** (zip code: 80401)

2661. **Jane Foran** (zip code: 4101) The ego of "The Masters of the Universe" set knows no bounds. How many CFOs and COOS of the fossil fuel corporations live anywhere near a coal mine, open pit mine, fracking well, pipeline or train rails that carry any of the extracted foundation that holds this planet together? Most likely, not even 1% of the aforementioned 1%! Yet many of us do live in proximity to these operations. Not by choice we may be subjected to explosions, fires, poisoned water and air. I have seen no proof that any of this activity can be guaranteed safe for anyone. This insanity needs to stop.

2662. **Janet Nelhart** (zip code: 55016) 2663. **Jane Leslie** (zip code: 55119) 2664. **Janell Jenkins** (zip code: 75042) 2665. **Jan Emerson** (zip code: 10022) 2666. **Janet Moser** (zip code: 11558) 2667. **Janet Kennington Kennington** (zip code: 90077)

2668. **Janet Spain** (zip code: 81122)

2669. **Janet beatty** (zip code: 93401) 2670. **Janet King** (zip code: 02482)

2671. **Janet Wyatt** (zip code: 81504) The future of our planet is more important than money for a few millionaires . There are jobs in clean energy to absorb the loss of work from new pipelines. We need to be thinking forward and not backward or greedy.

2672. **Janet Zimmerman** (zip code: 10969) 2673. **Jan Garrett** (zip code: 42104-3809)

Do not encourage the growth of extractive methods that put climate at risk and transportation modes that put communities at risk.

2674. **Jan Modjeski** (zip code: 29576) 2675. **Jerome Zornesky** (zip code: 07450) 2676. **Janice Minott** (zip code: 12747) 2677. **Janie Lucas** (zip code: 94110) 2678. **Janine Tokarczyk** (zip code: 27202) 2679. **Janice Parker** (zip code: 95370) 2680. **Janice Ketserman** (zip code: 89074) 2681. **Janice Eaton** (zip code: 70541) 2682. **Jan Lee Sproat** (zip code: 85254) 2683. **Robert Janusko** (zip code: 18018) 2684. **Terrence Ward** (zip code: 60445) 2685. **JOSEPH FORMISANO** (zip

COMPANIES/ORGANIZATIONS COMMENTS

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code: 34667) 2686. Jared Lallt (zip code: 95835) 2687. Jared Cornelia (zip code: 19804) 2688. Jared Howe (zip code: 98108) 2689. Joan Arlette (zip code: 53076) 2690. Jay Shewell (zip code: 98037) 2691. ghassan samara (zip code: 34746) 2692. Mary Ownby (zip code: 85716) 2693. Jason Nardell (zip code: 80504) 2694. Jason Triefenbach (zip code: 90802) 2695. Jason Moore (zip code: 97222) 2696. Jason Nichols (zip code: 37803) 2697. Jason Steadmon (zip code: 89005) 2698. Soretta Rodack (zip code: 10003) 2699. Jason Weckley (zip code: 98607) 2700. Jane Augram (zip code: 33549) 2701. Javier Andre (zip code: 91801) 2702. Francisco J. Velez (zip code: 10475) 2703. Javier Rivera (zip code: 11211) 2704. Joseph Walstrum (zip code: 21234) 2705. Gusti Bogok (zip code: 10011) 2706. Jayson Liu (zip code: 98055) 2707. Janet Kuntel (zip code: 62234) 2708. Jaylen Schmitt (zip code: 97211) 2709. James Lobdell Lobdell (zip code: 95404) 2710. Jayni Chase (zip code: 10506) 2711. Jameson McDonnell (zip code: 19148) 2712. Jay Rutherford (zip code: 95826) 2713. Jay Schelman (zip code: 60660) 2714. Jay Rozner (zip code: 33442-2445) 2715. Jason Collins Collins (zip code: 32068) 2716. Richard Johnson (zip code: 98227) 2717. James Bachman (zip code: 60174-4165) 2718. Jeremy Badessa (zip code: 02420) 2719. James Bailey (zip code: 46737) 2720. Jay Barr (zip code: 33702) 2721. Julia Bazar (zip code: 94705) 2722. James Bochenek (zip code: 12054) 2723. John Davis (zip code: 24201) 2724. Mary Beattie (zip code: 85351) 2725. Joanna Behrens Behrens (zip code: 83127) 2726. Judy Besman (zip code: 76088) 2727. Jasmine Wolf (zip code: 06238) 2728. Judith Bluhm (zip code: 98092) 2729. Janice Mohr (zip code: 22602) 2730. Jerilyn Bodemar (zip code: 95076) We must stop fracking and oil trains & pipelines that endanger our land, our waters and our health. Invest instead in renewable energy. 2731. JAMES BOISSONNAULT (zip code: 22301) 2732. Jeanette Redmond (zip code: 98221) 2733. James Broehl (zip code: workingfam) Stop fracking and building pipe lines 2734. Jim Brown Brown (zip code: 13206) 2735. Jeffrey Brown (zip code: 60643) 2736. Janis Todd (zip code: 08550) 2737. Joe Buhowsky (zip code: 94582-4865) 2738. Jeanne Busacca (zip code: 27712) 2739. Jonathan Carlson (zip code: 87106) 2740. John Carr (zip code: 32118) 2741. Joseph Catania (zip code: 93228) 2742. K Castelluccio (zip code: 60183) 2743. Joseph Fell (zip code: 06770) 2744. James A Clark Jr (zip code: 80911) 2745. John Cooper (zip code: 96772) 2746. Janet Campbell (zip code: 97330) 2747. John Markowitz (zip code: 10024) 2748. James Nelson (zip code: 87825) 2749. J Nelson (zip code: 51537) 2750. Jason husby (zip code: 55412) 2751. Jeffrey Cohen (zip code: 1969) 2752. Jeffrey Collins (zip code: 27514) 2753. Jared Collins (zip code: 46545) 2754. Judy Commons (zip code: 95821) 2755. James Connolly (zip code: 95926) 2756. John Cooper (zip code: 17837) 2757. Joanne Corey (zip code: 13850) It makes no sense to build new fossil fuel infrastructure at a time when we must phase out all fossil fuels - including methane - as rapidly as possible. 2758. Jeanne Clougher (zip code: 33584) We do not have any choice, it's this or negligently destroy our beautiful world. There are no ifs about it and I don't care what reasons are given or whose legacy we are concerned about, the earth comes first. 2759. Joseph Pitt (zip code: 24128) 2760. Julia Cranmer (zip code: 08088) 2761. John Servello (zip code: 76208) 2762. John Caszar (zip code: 19522) 2763. Julie Sears (zip code: 75080) 2764. Judith Cohen (zip code: 98112) 2765. John Wiesner (zip code: 94546) 2766. Joseph L. Doran (zip code: 03768) 2767. James Davis (zip code: 30504) 2768. She'ree Choy (zip code: 11234) 2769. John de Haan (zip code: 14468) 2770. Javier Del Valle (zip code: 90640) 2771. Joel Meza (zip code: 94121) 2772. Joanna Dewey (zip code: 91711) Please, think of the grand and great grand children. 2773. Jon Hayenga (zip code: 55976) 2774. John Diamond (zip code: 23606) 2775. Jacalyn Dinhofer (zip code: 10011) 2776. Darlene Jakus (zip code: 94407) 2777. Jeff Perzynski (zip code: 98027-7309) 2778. Jody Schulman (zip code: 21075) 2779. Jerry Whitley (zip code: 92653) 2780. Joann Eckstut (zip code: 12147) 2781. Jean Barker (zip code: 19348) 2782. Jean Gladstone (zip code: 95501) 2783. Jeanie Harvey (zip code: 48080) 2784. Jean Pauley (zip code: 98112) 2785. Phyllis Miller (zip code: 02115) 2786. Jeanne Iehow (zip code: 39553) 2787. Jeanne Pryor (zip code: 95409) 2788. Jeannie Roberts (zip code: 53705) 2789. Jean Schwinberg (zip code: 98105-4230) 2790. Noel Eaves (zip code: 96080) 2791. James Barrington (zip code: 06412) We don't need a larger carbon footprint, polluted well water or sink holes. gas pipelines such as the PG&E pipeline that just exploded in California. 2792. Jeffrey Bains (zip code: 32159) 2793. Jeremy Baptist (zip code: 66207) 2794. Joan Berger (zip code: 48193) Do not approve additional 2795. Jan Cowan (zip code: 63301) 2796. Jed Manwaring (zip code: 95405) 2797. Jeffrey Green (zip code: 60423) 2798. Jeffrey Gordon (zip code: 26501) 2799. Jeff Komisarof (zip code: 20854) 2800. Jeffrey DeCristofaro (zip code: 28804) 2801. Jeffrey Kramer (zip code: 80027) the only pipelines we need are for water 2802. Jeffrey Luckay (zip code: 44221) 2803. Jeanne Fratto (zip code: 97202) 2804. Jean Glassman Glassman (zip code: 02476) 2805. Jo Hewitt Hewitt (zip code: 46201) 2806. Kendra Waddell Waddell (zip code: 85730-1713)

COMPANIES/ORGANIZATIONS COMMENTS

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2807. **James Klein** (zip code: 78411) This remains a vexing problem primarily due to industry's ability to carry favor with elected officials. The corrupting influence of money in our political system is undermining our democratic traditions and discouraging Americans from voting and/or running for office. This ominous development may well end our experiment in representative democracy unless we alter this decades-long trend. For the sake of the republic, we must amend the US Constitution to state that corporations are not people (and do not have constitutional rights) and money is not speech (and thus can be regulated by state and/or federal campaign finance laws). Short of accomplishing this, no other reform of significance will be achieved. The moneyed interests will turn any reform to their benefit, often at the expense of the nation as a whole.

2808. **Jennifer Kardiak** (zip code: 10003) **2809. Jennifer Cohen** (zip code: 60173-5739) **2810. Jenni Kelley** (zip code: 93453) **2811. Jenette Downing** (zip code: 05081)

2812. **Jennifer Lake** (zip code: 84123) **2813. Jen H** (zip code: 32405) **2814. Jen Bradford** (zip code: 91977) **2815. Jennie Lee** (zip code: 26101) **2816. J S** (zip code: 07047)

2817. **Jennifer Schaalma** (zip code: 21409) **2818. Jennifer Talarico** (zip code: 8108) **2819. Jennifer Thomson** (zip code: 17837) **2820. J K** (zip code: 94080)

2821. **Jenny Churchill** (zip code: 61356)

2822. **Jenny England** (zip code: 94070)

2823. **Jens Muhle** (zip code: 92037)

2824. **Janet Rexroth** (zip code: 98512)

2825. **Jerlene Walberg** (zip code: 97701)

2826. **Jeri Pollock** (zip code: 91001)

2827. **MARY ROJESKI** (zip code: 90405) What do you want your child to inherit??

2828. **Jerome Roth** (zip code: 85281) **2829. Jerome Roth** (zip code: 85281) **2830. Jerome Schaack Schaack** (zip code: 80230)

2831. **Jerry Jorgenson** (zip code: 75023) Fossil fuels belong in the ground, not in pipelines. We must get off of fossil fuels if we are to have a future.

2832. **Jerry Currow** (zip code: 89046) **2833. Jerry Lewis** (zip code: 73071) **2834. Jerry Landau** (zip code: 05301) **2835. Jerry Levesque** (zip code: 90275) **2836. Joanne Ertle** (zip code: 95926) **2837. Jesse Greenman** (zip code: 94609) **2838. JESSE COUNTERMAN** (zip code: 51104) **2839. Jesse Kozak** (zip code: 92024)

2840. **Jessica Bader** (zip code: 10016) **2841. Jessica Locicero** (zip code: 60011) **2842. Jessamine Belland** (zip code: 49719)

2843. **Jessica McGuire** (zip code: 46201) **2844. Jorge Estomba** (zip code: 33178) **2845. Jeanette McCallister** (zip code: 55219) **2846. Will Bovender** (zip code: 20737) **2847. Jewel Payne** (zip code: 95616) **2848. J N** (zip code: 35055) **2849. J Alexander** (zip code: 20781) **2850. Joan Yater** (zip code: 22308) **2851. Jez Creek** (zip code: NG51NL) **2852. Joe Atkinson** (zip code: 72901)

2853. **Jeanne Friedman** (zip code: 10024)

2854. **Joyce Stoffers** (zip code: 85351)

2855. **Jerome Hossli** (zip code: 60607)

2856. **Jean Goetinck** (zip code: 85746) We must stop destroying the planet. We have no other place to live.

2857. **John Hainly** (zip code: 70806)

2858. **Jillian Fiedor** (zip code: 59101)

2859. **Joe Files** (zip code: 85120) Stop fracking, right fracking now!!!

2860. **Jamie Fillmore** (zip code: 97096) **2861. John Francis** (zip code: 22903) **2862. J Trinkaus** (zip code: 12846)

2863. **John Fritz** (zip code: 48103) I am 77 years old, have a Ph D in Physics and have been talking about the climate crisis for more than 5 years. I live in Ann Arbor, MI. Atmospheric CO2 is 33% greater than it has been for 800,000 years. LET'S WAKE UP AND STOP THIS INSANITY

2864. **Jeri Fonté** (zip code: 90277) **2865. Joe G** (zip code: 17111) **2866. Janice Haynes** (zip code: 97760) **2867. Gina Rosati** (zip code: 03054) **2868. Judy Joseph** (zip code: 11229) **2869. Jean Kuhn** (zip code: 07921) **2870. Janet Glover** (zip code: 85710)

2871. **John Nickum** (zip code: 85268) **2872. Joseph Goble** (zip code: 61455)

2873. **Joan Golowich** (zip code: 01002) climate change is real and we have to get serious about it.

2874. **Jane Graham** (zip code: 80526) **2875. Jeffrey Shurtleff** (zip code: 94066) **2876. Jeffrey Hemenez** (zip code: 94583) **2877. John Hammel** (zip code: 38401) **2878. James Rainbolt** (zip code: 52632) **2879. Jeanne Heid-Warmkessel** (zip code: 19454) **2880. James Cleland** (zip code: 4756)

2881. **Joyce Hertzig** (zip code: 68137) **2882. Jonathan Gottlieb** (zip code: 01760) **2883. Jane Maddock** (zip code: 84109)

2884. **James Mulder** (zip code: 12590) **2885. John Ruhl** (zip code: 08822-5600) **2886. Jason Hollington** (zip code: 32605)

2887. **Joseph Shulman** (zip code: 92115) **2888. Juan Huey-Ray** (zip code: 98112) **2889. Jill Weston** (zip code: AL7 4NQ)

2890. **Jill Madigan** (zip code: 53212) **2891. Jill Brothers** (zip code: 44441)

2892. **Jill Koenigsdorf** (zip code: 95476) **2893. Jill Turco** (zip code: 19146) **2894. Jim Lambeth** (zip code: 29036) **2895. Jim Sisk** (zip code: 33022)

2896. **James Adcock** (zip code: 78750) **2897. James P Picardi** **James Picardi** (zip code: 1370) **2898. James Amory** (zip code: 13760) **2899. James Brunton** (zip code: 33612) **2900. Jim Clapp** (zip code: 56501) **2901. James Corrigan** (zip code: 53005) **2902. James Sterner** (zip code: 10024) **2903. James Hughes** (zip code: 02141) **2904. James & April Thompson** **Thompson** (zip code: 28739-4720) **2905. James Keenan** (zip code: 19050) **2906. James Kunz** (zip code: 28560) **2907. Jim Magill** (zip code: 65284) **2908. James McConnell** (zip code: 85308) **2909. Paul L.** (zip code: 07660) **2910. Jim Snee** (zip code: 95736)

2911. **Jim Steltz** (zip code: 37738) No addition infrastructure for moving natural gas can be reconciled with our existential imperative of stabilizing the climate and returning carbon dioxide to habitable levels. You must not approve any more pipelines, if you believe that keeping a habitable planet is part of EERC's mandate.

2912. **Virginia Breza** (zip code: 08638) **2913. Janet S Matthews** (zip code: 11570) **2914. John Roney** (zip code: 80920) **2915. JJ Chambers** (zip code: 32541) **2916. Joseph Dimaggio** (zip code: 21214)

COMPANIES/ORGANIZATIONS COMMENTS

CO31 – Oil Change International (cont'd)

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2917. **Janet Giamanco** (zip code: 92105) Voting on the side of the greedy makes you one of the greedy. Do what's right for your fellow Americans and their children.

2918. **Julie Griffith** (zip code: 60174) 2919. **Jacqui Conti** (zip code: 96761) 2920. **John Landers** (zip code: 61467) 2921. **Jenelle Beckwith** (zip code: 53536) 2922. **Jan McKim** (zip code: 94070) 2923. **John Neumeister** (zip code: 10032) 2924. **James Neu** (zip code: 97404)

2925. **Jen Messina** (zip code: 89301) 2926. **Jill Arteaga** (zip code: 92879) 2927. **Jeffrey Anne Jones** (zip code: 91423) 2928. **Jeffrey Jones** (zip code: 20853) 2929. **John Pederson** (zip code: 94947) 2930. **Johanna Moran** (zip code: 77401) 2931. **Jennifer Scott** (zip code: 33908-6944)

2932. **Jennifer Wittlinger** (zip code: 80487) 2933. **Jose Peña** (zip code: 78526) 2934. **James Katzen** (zip code: 89169) 2935. **Joan Kendall-Rozman** (zip code: 49935)

2936. **John Keevert** (zip code: 14610) Global warming is already costing us billions because of fires, droughts, flooding and reduced yields of fish and farms. Don't exacerbate that by expanding fossil fuel infrastructure.

2937. **James Kerr** (zip code: 9) 2938. **Kathy Kestell** (zip code: 99208) 2939. **Jeanne Koopman** (zip code: 02139) 2940. **Debra Orben** (zip code: 18081) 2941. **Kyle Quigley** (zip code: 90094) 2942. **Julie Squire** (zip code: 64133) 2943. **Janie Smieszek** (zip code: 54234) 2944. **Jeff Thomas** (zip code: 22973) 2945. **Jan Kutchen** (zip code: 78209) 2946. **Kenna Vincent** (zip code: 67642) 2947. **Jeanette Weis** (zip code: 85302) 2948. **Jim Luebke** (zip code: 54935) 2949. **Judith Lang** (zip code: 22530) 2950. **Joanna Welch** (zip code: 95501) 2951. **John Kelsner** (zip code: 10009-6418)

2952. **Jennetta Clark** (zip code: 48235) 2953. **Janet Delaney** (zip code: 78731-4824) 2954. **Jessica Lederman** (zip code: 07302) 2955. **John S** (zip code: 98133) 2956. **Frank Lewis** (zip code: 28645) 2957. **Jordan Hunnicutt** (zip code: 30121) 2958. **Joel Levine** (zip code: 95482) 2959. **Janice Fielding** (zip code: 48423) 2960. **Jean Harrison** (zip code: 50321) 2961. **Jennifer Lewis** (zip code: 22960) 2962. **Julie Munoz** (zip code: 86336) 2963. **Jill Nicholas** (zip code: 14526) 2964. **Lee Stewart** (zip code: 20770) 2965. **Jan Weiland** (zip code: 91359) 2966. **Jeanne Carberg** (zip code: 85035) 2967. **Jennifer Anderson** (zip code: 78704) 2968. **John Margerum** (zip code: 19129) 2969. **Julie Martinson** (zip code: 96201-1114)

2970. **Jane Kirk** (zip code: 16504) Please, do all in your power to stop the climate, human and animal life horrible abuses caused by gas lines, hydraulic fracking etc.

2971. **Joshua McKain** (zip code: 02066) People, animals, and the environment over profits...for the few!

2972. **John McKee** (zip code: 4011)

2973. **James Columbla** (zip code: 93306)

2974. **Jessica Cresseveur** (zip code: 47150)

2975. **James Melloh** (zip code: 04106) The scientific evidence is clear. we cannot afford the climate damage these pipelines will encourage.

2976. **John Gavis** (zip code: 2908) You mean the over 800 pipelines are not enough? Enough is enough.

2977. **Joan Wilson** (zip code: 63670) 2978. **James Hohlfield** (zip code: 85375) 2979. **Jane Miller** (zip code: 66227) 2980. **Joann Koch** (zip code: 06249) 2981. **Janine Moore** (zip code: 04501) 2982. **Jeanne Moenk** (zip code: 44024) 2983. **James Geary** (zip code: 00000) 2984. **Julie Shames-Rogan** (zip code: 33437) 2985. **James Mundy III** (zip code: 90303) 2986. **Joseph Naidour** (zip code: 61604) 2987. **John Narby** (zip code: 81623) 2988. **Jan Novak** (zip code: 87501) 2989. **maureen Bestick** (zip code: 89503) 2990. **Janet Noonan** (zip code: 66204)

2991. **James Norgrove** (zip code: 32789-3340) WTF we have to sign petitions to get Democrats to act like Democrats and stop the oil pigs? Pipelines are bullshit. More oil that we don't need poisoning our water and soil. Great just great.

2992. **Jan Novotny** (zip code: 32250) 2993. **Candle Glisson** (zip code: 47906) 2994. **Jenny Steward** (zip code: 94553) 2995. **Joan Lubinsky** (zip code: 44129) 2996. **Joan Andersson** (zip code: 90290) 2997. **Peter Mitchell** (zip code: workingform) 2998. **Joan Earnshaw** (zip code: 87415) 2999. **Joanie Calem** (zip code: 43214) 3000. **GJoan Jarvis** (zip code: 97007) 3001. **Joanie Vigh** (zip code: 49588)

3002. **Joan-Marie Bauman** (zip code: 12701-4852) 3003. **Joanna Katz** (zip code: 94702) 3004. **Jeanne Thieleen** (zip code: 92220) 3005. **Joanne Zipay** (zip code: 12553)

3006. **JOANNE PARIS** (zip code: 94103) 3007. **Joanne Tenney** (zip code: 92026) 3008. **Joan Koleszar** (zip code: 18080) 3009. **Joann Ramos** (zip code: 08830) 3010. **Joan Peter** (zip code: 98335) 3011. **Joan Quinn** (zip code: 92078) 3012. **Joan Brandmeyer** (zip code: 55424)

3013. **Joan Siltnick** (zip code: 91436) 3014. **Joanne Conti** (zip code: 1257)

3015. **Jody Guth** (zip code: 97212) how many times must we say "NO!"

3016. **Doris Wilson** (zip code: 98034) 3017. **Jody Jensen** (zip code: 96051) 3018. **Joe Cuvillo** (zip code: 92075) 3019. **Joseph Daniel** (zip code: 29926) 3020. **Joseph Kondrot** (zip code: 20003) 3021. **Joseph Gilbert** (zip code: 93023) 3022. **Joseph Guzman** (zip code: 11421) 3023. **Joseph Kucak MSW, LCSW** (zip code: 53140) 3024. **Joel Finley** (zip code: 13669)

3025. **Joel Moore** (zip code: 39702) 3026. **Joel Graves** (zip code: 90019) 3027. **Joel Libman** (zip code: 60640) 3028. **Joe Stoner** (zip code: 01801) 3029. **Joseph Wiesner** (zip code: 53212) 3030. **dan sabinelli** (zip code: 01756) 3031. **John florack** (zip code: 80525) 3032. **John Fortier** (zip code: 90277) 3033. **John Comella** (zip code: 19103-1432)

3034. **John Davles** (zip code: 00000) 3035. **John Fraser** (zip code: 06437) 3036. **John Gamber** (zip code: 66604-1740) 3037. **John Holtzclaw** (zip code: 94133) 3038. **John Martin** (zip code: 60429) 3039. **Mary Bowman** (zip code: 37909) 3040. **Ioana Sfrangou** (zip code: 95747) 3041. **John Schenck** (zip code: 29264) 3042. **Debbie Imhoff** (zip code: 53704) 3043. **John Byland** (zip code: 02536) 3044. **John Cort** (zip code: 80516) 3045. **JOHN GLEBS** (zip code: 63116) 3046. **John Farha** (zip code: 67211) 3047. **John Irwin** (zip code: 19810) 3048. **John Kyrk** (zip code: 94109) 3049. **John Martinez** (zip code: 08232) 3050. **John Weston** (zip code: 53143) 3051. **Johnny Gagnon** (zip code: 10001) 3052. **John Langevin** (zip code: 80907) 3053. **Johnny Wilson** (zip code: 32601) 3054. **John Hartig** (zip code: 90036)

3055. **Judy Johnston** (zip code: 72032)

3056. **John Sunde** (zip code: 64501) Not just the pollution of burned fossils, nor even the fouling of our water tables from fracking, but we intend to guarantee increased pipeline failures and catastrophic pollution disasters?!

3057. **John Teague** (zip code: 90254) 3058. **John Peterkin** (zip code: 86326) 3059. **Joanne Jediger** (zip code: 10965) 3060. **Joie Miskic** (zip code: 60097) 3061. **John Goulette** (zip code: 48240) 3062. **Jon rosenblatt** (zip code: 8854) 3063. **Jon**

COMPANIES/ORGANIZATIONS COMMENTS

CO31 – Oil Change International (cont'd)

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longsworth (zip code: 95001) 3064. Jonathan Lyons (zip code: 17844) 3065. Jon Rosenblatt (zip code: 08854) 3066. Donna Landers-George (zip code: 11801) 3067. Jon Nedbor (zip code: 12440)

3068. John Irbly (zip code: 80907) 3069. Jon Fields (zip code: 11050) 3070. Jon Steenhoven (zip code: 95407) 3071. Jon Wood (zip code: 53941) 3072. Sandra Joos (zip code: 97239) 3073. Jordan Hooley Hooley (zip code: 46540) 3074. Jorge Gonzalez Gonzalez (zip code: 33178)

3075. Pamela Joseph (zip code: 06880) 3076. Joseph Lawson (zip code: 10023) 3077. Joseph Wenzel (zip code: 55042) 3078. Joseph Fysx (zip code: 08611) 3079. Carol Doty (zip code: 48609-2417) 3080. Joshua Angelus (zip code: 06716) 3081. Mary Zieser (zip code: 52091) 3082. Joslyn Baxter (zip code: 94118) 3083. Cornelia Teed (zip code: 98248) 3084. Joyce Dombourian (zip code: 70125)

3085. Joyce Browning (zip code: 71854-3520) It is time to leave fossil fuel in the ground--get smart on clean energy- and get super serious about cleaning up our Planet-- Fracking is destroying underground water, making it unfit to drink.

3086. J. Martin Martin (zip code: 63116) 3087. Susan Castelli-Hill (zip code: 11747) 3088. Joy Chase (zip code: 53719) 3089. Patricia Kerekes (zip code: 3102)

It is your job to stop the raping of our country! 3090. John Downing (zip code: 23220)

3091. Julie Adelson (zip code: 90405) leave it in the ground - what dont you understand?

3092. James pahre (zip code: 59718) 3093. John Dunphy (zip code: 19095)

3094. Jerry persky (zip code: 90403) 3095. Louise Nolte (zip code: 60033) 3096. Jeff Klein (zip code: 48390) 3097. Jay Levine (zip code: 87557) 3098. Jeremy Lynch (zip code: 04079) 3099. Judith Mackenzie (zip code: 55403) 3100. Jacob Pruess (zip code: 15213) 3101. Joanne Scott (zip code: 94131) 3102. jimmy phi (zip code: 94142)

3103. Joanne Sieck (zip code: 55906-8539) 3104. Jeremy Spencer (zip code: 94044-3318) 3105. John Teevan (zip code: 07701) 3106. Joyce Pusel (zip code: 27713)

3107. John wold (zip code: 95405) 3108. Julia Raven (zip code: 94945) 3109. Joseph Brown (zip code: 32141) 3110. James Bungarner (zip code: 66064) 3111. Jason Reinhardt (zip code: 77025) 3112. James Hipp (zip code: 98226) 3113. Julio Ribeiro (zip code: 91501) 3114. Joanne Rist (zip code: 8050)

3115. Jason Crawford (zip code: 17601) 3116. Jon Phipps Phipps (zip code: 84302) 3117. James Rubleske Rubleske (zip code: 46619) 3118. Jerry Skovle (zip code: 60540) 3119. Jaime Becker (zip code: 94702) 3120. Joe Schott (zip code: 52214) 3121. Joseph Schultz (zip code: 80027) 3122. Jull Shields (zip code: 13748) 3123. Jayne Shorin (zip code: 02139) 3124. Dori and Joseph Smith (zip code: 06250) 3125. Judith S Anderson (zip code: 90807) 3126. Judith S S Anderson (zip code: 90807) 3127. Joseph Magid (zip code: 19096) 3128. Justin Small (zip code: 1085) 3129. James Small (zip code: 37642) 3130. Rev. Jennifer Marie Marcus, Esq. Marcus (zip code: 48307-1885)

3131. John McPeck (zip code: 22031) Gee whiz! I thought we shit-canned the Xtra-Large Keister pipeline. Now these turkeys want to run another one through the KeyStone Slate, plus others besides? Let the industry frack itself!

3132. Janell Smith (zip code: 62074) 3133. Jennifer Spinaich (zip code: 06410) 3134. Judd Stark (zip code: 85138)

3135. Jeffrey St.Clair (zip code: 43204) 3136. J Stufflebeam (zip code: 57045) 3137. Jennifer Suess (zip code: 20874) 3138. Joan Butler (zip code: 85042) 3139. I. Thomas Ayres (zip code: 97131) 3140. John anderson (zip code: 07871) 3141. Jane Harada (zip code: 94709) 3142. James Thomas (zip code: 62702) 3143. Joe Tilley (zip code: 43062)

3144. Jo Thoran (zip code: 48324) 3145. Jackie Tryggeseth (zip code: 53560-9416) 3146. Kathleen Markus-Walczak (zip code: 44052) 3147. Jill Sheridan (zip code: 33458) 3148. Sharon Zavac (zip code: 62670) 3149. Jude Misorelli (zip code: 28712) 3150. Judith Kemble (zip code: 48124) 3151. Judith Maron-Friend (zip code: 97220-5630) 3152. Judith Falck-Madsen (zip code: 93013) 3153. Judith Rost (zip code: 86303) 3154. Judi Poulson (zip code: 56031) 3155. Judith Bohler (zip code: 17522)

3156. Judy Childers (zip code: 53714) 3157. Judy Moore (zip code: 59833) 3158. Judy Schriebman (zip code: 94903) 3159. Judy Lubow (zip code: 80504) 3160. Judy Robertson (zip code: workingfam) 3161. Judy Cohen (zip code: 52803)

3162. Judith Epstein (zip code: 55408) 3163. Judy Lindsey (zip code: 96746)

3164. Judy Rosenblatt (zip code: 10025) New infrastructure should support clean, not dirty, energy!

3165. Judith Gilbert (zip code: 07030) 3166. Judy McKinney (zip code: workingfam) 3167. Judy Peterson (zip code: 55123) 3168. Kevin West (zip code: 78723) 3169. Juli Kring (zip code: 77099) 3170. Julia Meadows (zip code: 33710) 3171. Julia Morgan (zip code: 14850)

3172. Julia Dean (zip code: 95062) Chances are you members of FERC are older than I. You are older than my children too. We will be living with the potentially catastrophic results of decisions that Your Agency pushed onto us without regard. How is my family supposed to survive even thrive in a nation riddled with polluted water, oil train derailments, fracked communities? Please please please stop poisoning my future! You hold the power for my family to survive.

3173. Julian and Alice Dewell (zip code: 98199) 3174. Julianne Clark (zip code: 98133)

3175. Juliann Pinto (zip code: 19136) 3176. Julia Broad (zip code: 92804) 3177. Julie Mock (zip code: 52245) 3178. Julie Hoffer (zip code: 11201-4814) 3179. Julie Levine (zip code: 90290) 3180. Julie Oster (zip code: 32309)

3181. Julia Radwany (zip code: 44333) 3182. Joseph Dangelo (zip code: 11731) 3183. Florencio Selva (zip code: 77011) 3184. Jussi Valantti (zip code: 02110) 3185. Micah McIntyre (zip code: 92082) 3186. Janet Hays (zip code: 70115) 3187. Justin Singer (zip code: MSM 215) 3188. James Vander Poel (zip code: 01532) 3189. Jill Vargas (zip code: 604416237) 3190. Joseph M. Varon (zip code: 11552) 3191. Jason Varvas Varvas (zip code: 61822-9361) 3192. Julia Vetric (zip code: 91387)

3193. Janet Walls (zip code: 88423) 3194. Joe Rogers (zip code: 78768) 3195. Joanne Watchie (zip code: 98116)

3196. Helen Bailey Bailey (zip code: 75070) 3197. Joseph Werzinski (zip code: 18938) 3198. Joe Wiederhold (zip code: 98229) 3199. James Reents (zip code: 56452) 3200. John Young (zip code: 18349)

3201. Jyrca Gough (zip code: 21403)

3202. Jeanne Young Young (zip code: 98392) It seems so obvious: to reduce emissions from burning fossil fuels, one reduces the fossil fuel burned. It is NOT appropriate to enable the increased availability and decreased cost of fossil fuels. Our lives depend on this logic

COMPANIES/ORGANIZATIONS COMMENTS

CO31 – Oil Change International (cont'd)

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3203. Jack Zelig (zip code: 5651) 3204. d. scott (zip code: 89008) 3205. Kaitlyn Johnston (zip code: 11716) 3206. Karen Kindel (zip code: 44718) 3207. Katharine Pillsbury (zip code: 02461) 3208. Karlene Gunter (zip code: 14618-4861) 3209. Peter Townsend (zip code: 01721) 3210. Rose Dippel (zip code: 21111)
3211. Kathleen Clouthier (zip code: 54302)
3212. Kae Bender (zip code: 93536) Fracking endangers communities, air, water, and pipelines expand the land affected. It is a BAD idea. We need to stop investing in new fossil fuel infrastructure and instead invest in developing and expanding green energy technologies!
3213. Karen Bond (zip code: 33458) 3214. Kenneth Jenrow (zip code: 48858)
3215. Kay Johnson (zip code: 14701)
3216. Karen Akers (zip code: 97203)
3217. Lynn Wilbur Wilbur (zip code: 99835)
3218. kathryn alexandra (zip code: 98221)
3219. Doris Rhine (zip code: 60634-2456)
3220. Kelth LaPointe (zip code: 85206)
3221. Ken Mayer (zip code: 19540)
3222. Kimberly McKendell (zip code: 90807)
3223. Mahesha Silva (zip code: 19016)
3224. Karen Angel (zip code: 85302)
3225. Cort Brumfield (zip code: 97220)
3226. Falth Strailey (zip code: 95971)
3227. Karen Applebaum (zip code: 946)
3228. Kirk Ramble (zip code: 17404)
3229. Gayle Hebert (zip code: 90260)
3230. Kara Stewart (zip code: 53809)
3231. Karen Adams (zip code: 24018) Please do the right thing and stop this building NOW!
3232. Karen Melton (zip code: 19129) 3233. karen miller (zip code: 63071) 3234. Karen Lilly (zip code: 95959) 3235. Karen Multer (zip code: 29645)
3236. Karen Kramarz (zip code: 48127) Please protect our climate from the oil industry. They will reap the income and we will be left with devastation.
3237. Karen Sesto (zip code: 07456) 3238. Karen Carson (zip code: 72758) 3239. Karen Berger (zip code: 91020) 3240. Karen Nakakihara (zip code: 79830) 3241. Karen Smith (zip code: 34679) 3242. karen steele (zip code: 92285) 3243. Karen Stimson (zip code: 06477) 3244. Peter Jensen (zip code: 02720) 3245. Karin Braunsberger (zip code: 33704) 3246. Karin Ralph (zip code: 11748)
3247. Karl Jahnke (zip code: 18067) 3248. Karl Koessel (zip code: 95519) 3249. Karlen Harmison (zip code: 95618) 3250. Karl Mortimer Mortimer (zip code: 05012) 3251. Karrie Vrabel (zip code: 55407)
3252. Karyn Barry (zip code: 02451) 3253. Kenneth Sanders (zip code: 33542)
3254. Kate Dougherty Dougherty (zip code: 55811) No, you mother fuckers, NO!!! No more!
3255. Kate Taptiklis (zip code: 05010)
3256. Catherine Caron (zip code: 99207) Take climate change seriously! Keep the oil in the ground!
3257. Kathryn Slagle (zip code: 16511) 3258. Kat Haber (zip code: 99605) 3259. Katherine Fulton (zip code: 44215) 3260. Kathleen Kesson (zip code: 5641) 3261. Kathleen Ragan (zip code: 22304) 3262. Kathleen Kopp (zip code: 43202) 3263. Kathleen Johnson (zip code: 28783) 3264. Kathryn Robertson (zip code: 33480)
3265. Kathryn Burns (zip code: 78727) Yes, these pipelines may create jobs, but what good are those jobs if they help make the planet unlivable? That's what's happening now, and we need to stop it.
3266. Kathryn Caldwell (zip code: 14) 3267. Kathryn La Rue (zip code: 94553) 3268. Kathryn Mahoney (zip code: 90039)
3269. Kathy Fullerton (zip code: 06897) 3270. Kathy Allen (zip code: 54601) 3271. Kathy Mackechney (zip code: 80220)
3272. Kathy Colton (zip code: 52403) 3273. Kathleen Coffman (zip code: 85739) 3274. Katherine Nolan (zip code: 95014)
3275. Kathy Ruopp (zip code: 60643)
3276. Kathy Veomans (zip code: 93001) 3277. Kathy Hart (zip code: 8752) 3278. Katie Shultz Walker (zip code: 97266) 3279. Katie and Bill Dresbach (zip code: 44054-0166) 3280. katrina gergely (zip code: 32503)
3281. Katherine Fulkerson (zip code: 53562)
3282. Kathleen Kuczynski Kuczynski (zip code: 92630)
3283. Robert Hirschorn (zip code: 34736)
3284. Kathleen Ebanex (zip code: 98802)
3285. K Scott (zip code: 76092)
3286. Kathryn Dummann (zip code: 97006)
3287. Sarah Forbes (zip code: 02048)
3288. Kathy Averill (zip code: 19036)
3289. Kathleen Mullen (zip code: 98407)
3290. Tony Chapman (zip code: 93012)
3291. Tina Martin (zip code: 14611)
3292. Pricilla Smith (zip code: 85712)
3293. Kay Coll (zip code: 07102)
3294. K Bason (zip code: 50240) It is past time to move aggressively to clean energy.
3295. Kathleen Bentley (zip code: 21234) 3296. Kenneth Bierman (zip code: 85745)
3297. Karen Bond (zip code: 85283)
3298. Ken Bossong (zip code: 20912)
3299. Ken Bowman (zip code: 32817)
3300. Kathy Bregder (zip code: 95405)

COMPANIES/ORGANIZATIONS COMMENTS

CO31 – Oil Change International (cont'd)

3301. Kathleen Brown (zip code: 94109)
3302. Bruce Higgins (zip code: 30318)
3303. Kirstin Burt (zip code: 8011)
3304. Kirk Butler (zip code: 33614)
3305. Karen Christian (zip code: 05641) SAVE THE PLANET!!!
3306. Joyce Dixon (zip code: 75219-3710) 3307. Karen Christiansen (zip code: 80621) 3308. kris brinsky (zip code: 15102) 3309. Kathleen Conner (zip code: 80247) 3310. Karen Deckel (zip code: 02532)
3311. Kathleen Brown (zip code: 48169) 3312. Katherine Hutchins (zip code: 85050) 3313. Kelly Kling (zip code: 15666) 3314. Kerry Moore Moore (zip code: 98591) 3315. Karla Osuna (zip code: 11094) 3316. Kathleen Querner (zip code: 45066) 3317. Kean Butterfield (zip code: 94550)
3318. Karen Greenspan (zip code: 10006) 3319. Keith D'Alessandro (zip code: 48187) 3320. Keith Robillard (zip code: 04282) 3321. Keith Wiljanen (zip code: 29492) 3322. Keith D'Alessandro (zip code: 48187) 3323. Kellie Smith Smith (zip code: 03244) 3324. Kelli Gilbert (zip code: 80433)
3325. Cynthia Kelley (zip code: 83864) 3326. Kelli Lent (zip code: 94501) 3327. Kelsey Price (zip code: 97701) 3328. Kelsey Sampson (zip code: 01522) 3329. Kelsey Hobbs (zip code: 01070) 3330. Keith Emery (zip code: 46219)
3331. Kenneth McLintic (zip code: 90755) Keep it in the ground. Force energy and extraction companies to retool for green energy, if they don't tax the hell out of them, fine them and then jail them. Jail any corporation who petitions to drill on Federal lands. Do it now!!!!
3332. Donna Bubb Bubb (zip code: 89052) No more pipelines anywhere!
3333. Kendra Holt (zip code: 20902) 3334. Ken Mundy (zip code: 90068) 3335. Ken Lesem (zip code: 5408) 3336. Ken Mauney (zip code: 27703) 3337. Kenneth Ruby Ruby (zip code: 03079-3667)
3338. Kenny Lewis (zip code: 01701)
3339. kenneth wallers (zip code: 35205)
3340. Christine Rodgers (zip code: 74120)
3341. kent lennox (zip code: 94134-2457)
3342. Kermit Easterling (zip code: 37033-2723)
3343. Rachel Watts (zip code: 70125)
3344. Lucia Kern (zip code: 80526)
3345. Kerry MacInnes (zip code: 94549)
3346. Kerry Kuhn (zip code: 60193)
3347. Kristin Sullivan (zip code: 80521)
3348. Keith Luke (zip code: 34652)
3349. Kathleen DeVries (zip code: 95628)
What has been "passing" for clean energy is not now, nor was it ever clean and safe. Please do not allow any more of these pipelines to be built!
3350. Susan Welsford (zip code: 49441) Don't need it; don't want it!
3351. K Cook (zip code: BA16 ORP) 3352. Kevin Rapp (zip code: 84115)
3353. (Veteran USAF) oCullinn (zip code: 29830) And there is nothing we could do to stop the 42" pipeline being built through the pristine SW Big Bend of Texas Big oil & gas moguls prevail, governed by the Railroad commission of Texas. The Rubber Barons ride again!
3354. Kevin Chiu (zip code: 98033)
3355. Elena Polletta (zip code: 06776) Fracking is destroying our planet in addition to poisoning our water and causing cancer. If you like life then you should support NO FRACKING end of story.
3356. Kevin Kinzler (zip code: 60062) 3357. Karen Raccio (zip code: 55311) 3358. Kara Graul (zip code: 77005)
3359. Karen Gupton (zip code: 37209) We are already behind in our commitment to provide cleaner air. We do NOT need even a single new pipeline! Get serious about saving our earth...unless of course you have another planet to move to...
3360. Kathleen Hall (zip code: 96067) 3361. Kacy Harnedy (zip code: 03060) 3362. Carolyne Lampe (zip code: 96830) 3363. Florence Morris (zip code: 14609) 3364. Kathy Bradley Bradley (zip code: 29079) 3365. Kristina Heiks (zip code: 28607)
3366. KAREN JONES (zip code: 90291) Fracking is an environmental disaster, now and in the future. It is breaking our land apart, literally, and poisoning our most precious natural resource--our drinking water. Just say NO to fracking in all its forms. Please. NOW!
3367. Katia Iannacome (zip code: 14620) 3368. G. Fries (zip code: 99603)
We have to move toward non heat producing energy, put all effort there! 3369. Lou Ann Kilburg (zip code: 52001)
3370. John Pasqua (zip code: 92025) STOP THE PIPELINES. CLIMATE CHANGE IS REAL NOW.
3371. Kim Rivers (zip code: 01201)
3372. Kimberly Duncan (zip code: 24015) Building all of the pipelines these fracking companies are asking for would be completely irresponsible a dangerous precedent to set while we are all trying to meet our climate commitments. PLEASE say NO to any and all pipeline requests!
3373. Kim Diment (zip code: 49738)
3374. k g (zip code: 98360)
3375. Kim Harrison (zip code: 33813)
3376. Kim Smith (zip code: 13039)
3377. Kim Pierce (zip code: 00000)
3378. Kim Sellon (zip code: 07974)
3379. Kim Young (zip code: 37082) Keep fossil fuels IN THE GROUND!!!!!!!!!!!!
3380. Kim VonderHaar (zip code: 40059) 3381. Kindy Kemp (zip code: 98368) 3382. Judy King (zip code: 95762) 3383. Rob Roberto (zip code: 92071) 3384. Kinsey Service (zip code: 93117) 3385. Kirk Nason (zip code: 92648) 3386. Kerry Kirkpatrick (zip code: 99801)

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COMPANIES/ORGANIZATIONS COMMENTS

CO31 – Oil Change International (cont'd)

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3387. **Karen I Todd** (zip code: 08530) The pipelines are affecting water supplies and people's health, right now! Additional ones will be an incentive to oil/gas companies to frack some more----and increase the number of earthquakes.

3388. **Kirsten Lovett** (zip code: 34234) **3389. Elmore Kissling** (zip code: 95503) **3390. Crystal Boles** (zip code: 85009)

3391. **Kristin Dubovsky** (zip code: 60565) **3392. TABATURA JOB** (zip code: 30639)

3393. **Carolyn Kittle** (zip code: 88310) Do not sacrifice the environment, and the planet, on the altar of fossil fuel profits.

3394. **Pamela Check** (zip code: 95926-1475)

3395. **Nadiya Littlewarrior-Davis** (zip code: 91387)

3396. **Kiwibob Glanzman** (zip code: 98115)

3397. **Okuyo Ososaka** (zip code: 94606)

3398. **Pamela Stearley** (zip code: 47834)

3399. **Katy Kotiadis** (zip code: 10706)

3400. **Kathleen Johnson** (zip code: 89509)

3401. **Kathy Kane** (zip code: 60452)

3402. **K Krupinski** (zip code: 90042)

3403. **Kathy Kibbie** (zip code: 48169)

3404. **Kurt Kiebler** (zip code: 66207)

3405. **Kay King** (zip code: 61010)

3406. **Kerry Klutka** (zip code: 87505)

3407. **Karen Malcolm** (zip code: 85262)

3408. **Kathy Kroll** (zip code: 18360)

3409. **Kristin VanHorne** (zip code: 14001)

3410. **Kevin Wightman** (zip code: 91392)

3411. **KAREN LAAKANIEMI** (zip code: 32534) PROTECT OUR PEOPLE AND OUR LANDS!!!

3412. **Mike Klarer** (zip code: 53507)

3413. **Klaudia Englund** (zip code: 91360) **3414. Kay Brainerd** (zip code: 48111) **3415. KAREN COLLETT** (zip code: 84010)

3416. **Lea Morgan** (zip code: 01201)

3417. **Leigh Sands** (zip code: 21629) **3418. Linda Klein** (zip code: 90245-3259) **3419. Ken Lengel** (zip code: 96073) **3420. Kathleen Iensemmayer** (zip code: 43220) **3421. Kathleen Levy** (zip code: 33321) **3422. kelvin hobson** (zip code: 21236) **3423. Kathy Libby** (zip code: 03865) **3424. Diana Klliche** (zip code: 90804) **3425. Michael & Carrie Kline** (zip code: WFP) **3426. Kathleen Keske** (zip code: 11215) **3427. Kim Nguyen** (zip code: 95136) **3428. Ioren dawn** (zip code: 85712) **3429. Kevin Ryan** (zip code: 43614) **3430. Kathryn Samuelson** (zip code: 5001) **3431. Kerwin Schaefer** (zip code: 28560) **3432. Kris Strate** (zip code: 84629) **3433. Kathi Squires** (zip code: 05401)

3434. **Kevin Vaughn Vaught** (zip code: 37913) **3435. Kate MacDonald** (zip code: 02138) **3436. Kevin Marckus** (zip code: 33809) **3437. Kathy Margulis** (zip code: 11719) **3438. Kristine Cassar** (zip code: 19702) **3439. Kristina Fukuda-Schmidt** (zip code: 90230) **3440. Kristina Lamons** (zip code: 77008)

3441. **Karen Milliken** (zip code: 80107) **3442. Katherine Kautz** (zip code: 80233-2284)

No more oil spills!

3443. **Kristine Moy** (zip code: 48230)

3444. **Kay Reinfried** (zip code: 17543)

3445. **Katherine Murdock** (zip code: 72737)

3446. **Kiasha Pearson** (zip code: 75115)

3447. **Donna Knipp** (zip code: 10034)

3448. **k o** (zip code: 63136)

3449. **Jill Cochran** (zip code: 20170)

3450. **Kevin Oldham** (zip code: 11967) Why are we not investing heavily in new infrastructure for renewable energy?

3451. **Deborah Walsh** (zip code: 55082) **3452. Keith Milligan** (zip code: 99212)

3453. **William Carr** (zip code: 48075) we have one planet, rich bitch, poor bitch, it's a socialist system whereby if it goes down we all go down.wake up! You're not going to destroy the poor people's part and leave the rich one okay. It will all go down together. And you're not going to move to a new gated community. **3454. Sandra Koppel Koppel** (zip code: 10901) **3455. Kevin O'Rourke** (zip code: 13316-6007) **3456. Bhawna Koul** (zip code: 06851)

3457. **Karen Mihan** (zip code: 13326) **3458. Keith Everton** (zip code: 23113) **3459. kathie piccagli** (zip code: 94112) **3460. Katie Pratt** (zip code: 94559) **3461. Denise Kraemer** (zip code: 12463) **3462. Justin Kramer** (zip code: 33180) **3463. Joseph Kraus** (zip code: 32303) **3464. Paul Krauss** (zip code: 85250)

3465. **Evelyn Kirby** (zip code: 94619) Our shared highest priority has to be promoting and enabling the use of renewable green energy; it is absolutely necessary to save ourselves and our planet! The sooner we implement the policies to make this change happen, the more successful we can be in solving climate change and guaranteeing our future.

3466. **Dwight Krehbiel** (zip code: 67117) **3467. Kris Mydler** (zip code: 80301) **3468. Rita Wise** (zip code: 80615) **3469. Krishna Murphy** (zip code: 28711) **3470. Krista Lohr** (zip code: 34232) **3471. Kristin Vyhnal** (zip code: 80228) **3472. Kristin Kokal** (zip code: 33914)

3473. **Kristin Kirk** (zip code: 01096)

3474. **Kathleen Remaly** (zip code: 77063)

3475. **Kenneth Miller Miller** (zip code: 60014)

3476. **Kathleen Mohning** (zip code: 37027)

3477. **Kate Skolnick** (zip code: 11238)

3478. **Krystal Templeman** (zip code: 48035)

3479. **karen scotese** (zip code: 60202)

3480. **Keith Shatzel** (zip code: 33312 1971)

3481. **Krista Slavin** (zip code: 48320)

3482. **Kevin O'Carroll** (zip code: 01966)

COMPANIES/ORGANIZATIONS COMMENTS

CO31 – Oil Change International (cont'd)

3483. David Speakman (zip code: 66046)
3484. Karen Sullivan (zip code: 78599) Some people are hell bent on destroying our planet
3485. Karen Sweetland (zip code: 95008) 3486. Kate Sherwood (zip code: 11561) 3487. Kevin Zellmer (zip code: 53211) 3488. Kay OGrady (zip code: 60047) 3489. Jennifer McDermott (zip code: 55426) 3490. Katarzyna Kubzdelo (zip code: 2124) 3491. Kunal Natu (zip code: 94024)
3492. Kurt Shaffer (zip code: 44111) 3493. Brian Kuru (zip code: 43202)
3494. Matthew Kuryllo (zip code: 52004) 3495. John & Mary Kurzynski (zip code: 54162) 3496. Kelly Warner (zip code: 72016) 3497. Jackie Kwasmik (zip code: 29464) 3498. Kevin Watkins (zip code: 19971) 3499. Katherine Warner (zip code: 05673) 3500. Kimberly Wick (zip code: 97109) 3501. Kathleen Wilgus (zip code: 43204) 3502. Karl Kibler (zip code: 78664) 3503. Kevin Morris (zip code: 38347) 3504. Candace Batchelder (zip code: 42240) 3505. Kyle Bracken (zip code: 90066) 3506. Linda Qureshi (zip code: 02467)
3507. Linda Livingston (zip code: 93023) I am sick of big oil (and big ag and big pharma) poisoning us and our environment...our health and that of the planet needs to be more important (urgent) and corporate greed!
3508. Lorraine Reade (zip code: 92028) 3509. Sean Attri (zip code: 2155) 3510. Cassandra Treppeda (zip code: 10523)
3511. H. Kurt Kettelhut (zip code: 33442) 3512. Carol Ohlentorf (zip code: 34202) 3513. Lacey Levitt (zip code: 91913)
3514. Leta Dally (zip code: 60643) 3515. Michelle Pavovich (zip code: 98125)
3516. Wendy Herbert (zip code: 06471) Please stop building pipe lines.
3517. Eileen Buckingham (zip code: 93611) How fast do we want to destabilize this fragile planet? How soon do we want to see Florida & all coastlines go under the sea? How soon do we want those rolling earthquakes to rattle the east & midwest, knowing they don't have earthquake stds. for their current buildings & structures? Besides the 3 ring circus in the political arena, how fast will our society come unraveled as the uncontrollable forces of nature rip our communities apart? It's PAST TIME to say STOP to the pipelines crisscrossing our country. How big a cry for help do the American people have to make before people start to take matters into their own hands? God forbid! Frustration of this magnitude could lead to civil disobedience. Stop thinking of dollars and start thinking about their quality of life. Or lack thereof...
3518. Lisa Winters (zip code: 98010) We need to stop destroying the planet RIGHT NOW! And stopping fracked gas & coal, & moving to renewables will be a good start.
3519. Jennifer minish (zip code: 85750) 3520. Lee F (zip code: 97219) 3521. Leah Leifer (zip code: 46240) 3522. Magaly Fernandez (zip code: 94124) 3523. Marianna Mejia Contact (zip code: 95073-9708) 3524. Silvio Fittipaldi (zip code: 19114)
3525. Alicia Jackson (zip code: 94591) 3526. dennis love (zip code: 92372) 3527. LANA PROSSER (zip code: 90503) 3528. Paul and Kathleen Lanctot (zip code: 95066) 3529. Yolanda Rosebraugh (zip code: 95076) 3530. Guy Winiak (zip code: 12529)
3531. Ilyana landes (zip code: 94609) 3532. Connor Hansell (zip code: 84121) 3533. Patricia Dicoste (zip code: 77402) 3534. Ianie cox (zip code: 99224) 3535. Avis Ogilvy (zip code: 70118-4657) 3536. L. P. Rees (zip code: 62946) 3537. Sarah Lanzman (zip code: 22935) 3538. LISA PATTON (zip code: 94115) 3539. Lara Assaad (zip code: 37520) 3540. Lara Wright, MD Wright, MD (zip code: 94706-2343) 3541. Larisa Bogach (zip code: 60613) 3542. Larissa Matthews (zip code: 11803)
3543. Robert Brown (zip code: 98466) Pipelines are better than bomb trains; however, given the world situation, we really don't need this oil. We should go for sunshine and wind instead. Keep our air clean.
3544. Larry Lima (zip code: 95008) 3545. Lawrence Cohen (zip code: 20016) 3546. Linda Bray (zip code: 32827) 3547. Larry Hovekamp Hovekamp (zip code: 40218) 3548. Larry Lapuyade (zip code: 94979) 3549. Larry Koch (zip code: 87106) 3550. Larry Rosenberg (zip code: 96145)
3551. Larry Thompson (zip code: 68005) 3552. Larry Etscovitz (zip code: 03904) 3553. Pablo Moore (zip code: 61107) 3554. Robert Wallace (zip code: 90602) 3555. Linda Smith (zip code: 81612) 3556. Gabriel Rosas (zip code: 95050) 3557. Hank Ramirez (zip code: 92116) 3558. Nancy McCormick (zip code: 10065) 3559. Brandie Deal (zip code: 98021) 3560. Lauren Linda (zip code: 92637) 3561. Laura Herndon Herndon (zip code: 91505) 3562. Laura Paden (zip code: 91311)
STOP. FRACKING. EVERYWHERE!!! 3563. Laura Robichek (zip code: 94089) 3564. Laura Muñoz (zip code: 11121) 3565. Laura Craig (zip code: 98597) 3566. Laura Healy (zip code: 29414) 3567. Laura Lynch (zip code: 03084) 3568. Laura Ratforth (zip code: 34624) 3569. Laura seserman (zip code: 33446) 3570. Laura Koeninger Koeninger (zip code: 95482)
3571. Laureen Mitchell (zip code: 90019)
3572. Laurel Scott (zip code: 92108) 3573. Laurel Kinde (zip code: 54725)
3574. Laurel Pace (zip code: 81611) STOP THE INSANITY!
3575. Lauren Bond (zip code: 10018) 3576. Laurence Sklrvin (zip code: 30180) 3577. Laura DePreta (zip code: 06903) 3578. Lauri DesMarais (zip code: 63390-6373) 3579. Laurie Vanhorn (zip code: 48801) 3580. R-Laurraine Tutthast (zip code: 85623) 3581. Micky & Dave K. (zip code: 11722) 3582. Lawrence Logue (zip code: 32505) 3583. Randall Webb (zip code: 97219) 3584. Leone Batte (zip code: 43123) 3585. Cindy Ewing (zip code: 87540) 3586. Lynn Beagle (zip code: 60002) 3587. Lisa Bergerud (zip code: 55416) 3588. Lisa Bjerke (zip code: 04609) 3589. Larry Bogolub (zip code: 55105) 3590. Lauren Bouche (zip code: 80603-9715) 3591. Lynne Brimecombe (zip code: 48103) 3592. Lama Lane (zip code: 92627)
3593. Lynn Cardiff (zip code: 97301) 3594. Lisa Mackem (zip code: 20191) 3595. Lisa Mell (zip code: 19147) 3596. Dennis Ledden Ledden (zip code: 95656) 3597. Laura Staples (zip code: 34232)
3598. L.D. Hieber (zip code: 48118) 3599. Lou Di Falco (zip code: 07834) 3600. Linda Orgel (zip code: 98520) 3601. LD Romcalli (zip code: 95404) 3602. Claude Robert (zip code: 00000) 3603. Joe LeBlanc (zip code: 95472) 3604. Peg LeClair (zip code: 01238-9417) 3605. marguery lee zucker (zip code: 97403) 3606. Linda Erwin (zip code: 61820)
3607. Lee Scarborough (zip code: 81221) 3608. Lee Bartell Bartell (zip code: 07030) 3609. lee bory (zip code: 03062)
3610. Cynthia Cexas (zip code: 94611) We are the stewards of our planet Earth. We don't need any more pipelines. Period. I oppose them all---they are destroying the climate, and are not safe for people or animals. Too many deaths. Too much destruction.
3611. Lee Davis (zip code: 95448-1492) 3612. Eileen Bergan (zip code: 93001)

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COMPANIES/ORGANIZATIONS COMMENTS

CO31 – Oil Change International (cont'd)

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3613. Lee Sides (zip code: 88203)
3614. Leslie Lakind (zip code: 87505)
3615. Lynne Thomson (zip code: 95662)
3616. Phyllis Satterfield (zip code: 66614)
3617. Robert Bauerlein (zip code: 85042)
3618. Leslie Harris (zip code: 12456)
3619. Leigh Miller (zip code: 54455)
3620. Leigh Walker (zip code: 30506)
3621. Susan Wilson (zip code: 98031)
3622. Laura LaVertu LaVertu (zip code: 22303)
3623. Lcn Jennings (zip code: 55108)
3624. Lenora Roedner (zip code: 63012)
3625. Lenore Sheridan (zip code: 94703)
3626. Jane Murphy (zip code: 14775)
3627. William Heaton (zip code: 94102-3656) please stop this madness!
3628. Leon Demars (zip code: 85321) 3629. Leonard Rubin (zip code: 20012) 3630. Jennifer Graham (zip code: 33919)
3631. Lois Fryor (zip code: 94501) 3632. Ronald Le Le (zip code: 95116) 3633. Lenore Reeves (zip code: 60448)
3634. Linda Schmidt (zip code: 15044)
3635. Leslee Goodman (zip code: 98856) The longer we wait to take action on climate change, the greater the crisis we create for our children, grandchildren, and other species.
3636. James and Leslee McPherson (zip code: 94403) 3637. Leslie Cassidy (zip code: 10026) 3638. Leslie G Baker (zip code: 01240) 3639. Leslie Pereira Pereira (zip code: 33145)
3640. Leslie Bradford (zip code: 73170) 3641. J ALLEN LESLIE (zip code: 17609) 3642. Leslie Faris (zip code: 98133) 3643. Phyllis a (zip code: 60202)
3644. Les Paul (zip code: 45759) 3645. Diane Palma (zip code: 46324) 3646. Beth Levin (zip code: 97213) 3647. Timothy Taylor (zip code: 90064) 3648. Lewis Banells (zip code: 01604) 3649. William Facey (zip code: 1349) 3650. Laurel Facey (zip code: 01349) 3651. Laura Fake (zip code: 19567) 3652. Lisa Lewis (zip code: 27529)
3653. Linda Gillaspay (zip code: 89506) We must act aggressively to give our children a habitable planet. Please help not hinder this endeavor.
3654. Lynne Glaeske (zip code: 80237) 3655. Linda Greene Greene (zip code: 47468) 3656. Laura Silverman (zip code: 10994) 3657. Linda Thompson (zip code: 77074) 3658. Rev Linda Andrews (zip code: 97239)
3659. Linda Hansen (zip code: 97218) NO means no! No more oil spills, no more fracking, no more pipelines. Stop it down! Shut it all down! Keep it in the ground!
3660. Lois Hayes (zip code: 18940) 3661. L.M. Holmes (zip code: 96817)
It's past time to retire fossil fuels.
3662. Linda Howed (zip code: 02478) I don't think enough attention has been given to the absolute trashing of the landscape where fracking occurs. It has been blown up, toxic chemicals injected to help release the gas have polluted water supplies. Who would want to live in these places? For once we need to put "energy" aside and think of the natural world. Corporate energy companies have extracted more and more, with little thought to the health of the planet. Will pipelines ever be judged safe? I doubt it.
3663. Dominic Libby (zip code: 03851)
3664. Libbie Botting (zip code: 14534) Of course they aren't safe! Anyone paying attention knows how much harm has been done and surely would again.
3665. Libby Herman (zip code: 40202)
3666. Libby Rice (zip code: 40516) We need to protect our Nation against abrogators that destroy our Nations Lands, Waters, Air and Sea's!
3667. Robert Liedike (zip code: 80002-3555) 3668. Kirk Ballin (zip code: 24153) 3669. Patsy Deerhake (zip code: 43214)
3670. Phyllis D'Anna (zip code: 94070-2161) 3671. Robert Crossett (zip code: 19023) 3672. Rachel Lileet-Foley (zip code: 97225) 3673. Rachel Lileet-Foley (zip code: 97225) 3674. Lillian Anderson (zip code: 85351) 3675. Lilith Lascone (zip code: 85004) 3676. Kym Waugh (zip code: 80203)
3677. Lisa Neste (zip code: 27265) 3678. Lily Bushman-Copp (zip code: 10003) 3679. Christopher Lima (zip code: 92003)
3680. Linda Immler (zip code: 20674) 3681. Lin Waldron (zip code: 92103) 3682. Linda Abbott (zip code: 10010) 3683. Linda Croxson (zip code: 22740) 3684. Linda Lewis (zip code: 20723) 3685. Edward Rubin (zip code: 02067) 3686. Linda Bader (zip code: 52402) 3687. Linda Blanchard (zip code: 04103) 3688. Linda Kaplan (zip code: 38138) 3689. Linda Emme (zip code: 94940) 3690. Linda Marshall (zip code: 29606)
3691. Linda Bennett (zip code: 49008) 3692. Linda Forsythe (zip code: V5C524)
3693. Linda Littleton (zip code: 28705) This pipeline is just wrong. Why spend all the time and money for the summit in Paris and do this? This is not what the American people want.
3694. Linda Carroll (zip code: 70118-4951) Fracking produces huge risks to public health and our climate and is unnecessary in the age of green, clean energy.
3695. Linda Pearce (zip code: 37027) 3696. Linda Marie (zip code: 32301) 3697. Linda Barker (zip code: 27949) 3698. Linda Franctco (zip code: 48237) 3699. Linda Reilly (zip code: 98502) 3700. Linda Ricci (zip code: 2905)
3701. Linda Rudman (zip code: 10025-3569)
3702. Linda Kirsch (zip code: 95490) We already have all the proof we need that fracking and pipelines have done incredible damage to the environment and all who live on this planet. Money is never an excuse for destroying life.
3703. Linda Strode (zip code: 84129) 3704. Linda Silverman (zip code: 21157)
3705. Linda Tibb (zip code: 37634) Reject any pipeline that could cause harm to our Climate.
3706. Linda Watts (zip code: 64670) 3707. Linda Zimmerman (zip code: 97405) 3708. Charles Andros (zip code: 03602)

COMPANIES/ORGANIZATIONS COMMENTS

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3709. Henry Friedman (zip code: 19010) 3710. Lindsay Johnson (zip code: 32092) 3711. Lindsey Pfanstiel (zip code: 62278) 3712. GARY BRANT (zip code: 32712) 3713. Linda Linderman (zip code: 33884) 3714. Linda Kiernan (zip code: 45140) 3715. Linda Provost (zip code: 5401) 3716. Lin Provost (zip code: 98144) 3717. Lisa Abramson (zip code: 08006) 3718. Lisa Hughes (zip code: 77550) 3719. Lisa Johnson (zip code: 78240) 3720. Lisa Cuhelro (zip code: 08050) 3721. Lisa Howell (zip code: 1520)

3722. L. Krausz (zip code: 94920) 3723. Lisha Doucet (zip code: 80549) 3724. talevich (zip code: 98118) 3725. Elizabeth MacKelvie (zip code: 54915)

3726. Deborah Little (zip code: 11720) I call on FERC and all federal agencies to move climate change to the top of any list of criteria for making decisions on fossil fuel infrastructure. We can't move off of these fuels unless we start moving off of them!! We have international treaty obligations to meet.

3727. Cristina Fiorillo (zip code: 10128) Please move forward with solar, wave and wind energy. We do not need detrimental sources of energy like fracking, oil, coal, nuclear. Our opportunity to stop some of the consequences of global warming is close to zero. Abandon energy that is putrid. Choose energy that enhances life.

3728. Lucille Seymour (zip code: 04005) 3729. Terry Vollmer (zip code: 63143) 3730. Elaine Livingston (zip code: 1) 3731. Liz Galst (zip code: 18011)

3732. Liz Zundel (zip code: 5641) 3733. Lia Schmidt (zip code: 97520) 3734. e p (zip code: 95482) 3735. Kate Ladd (zip code: 27916) 3736. Liz LaFour (zip code: 77482) 3737. Elizabeth Schwartz (zip code: 11106-4248) 3738. Elizabeth Vitale (zip code: 06117)

3739. LIZ WALLACE (zip code: 98045) 3740. Elizabeth smith Smith (zip code: 64138) 3741. LYNDA CRUICKSHANK (zip code: 44515)

3742. Peter Holcomb (zip code: 98226) We need to put all of our resources into renewables and more effective and efficient use of energy, not pipelines.

3743. Edward Bielaus (zip code: 20852) 3744. Laurie Fraker (zip code: 92243) 3745. Lisa Fues (zip code: 22301) 3746. Lisa Kagan (zip code: 12414) 3747. Lawrence Landherr (zip code: 53613)

3748. IJubica Sefer-Stefanec (zip code: 10032) 3749. LEILA ISHIKI (zip code: 96813) 3750. Lindsey Kilbourn (zip code: 24401) 3751. Linda valenziano (zip code: 94553)

3752. Larry Lambeth (zip code: 65810) 3753. Lennie Leonard (zip code: 20607) 3754. Louis Levi (zip code: 17403) 3755. Matthew Harper (zip code: 75235) 3756. Iori conley (zip code: 01027) 3757. Lloyd Hedger (zip code: 98403) 3758. Lloyd Richardson (zip code: 62711) 3759. Luis Lozano (zip code: 90803) 3760. Lynda West (zip code: 22044)

3761. Lara Manganaro (zip code: 01760) 3762. Leonora Mart'n del Campo (zip code: 53100) 3763. Lisa Mazzola (zip code: 33612) 3764. Linda Baumann (zip code: 95616) 3765. lois henstein (zip code: 85302) 3766. Linda Carlson (zip code: 97487) 3767. Linda McClendon (zip code: 35016)

3768. Laura McGowan (zip code: 20711) Fracking is NOT the answer. It is NOT worth the risk. Water is our most precious resource. We cannot afford to endanger that resource. 3769. Linda Lee McEachron Taylor (zip code: 85746) 3770. Linda Mellen (zip code: 92661) 3771. Lawrence Mick (zip code: 45449) 3772. Linda Middleton (zip code: 96822) 3773. Linda Janota (zip code: 34223) 3774. Lauren Lynley (zip code: 94580) 3775. Rodney Saenz (zip code: 78621) 3776. Lisa Montanus (zip code: 12498) 3777. Lynda Pauling (zip code: 55082) 3778. Lauren Richie (zip code: 35127) 3779. Linda Waine (zip code: 02780) 3780. Larry Needleman (zip code: 95473) 3781. Laura Nelman (zip code: 10034) 3782. Lori Murray (zip code: 85298) 3783. Linda Ng (zip code: 11354) 3784. Lewis Meyer (zip code: 33173) 3785. Lenny Oholisky (zip code: 80122) 3786. logan weldt (zip code: 10009) 3787. Lois Schreff (zip code: 23451) 3788. Lois Zmitrovic (zip code: 24101)

3789. Lola Reed (zip code: 73160) 3790. susan dickerson (zip code: 20735-1542) 3791. Ricard Rossello (zip code: 08024) 3792. Lonnie Albrecht (zip code: 33538)

3793. Roy Tansill (zip code: 78418) Fossil fuel profits are unimportant except to fossil fuel corporations and corrupt politicians bought by fossil fuel corporate bribes. Our planet's health trumps both.

3794. John Lopez (zip code: 89509)

3795. Loraine Lundquist (zip code: 91343) Please keep fossil fuels in the ground for the sake of our future. My community recently experienced the worst gas blowout in the history of the country. These pipelines aren't promoting our interests, they are destroying them.

3796. L. Bagley Bagley (zip code: 87108) 3797. Loretta Larkin (zip code: 07304) 3798. Lori Gudmundson (zip code: 98227) 3799. Lori Visioli (zip code: 1876)

3800. Grace Busch (zip code: 34211) 3801. Lorna Soto (zip code: null) 3802. Lorne Stockman (zip code: 24401) 3803. Lorraine D. Johnson (zip code: 98118-2851) 3804. Lorraine Williams (zip code: 52353)

3805. Lorraine Moore (zip code: 78210) 3806. Lorraine Weber (zip code: 79924) 3807. Lorene Wartick (zip code: 32117)

3808. Lorren James (zip code: 80007) 3809. Lorrie Ogren (zip code: 55408) 3810. Linda Ostro (zip code: 94611) 3811. Henry Schwartzman (zip code: 14830) 3812. Ron Hamilton (zip code: 76201)

3813. Usa Lottes (zip code: 21117) 3814. Herbert Jeschke (zip code: 19004) 3815. Louis LaBrunda (zip code: 07920-2636)

3816. Lindsay Conklyn Conklyn (zip code: 48843) 3817. joyce heyn (zip code: 92064) 3818. Louis Blaut (zip code: 11229) 3819. Louise B ANGELIS (zip code: 60026) 3820. Sara Ryals (zip code: 28356)

3821. Elizabeth Barger (zip code: 38483) You cant breathe methane, you can't drink oil, and you can't eat money, so why do you think fracking will do more than make some short term profits, the means of which that may kill you and your children?

3822. Lori Thomas (zip code: 91945) 3823. sharon chang (zip code: 70072) 3824. Leslie Patrick (zip code: 17844) 3825. Laura Kiholm (zip code: 85207) 3826. Linda Prostko (zip code: 49316) 3827. Lance Polya (zip code: 05465)

3828. Lois Battersby (zip code: 03813)

3829. Lee Margulies (zip code: 11790)

3830. Luis Sanchez (zip code: 33145)

3831. Linda Sue Barnes (zip code: 28395) Fracking needs to stop NOW. Please don't approve more pipelines.

3832. Lupe Sesma (zip code: 95130)

3833. Lenny Segel (zip code: 48331)

COMPANIES/ORGANIZATIONS COMMENTS

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3834. Lynn Marie Suits (zip code: 48103)
3835. Leonard Veden (zip code: 63146) We don't need any Fracked Gas!
3836. Glenn Tetterton-Ophcim (zip code: 28401) 3837. Laurel Tumarkin (zip code: 11201) 3838. Luc Le Noir (zip code: 07976) 3839. Linda Lucchese (zip code: 89135)
3840. Lucia Hall (zip code: 92117) 3841. Lucille Cecon (zip code: 06019) 3842. Lucinda Windsor (zip code: 76065) 3843. Diane Basile (zip code: 11746) 3844. Casste Cooper (zip code: 97538) 3845. Lucy Horwitz (zip code: 90049) 3846. Alleen Orthner (zip code: 33548)
3847. Luise Perenne (zip code: 92708) There should not be any fracking activity happening Any where!
3848. Luis Puentes (zip code: 92262) 3849. Luke Farrell (zip code: 72015) 3850. John frazier (zip code: 92024)
3851. k. eggers (zip code: 99101) It's WAY past time to start weaning ourselves from the dirty energy that has poisoned our planet and it's people for too long. Technology has advanced to the point where we can do this, now. Please do the job that FERC stands for. Thank you for listening!
3852. dianna sicilia (zip code: 22903) 3853. Lauren Baldwin (zip code: 92081) 3854. Luuk Van Hut (zip code: 10011-9191)
3855. Jacob R. Raitt Raitt (zip code: 06605) We are looking to protect our planet from those who willfully ravage it, in order to leave a sustainable Earth for our great-grandchildren's great-grandchildren.
3856. Carole Smudin (zip code: 2324) 3857. Laura Gandolfo (zip code: 11395) 3858. Larry Andrews (zip code: 97204) 3859. Lindsey Walker (zip code: 49770) 3860. Linda Drescher (zip code: 80401-5108) 3861. Donna Smith (zip code: 19083)
3862. Lynda Barry (zip code: 96793-2641) 3863. Lynda Barondes (zip code: 85603) 3864. Lynda Lahue (zip code: 91256)
3865. Lynda McDaniel (zip code: 95472) 3866. Lynda Stiefel (zip code: 43452)
3867. Wyllyn Hodnett (zip code: 23005)
3868. Lyn Lowry (zip code: 80501) These things aren't safe, don't have safeguards, destroy peoples' land and drinking water, shouldn't be allowed.
3869. Lynn C. Lang (zip code: 56303) 3870. Phil and Lynn Fischer (zip code: 94521) 3871. Lynn Bengston (zip code: 10071) 3872. Lynne Bannerman (zip code: 98103)
3873. Lynne Bailey (zip code: 12445) #1 ... THINK !!! We NEED sustainability and renewable energy sources NOW ... we are killing our own habitat if we don't switch ASAP
#2 ... Stop building oil & gas pipelines #3 ... End ALL fracking #4 ... No approval for new gas-fired power plants #5 ... Phase out all Nuclear and Fossil-fired power plants
3874. Lynn Levine (zip code: 55416)
3875. Lynn Ricc (zip code: 54016)
3876. Lynn Spencer (zip code: 48124)
3877. Lynn Howard (zip code: 92109) past the tipping point folks...
3878. Bill and Marilyn Voorhes (zip code: 04612)
3879. Carolyn Shaw (zip code: 06457) Our country is becoming riddled with pipelines. Why are we doing this, when we should be putting every single bit of energy...every resource...into wind, solar and hydroelectric energies that will give us a chance to survive as a species?
3880. Jennifer Waters (zip code: 85285) 3881. C Cass (zip code: 61615) 3882. Mike Jackson (zip code: 90503)
3883. Michael Moats (zip code: 60515) 3884. Michael Taylor (zip code: 80504) 3885. MaryAnn Denning (zip code: 14830)
3886. mary charles (zip code: 53704) 3887. Mary Chlopan (zip code: 32308) 3888. Matthew Hansen (zip code: 94904)
3889. Robert MacLuskie (zip code: 20715) 3890. Michael House (zip code: 94061) 3891. Jason Greenberg (zip code: 95010)
3892. Lynn Macy (zip code: 7916)
3893. Macyle Candela (zip code: 17316) 3894. Miriam Chapman (zip code: 68124) 3895. James Vinson (zip code: 35213) 3896. Michael Camp (zip code: 05401-2940) 3897. Sam Asseff (zip code: 80915)
3898. Jon Madden (zip code: 33461) 3899. reyna garcia (zip code: 91768) 3900. Margaret Herten (zip code: 44135) 3901. Maggi Gilson (zip code: 27510) 3902. Margaret "Maggie" Larrick (zip code: 98166) 3903. Lawrence Crowley (zip code: 80027)
3904. Mary Ann Gilman (zip code: 06438) 3905. Kathy Magne Magne (zip code: 55105) 3906. Connie Tompkins (zip code: 51503) 3907. Marcia Pauley (zip code: 98370)
3908. Susan Pelakh (zip code: 32931)
3909. Mike Hlat (zip code: 14218)
3910. David Morris (zip code: 94618)
3911. Michael Kitchen (zip code: 49081) This is the only way.
3912. Peter Brooks (zip code: 08816) 3913. Sharon Cunningham (zip code: 04084) 3914. Linda Hart (zip code: 43616) 3915. Mair McNamara (zip code: 60010-1481) 3916. Mairi Meredith Meredith (zip code: 13690) 3917. Edith Mirante (zip code: 97202) 3918. Gordon Smith (zip code: 71901) 3919. Kathe Gardenias (zip code: 95926) 3920. Mike Albar (zip code: 06044)
3921. Mary Ann Leitch (zip code: 19147) No man may poison the people for his private profit. —Theodore Roosevelt
"The supreme reality of our time is the vulnerability of our planet." President John F. Kennedy
"When a man must be afraid to drink freely from his country's river and streams that country is no longer fit to live in. _
Edward Abbey
3922. Michael Dorer (zip code: 94538) 3923. Maggie A. (zip code: 54301) 3924. Mary Allen (zip code: 68104) 3925. Stephen Green (zip code: 98233) 3926. Guillermina Aguirre (zip code: 80030) 3927. Marcia Frazee (zip code: 46011) 3928. Caroline Fox (zip code: 11725)
3929. FRANÇOIS DE LA GIRODDAY (zip code: 84093) 3930. Amanda Withrow (zip code: 90405) 3931. Mary Pilaffan (zip code: 33156) 3932. Mary Mahoney (zip code: 02114-3247)
think of the fallout - people first ahead of corporate greed 3933. Rang Ma (zip code: 05346) 3934. Ronald Matthews (zip code: 01752) 3935. Marc Stein (zip code: 80132)

COMPANIES/ORGANIZATIONS COMMENTS

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3936. Marcia Hoodwin (zip code: 34238) 3937. Marci Levine (zip code: 90046) 3938. Marc Stoner (zip code: 97408) 3939. Mary Ann Dailey (zip code: 55109) 3940. Margie Koelling (zip code: 32935) 3941. Marie Garescher (zip code: 10591) 3942. Pj Boyce (zip code: 21227) 3943. margaret cole (zip code: 95070) 3944. Margaret T.M. Petkiewicz (zip code: 95125) 3945. Margery Bowser (zip code: 13066) 3946. Margean Kastner (zip code: 63144) 3947. Marge Schneider (zip code: 06084) 3948. Margaret Gallagher (zip code: 21015) 3949. MARGE FEAR (zip code: 44118) 3950. Margaret Hart (zip code: 13036) 3951. Margaret Sweeton (zip code: 67208) 3952. margie Arlkawe (zip code: 72209) 3953. Margie Borchers (zip code: 93101) 3954. Marjorie Williams (zip code: 32079) 3955. Laurence Margolis (zip code: 55345) 3956. Maria Cooper (zip code: 92657) 3957. Maria Duffield (zip code: 33146) 3958. Maria Socorro (zip code: 90066) 3959. Marian Cruz (zip code: 95023) Oil/gas destroy and must stop this behavior. NO, No to pipeline! 3960. Marian Cooley (zip code: 47304) These pipelines are too dangerous for people and our environment! 3961. Marian Feldman (zip code: 20879) 3962. Marian Harlin (zip code: 84915) 3963. Mari Dominguez (zip code: 95236) 3964. Marie Rourke (zip code: 68134) 3965. 3965. Marilla Calafiori (zip code: 20520) 3966. Marilyn Grosky (zip code: 80365) 3967. Marilyn Shepherd (zip code: 95570) 3968. Marilyn S. Underwood (zip code: 72641) 3969. Marina Adams (zip code: 10003) 3970. marina Jenney (zip code: 93105) 3971. Mariano Marquez III (zip code: 94124) 3972. Jennifer Schaffer (zip code: 79702) 3973. Christina Maris (zip code: 87107) 3974. Marisa Gonzalez (zip code: 78248) 3975. Anthony Buch (zip code: 98115) 3976. Maritza Carrera (zip code: 80129) 3977. Mariu Suarez (zip code: 76123) 3978. Marjorie Wagner (zip code: 11218) 3979. Marjorie Cogan (zip code: 98115) 3980. Margarita Perez (zip code: 91342) 3981. Marjorie Short (zip code: 01960) 3982. Marjorie Rogalski (zip code: 3755) 3983. mark lnda (zip code: 33572) 3984. Mark Beckwith (zip code: 9470) 3985. Mark Hollinrake (zip code: 10026) 3986. Mark Wirth Wirth (zip code: 98102) 3987. Mark Reback (zip code: 90042-1107) 3988. Mark Lungo (zip code: 44017-1977) 3989. Barbara Wood (zip code: 19135) The fossil fuel industry has spent millions trying to push fracked gas as a "clean" fuel. But our new report on these pipelines shows that label is simply wrong. Any way you slice it, these pipelines would be a disaster for the climate, as well as huge risks to communities threatened by explosive pipelines and fracking dangers. Act now to demand that FERC and federal agencies protect the climate and communities everywhere from these fracked gas pipelines by aligning energy policy with climate science. 3990. Mark Baker (zip code: 11300) 3991. Mark Patten (zip code: 14219) 3992. Mark Holmgren Holmgren (zip code: 33705-3937) Do you even know how late in the game we are, climate-wise? There are other energy paths that create jobs and save our planet. This is addiction and status quo with fracking and fossil fuels. Get help: be the help. Please. 3993. Michael Marktc (zip code: 44111) 3994. Mark Leffler (zip code: 38041) this is very important 3995. Wayne Langford (zip code: 30044) 3996. mark wzyzenbeek (zip code: 85029) 3997. Marlene Tendler (zip code: 06801) 3998. Marlene Miller (zip code: 59701) 3999. Marlene Hutchison (zip code: 76011) 4000. marie vane (zip code: 95831) We need to get off fossil fuels! 4001. Marly Wexler (zip code: 92103) 4002. Marni Ebersole (zip code: 12866) 4003. Michael and Amy Roberts (zip code: 04680) 4004. Mary Ann Rotondo (zip code: 19473) 4005. Christine Marquette (zip code: 12701) 4006. Elyse Ashton (zip code: 90069) 4007. Marrisba Abbot (zip code: 95006) 4008. Marsha Wiseltier (zip code: 11545) 4009. Margaret Silvers (zip code: 20756) 4010. maria langlois (zip code: 49323) 4011. Marta Hiedegut (zip code: 60626) 4012. Martha F. Hoar (zip code: 05482) 4013. Martin Diedrich (zip code: 92627) 4014. g & b martin (zip code: 94070) 4015. Martin Horwitz Horwitz (zip code: 94122) 4016. Martin Riley (zip code: 92883) 4017. Martin Fogel (zip code: 7044) 4018. Bill Martens (zip code: 6066) 4019. MARV COHEN (zip code: 94595) 4020. Jennifer Johnson (zip code: 61008) 4021. Mary Helton (zip code: 79925) 4022. Mary Crawford (zip code: 48823) 4023. Mary Barbezat (zip code: 60124) 4024. Mary Peterson (zip code: 97365) 4025. Mary Ann Calvert (zip code: 23452) 4026. Mary Thorpe (zip code: 14889) 4027. mary boyle (zip code: 12208) 4028. Mary Ann Black (zip code: 62232-1003) 4029. m w (zip code: 87120) 4030. MaryAnna Foskett (zip code: 02476) 4031. Mary Dalley (zip code: 55109) 4032. mary Raven (zip code: 03054) Please, for the future of my children, scale back or eliminate the building of new pipelines and focus on renewable energy instead. We're the USA. If we can put a man on the moon in 1969 we can achieve energy independence without new pipelines! 4033. Mary Burnley Burnley (zip code: 97386) 4034. Mary Link (zip code: 01330) 4035. Mary Chase (zip code: 94947) 4036. Mary Gamson (zip code: 94610) 4037. mary e hunt (zip code: 13820) 4038. Mary Barbezat (zip code: 60125) 4039. mary ellen weiner (zip code: 06111) 4040. mary fanelli (zip code: 14017) 4041. Mary G Barrow (zip code: 97201) 4042. Kristin Hall (zip code: 77497) 4043. Mary Malo (zip code: 53202) 4044. Mary Rodarte (zip code: 92371) 4045. Marylee Fithian (zip code: 53409) 4046. Mary McGaughey (zip code: 97030) We want, we must meet our climate goals. We must, therefore, totally divest from all oil energy.....using a timely, organized policy plan.

COMPANIES/ORGANIZATIONS COMMENTS

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4047. Mary McMahon (zip code: 19067) 4048. Mary Landrum (zip code: 42134) 4049. Mary Beckman (zip code: 10925) 4050. Dawn Mason (zip code: 17901) 4051. John Massman (zip code: 60002) 4052. LOUIS PALAZZINI PALAZZINI (zip code: 80011) 4053. Marsha StLouis (zip code: 98031)
4054. Ronald Sverdløve (zip code: 08540) 4055. matthieu claramunt (zip code: 83500) 4056. Matthew Eager (zip code: 11901) 4057. Oil Change International (zip code: 94610) 4058. Matthew Herrington (zip code: 48433) 4059. Matthew Reardon (zip code: 2144)
4060. patricia matthaei (zip code: 79830)
4061. Jennifer Fortin (zip code: 84103) 4062. Matthew Palmer (zip code: 90808) 4063. Maura McCarthy (zip code: 50441)
4064. Meredith West (zip code: 60622)
4065. Anne Rice (zip code: 40516) We need to protect our Nation against abrogators that destroy our Nations Lands, Waters, Air and Sea's!
4066. Maxine Clark Clark (zip code: 98310) 4067. Randy Maxfield (zip code: 97309) 4068. Gay Goden (zip code: 44119)
4069. Max Johnson (zip code: 46303) Seriously, cut the shit out. We don't need any more gas. We need to maximize sustainable and clean energies like solar, wind, and turbine. Yall know this, why do I have to say it?
4070. Mary Axle (zip code: 48357-3524)
4071. Mayellen Henry (zip code: 98009) We have nothing to gain by building these pipelines and way too much to potentially lose. Please don't do it without way more verification that they are not only safe, but necessary.
4072. Mays Swicord (zip code: 33037)
4073. robert mayton (zip code: 42303)
4074. Mojgone Azemun (zip code: 98225)
4075. Melissa Baird (zip code: 34683) Please do NOT do this!
4076. Mark Lloyd Baker (zip code: 85501) 4077. Mary B Bartlett (zip code: 46208) 4078. Barbara Davidson (zip code: 61604-5420)
4079. Margaret Blakeley (zip code: 80120) 4080. Michael Diamond (zip code: 10128) 4081. Lynette Belew (zip code: 85224)
4082. Marilyn Lee (zip code: 33630)
4083. Mary Love (zip code: 40031) We need to keep fossil fuels in the ground, not build more pipelines. Instead of building new or repurposing old ones, the industry needs to repair and strengthen the pipelines they already have!
4084. Stuart Weiss (zip code: 80218) 4085. M B NEACE (zip code: 89145) 4086. Mike Bundar (zip code: 19805) 4087. Michael Bordenave (zip code: 93728) 4088. Mary Rand (zip code: 27546)
4089. Marilyn Britton (zip code: 03458) We don't need these. STOP them now.
4090. Monica Daigler (zip code: 14304) 4091. Mary Catherine Green (zip code: 53719) 4092. Carol Thompson (zip code: 15129) 4093. Marilyn Caplin (zip code: 33146) 4094. Michael Cate (zip code: 93921) 4095. Nina McBee (zip code: 29621) 4096. Martin Becker (zip code: 34145) 4097. Crawford MacCallum (zip code: 87059) 4098. Karen McChrystal (zip code: 90403)
4099. Harriet McCleary (zip code: 55404) 4100. Elizabeth McCleary (zip code: 85048) 4101. James McConkey (zip code: 60115) 4102. John McCormick (zip code: 08260) 4103. Deborah McCoy (zip code: 98201) 4104. James mcreca (zip code: 302376) 4105. Gary McCuen (zip code: 97302-5209) 4106. Marge DeJack (zip code: 48189) 4107. tom harris (zip code: 08505)
4108. Michael Lillian (zip code: 02135) 4109. Marjorie Johnson (zip code: 11803)
4110. Michael Kemper (zip code: 94109) We need to be weaning ourselves of petroleum products not facilitating their use and the accidents attendant upon their recovery and transportation.
4111. Mary McLeod (zip code: 10027) 4112. Margare C. McHugh (zip code: 07871-1511) 4113. Rosalie McMenamin (zip code: 60622) 4114. Marilyn McMullen (zip code: 94591) 4115. Mari McShane (zip code: 15218) 4116. Marcia Sherman (zip code: 93110) 4117. Matthew Skarin (zip code: 80920) 4118. Meredith Tucker (zip code: 60067)
4119. Mark McWhinney (zip code: 6757)
4120. Michelle Fuller (zip code: 80120)
4121. Melinda Armistead (zip code: 01930-1551)
4122. David Moore (zip code: 92308) Climate Change is real! Please; no more fracked gas pipelines.
4123. Myra Dewhurst (zip code: 33176) 4124. Manetric Douglas (zip code: 46219) 4125. Mark Wise (zip code: 22315) 4126. Richard Dykstra (zip code: 12771) 4127. Libby Earle (zip code: Ohio)
What we need is oversight and repair of deteriorating existing pipe lines. lines 4128. Raelyn Michaelson (zip code: 98168) 4129. Sergio Rivera (zip code: 60634) 4130. Martha Barrett (zip code: 75230)
4131. Marsha Ebaugh (zip code: 67204) 4132. Marlyn Couture (zip code: 05250) 4133. Dallas Windham (zip code: 75243)
4134. margaret phillips (zip code: 85743) 4135. Megan Faber (zip code: 80210) 4136. Meghan McCutcheon (zip code: 98672) 4137. Meghan Kearns (zip code: 97229) 4138. meg kettell (zip code: 11222)
4139. RENATE DOLIN (zip code: 90265) 4140. Mohdie Vakili (zip code: 60085)
4141. Eleanor Snyder (zip code: 03467) When will enough be enough?
4142. Elizabeth Hunter (zip code: 85097) 4143. rich meler (zip code: 89434) 4144. Melanie Kuhn (zip code: 47906) 4145. Melanie Rising (zip code: 01605) 4146. Marilyn Lemons (zip code: 85213) 4147. Mel Ginsberg (zip code: 97520) 4148. Melvin Cheltin (zip code: 94109)
4149. Dr. Mary Ellen Aguilre (zip code: 85713) How much more does the environment have to be poisoned before we stop the madness! allow this to go on the polluters should be required to pay ALL costs of cleanup and medical care for citizens subjected to their disastrous practices.
4150. Melody Kouba (zip code: 80015)
4151. Rosemary Jack (zip code: 60534)
4152. Javier Mendez (zip code: 96817-1200)
4153. Matthew Ennis (zip code: 05404)
4154. Carole Kronberg (zip code: 48223) #NoNeedForFossilFuels #KeepItInTheGround
4155. Morgan Peters (zip code: 90027) 4156. Andrea Fuhrman (zip code: 67410) 4157. Misty McIntyre (zip code: 94501)

COMPANIES/ORGANIZATIONS COMMENTS

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if we

4158. Ben Klopper (zip code: 63125) It's not just the pipelines (though they're bad enough); it's also the way the gas they'll move is acquired. Fracking is frakking the environment.

4159. m pritchett (zip code: 94501) **4160. Melissa Palge** (zip code: 10016)

4161. David Rice (zip code: 72903) Instead of being insane about money we need to be insane about cleaning, protecting and promoting our Nations lands, Waters and Sea's. It's a no Brainer isn't it? Then get a BRAIN!

4162. Mercy Drake (zip code: 35205) **4163. Meredith Ryan** (zip code: 77339) **4164. Merel Schoen** (zip code: 1183) **4165. Merrill Boone** (zip code: 22203)

4166. Mary MacVicar (zip code: 43221) if we can't count on the fed agencies to protect the environment and our health, where do we turn?????

4167. Chrissy Morrissey (zip code: 54911) **4168. Meryle A. Korn** (zip code: 98226) **4169. Marsha Shaiman** (zip code: 98122) **4170. Margaret Goodman** (zip code: 19342)

4171. Patricia Moncada (zip code: 85712) Stop fracking our Mother Earth, this is destroying us all. Greed has taken over the senses of these companies. Please stop them NOW!

4172. S. R. Craig (zip code: 91201) **4173. Meredith Asher Asher** (zip code: 60622) **4174. Sharon Mylott** (zip code: 3603) **4175. Diane Puckett** (zip code: 96012)

4176. marylee fahlstrom (zip code: 54729) **4177. Faye Bennett** (zip code: 97214) **4178. Mary Dunn** (zip code: 04101) **4179. Marguerita Denise Flowers** (zip code: 89081) **4180. Michael Felmet** (zip code: 27106)

4181. Douglas McCormick (zip code: 92679) **4182. Marie Fitzsimmons** (zip code: 32256) **4183. Mary Ford** (zip code: 64155) **4184. Melissa G Bailey** (zip code: 08540) **4185. Mary Follis** (zip code: 49009)

4186. Michael Gilgosh (zip code: 55731)

4187. mark gillono (zip code: 60503) "The human appetite for animal flesh is a driving force behind virtually every major category of environmental damage now threatening the human future - deforestation, erosion, fresh water scarcity, air and water pollution, climate change, biodiversity loss, social injustice, the destabilization of communities and the spread of disease." - The World Watch Institute

www.cowspracy.com/ **4188. Michael Ittis** (zip code: 53715) **4189. Mark Clauth** (zip code: 80863) **4190. Mark Molloy** (zip code: 11238) **4191. Margaret Oakes** (zip code: 89145) **4192. Mark Gotvald** (zip code: 94523) **4193. Mike Griesmeyer** (zip code: 87110) **4194. Susan Shaak** (zip code: 19606)

4195. MONICA TURPEN (zip code: 47446) **4196. Margaret Hadderman** (zip code: 88061) **4197. Mark Halm** (zip code: 65201)

4198. Mary OConnell (zip code: 15001) It must be someone's moral duty to protect the innocent. We are the innocent and we need your help to keep us safe. Do the right thing.

4199. Martha Keeley (zip code: 1938) **4200. Kelly Larkin** (zip code: 1106) **4201. Marjorie Bridgers** (zip code: 08106) **4202. Mary Helen Venos** (zip code: 32312) **4203. Maria Dambrosio** (zip code: 92203) **4204. Mia Dravis** (zip code: 91730)

4205. Michelle Maher (zip code: 97103) **4206. Michael Stella** (zip code: 33040) **4207. Michael Kahler** (zip code: 66039) **4208. Michael Kavanaugh** (zip code: 94115) **4209. Michael Mitchell** (zip code: 52404) **4210. Michaela Redden** (zip code: 07649) **4211. Michael DeMoran** (zip code: 34293) **4212. michael aman** (zip code: 13224) **4213. Michael Shapiro** (zip code: 33134) **4214. Michael Bromberg** (zip code: 98102)

4215. Michael Carpenter (zip code: 54212) **4216. Michael J Rulon Rulon** (zip code: 86005) **4217. Michael Prete** (zip code: 85719) **4218. M. R.** (zip code: 39035) **4219. Jonathan Michaels** (zip code: 01061) **4220. Michael Stuart** (zip code: 01501) **4221. Michael Lynch** (zip code: 93111) **4222. Michelle Doty** (zip code: 78734) **4223. Michael Barry** (zip code: 83501) **4224. Mary Dehart** (zip code: 73018) **4225. Michele Paxson** (zip code: 11554-4250) **4226. Michele Shipp Shipp** (zip code: 20877) **4227. Michelle Inere** (zip code: 32507) **4228. Michelle Jordan** (zip code: 97520) **4229. Michelle Bentley** (zip code: 28713) **4230. Michelle Morris** (zip code: 76040) **4231. Mike Conlan** (zip code: 98052) **4232. mary m. mason** (zip code: 92649) **4233. Michael Malloy** (zip code: 75039) **4234. Desiree Middleton Middleton** (zip code: 33004) **4235. Mike Conatser** (zip code: 84067)

4236. mihal C (zip code: 33132) **4237. Michael Klausung** (zip code: 25143) **4238. Mike McCool** (zip code: 1527) **4239. Michael Edwards** (zip code: 27592) **4240. Michael Lombardi** (zip code: 19054) **4241. Michael Presley** (zip code: 75087) **4242. Michael Rapp** (zip code: 45385) **4243. Mike Rudly** (zip code: 48067) **4244. mike kastner** (zip code: 46356) **4245. Mike Lindner** (zip code: 11050) **4246. Michael Dohn** (zip code: 37206) **4247. Michael Smith** (zip code: 98902) **4248. Michael Eisenberg** (zip code: 27613) **4249. Michael George** (zip code: 30506) **4250. Michael Haskell** (zip code: 04074)

4251. Michael Callaway (zip code: 91786) **4252. Michael MacGuire** (zip code: 98198) **4253. Michael Gelfer** (zip code: 10579) **4254. Michael Eiklas** (zip code: 92054) **4255. Mike Bushaw** (zip code: 45424) **4256. Mike Lundgren** (zip code: 66205)

4257. michael ann herring (zip code: 92612) **4258. Kimberly Frey** (zip code: 19711)

4259. Phil and Millie Brady (zip code: 46208) Stop fracking and all the dangerous activities connected with fracking. We need to go to renewal like wind and solar. We need to prevent our planet from the effects of pollution and climate change.

4260. James Miles (zip code: 33405) **4261. Chetra Pittsa** (zip code: UK) **4262. Mary Millard** (zip code: 89439) **4263. Kerby Miller** (zip code: 65203) **4264. Emily Busse** (zip code: 80997) **4265. Lynda Armona** (zip code: 30512) **4266. Michael Kurland** (zip code: 6250) **4267. Jennings Jennings** (zip code: 55108) **4268. Maryrose Wilson** (zip code: 17257) **4269. Yvonne pratt** (zip code: 11772)

NOT NOW, NOT EVER!!!!!! **4270. Mindi Shank** (zip code: 90405) **4271. Anne Reidt** (zip code: 94560) **4272. Mariann Regan** (zip code: 06824) **4273. Miriam Baum** (zip code: 91701) **4274. Mirlam Harlan** (zip code: 19103) **4275. Marylyn Irgang** (zip code: 56001) **4276. Michele Demers** (zip code: 87505)

4277. Judith Sutton (zip code: 46032) **4278. Kelly McMahan** (zip code: 87114) **4279. Melissa Milano** (zip code: 35406)

4280. Louis Salerno (zip code: 94501) **4281. mika stickford** (zip code: 19012) **4282. Orva M Gullett** (zip code: 43302) **4283. Mitch Wilson** (zip code: 41179) **4284. Matilda Ticknor** (zip code: 01475) **4285. mital frank** (zip code: 44274) **4286. Kathryn Rose** (zip code: 80205) **4287. Susan Covey** (zip code: 94306) **4288. Mary Al-Tukhaim** (zip code: 1474) **4289. j D** (zip code: 94941)

COMPANIES/ORGANIZATIONS COMMENTS

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4290. **Juan and Maria Balboa** (zip code: 92583) 4291. **Donna Barrett** (zip code: 60089) 4292. **marjorie cllsson** (zip code: 56390) 4293. **Michael Frey** (zip code: 93130)
4294. **Maureen Fauss** (zip code: 63129) we must stop fracking it will destroy our water and created earthquakes , it's time to save the planet! NOW!
4295. **Mary Jane Shanklin** (zip code: 66783) 4296. **Michael Kenny** (zip code: 77041)
4297. **MEREDITH KATES** (zip code: 7642) 4298. **M Langelan** (zip code: 20815) 4300. **Michael Lyons** (zip code: 80232) 4300. **Michael Montgomery** (zip code: 33704) 4301. **Martha Land Land** (zip code: 94518-1324) 4302. **Mitch Parkinen** (zip code: 94553-3920) 4303. **mark rist** (zip code: 08050-2920)
4304. **Mike Kane** (zip code: 60411) 4305. **Maren Kentfield** (zip code: 85748)
The climate impact is devastating.
4306. **Mark Klenzynski** (zip code: 60544)
4307. **Marlyn Logan** (zip code: 66208)
4308. **Maxim Kolbowski-Frampton Kolbowski-Frampton** (zip code: 10002)
4309. **Marie Kopin** (zip code: 48858) Please stop this reckless destruction of our environment. No more pipelines please!
4310. **Michael Marshall** (zip code: V2C 4E1) 4311. **Manuela Kupfer** (zip code: 35039) 4312. **Mary Kushner** (zip code: 07068) 4313. **Marrey Lachance** (zip code: 4003) 4314. **Michael lahey** (zip code: 60626) 4315. **Michael Lauren DeSarbo DeSarbo** (zip code: 52565) 4316. **Marilyn Carse** (zip code: 48103)
4317. **Ellen Wade** (zip code: 92107)
4318. **marjorie leach Parker** (zip code: 23464)
4319. **Meaghan Leavitt** (zip code: 33710)
4320. **Michael Lewandowski** (zip code: 27526)
4321. **Mike Lyons** (zip code: 95476)
4322. **mindy maxwell** (zip code: 2138)
4323. **Marie-Louise Nordeman** (zip code: 53293)
4324. **Mary Carter** (zip code: 13760)
4325. **Michael Lowe** (zip code: 32603)
4326. **Mike Sherman** (zip code: 98133) We need to focus on Clean, Renewable, and Sustainable energy, not 19th century technology...
4327. **Mark Waltzer** (zip code: 08003) 4328. **Mike Lynxwiler** (zip code: 63123) 4329. **Mary Zack** (zip code: 43086) 4330. **Mark Mansfield** (zip code: 14456) 4331. **Marion Marsh** (zip code: 53122) 4332. **Mindy Thompson** (zip code: 98236) 4333. **Michele Biggane** (zip code: 45069) 4334. **Michael Brown** (zip code: 85901) 4335. **Marilyn McNabb** (zip code: 68522) 4336. **Marilee Nagy** (zip code: 43230) 4337. **Mary Price** (zip code: 07002)
4338. **Matt Geer Geer** (zip code: 60480)
4339. **Mildred Meyer** (zip code: 12449) If we ruin our water through various means of fracking and transportation of its products, we'll ruin the Earth - and we will no longer be able to survive on this Earth.
4340. **Mary Flannelly** (zip code: 94706) 4341. **Merri Gelbard** (zip code: 94549) 4342. **Mark Messing** (zip code: 49684)
4343. **Marian MacCurdy** (zip code: 1007) I once lived on land with a cross continental telephone cable on it. The cable broke and we arrived home one day to find a helicopter, police cars, countless bulldozers, and hundreds of people clustered on our land, digging it up, making a mess, and working 24 hours round the clock to fix this cable. What would this experience have been like if instead of a fiber optic cable it had been a gas line? I shudder to think. These lines break; we all know it. They must not be approved until it is proven they are safe.
4344. **Margaret O'Neill** (zip code: 03054) Stop the insanity. If the pipeline doesn't benefit NH, we're not going to let them in!
4345. **Michael Monroe** (zip code: 02445)
4346. **Martin Gachel** (zip code: 60640)
4347. **m may** (zip code: 92008)
4348. **mehry sepanlou** (zip code: 90296)
4349. **Marilyn Mueller** (zip code: 30094) We cannot turn our country and planet into an eventual wasteland!
4350. **Mary Mutch** (zip code: 54601)
4351. **Michael Webb** (zip code: 45102)
4352. **Martha Yoshida** (zip code: 10024)
4353. **David Clark** (zip code: 95070) No new fossil energy. Leave what is left in the ground.
4354. **Margaret Stein** (zip code: 86326)
4355. **Tim Burch** (zip code: 4543)
4356. **Michael Oblander** (zip code: 73072)
4357. **M Rangne** (zip code: 10009)
4358. **James Moffat** (zip code: 98270) The science is clear. Fracking is death on many levels.
4359. **MOHIB JIVAN** (zip code: 90802) 4360. **Marina Tonkonogy** (zip code: 91302) 4361. **Laurie Schick** (zip code: 90211)
4362. **Mark Molen** (zip code: 84103)
4363. **Kathryn Lezenby** (zip code: 19147) Fracking destroys habitat, forests and farmland and pollutes waterways. It requires huge amounts of water when water is in short supply. We must not cause all this destruction for a fossil fuel when we need to be switching to renewables as quickly as possible. In stead of committing ourselves to future dependency on fossil fuels by investing in this infrastructure, we must invest in renewable energy.
4364. **Molly Brown** (zip code: 96067) Get real! We have to slow down climate change NOW!
4365. **Mary Shaughnessy** (zip code: 46217) 4366. **Molly Hauck** (zip code: 20895) 4367. **Maria Mollenkopf** (zip code: 78728)
4368. **Susan Hurwitz** (zip code: 07661) 4369. **M Sullivan** (zip code: 23238)
4370. **Candice Shaffer** (zip code: 05673) 4371. **Laurel McDonnell** (zip code: 78666) 4372. **Armando A. Garcia** (zip code: 90723) 4373. **mark nicholas** (zip code: W8P 1B0)
4374. **Tracy S Troth** (zip code: 39208-5710) 4375. **monique maas** (zip code: 982219416) 4376. **F. Michael Montgomery** (zip code: 95403) 4377. **Steph Cruz** (zip code: 11432)

COMPANIES/ORGANIZATIONS COMMENTS

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4378. Diana Saxon (zip code: 97301) 4379. Valerie Wasson (zip code: 44601) 4380. Mary Johannsen (zip code: 55411) 4381. J.C. Moore (zip code: 67067) 4382. Morgan Clark Clark (zip code: 07079) 4383. Jason Morgan (zip code: 49331) 4384. Mark Smith (zip code: 54154) 4385. Mary Anne Orlich (zip code: 63017) 4386. Nella Morrison (zip code: 7371P6) 4387. Sean Hagstrom Hagstrom (zip code: 92373) 4388. Nylas Moser (zip code: 67213) 4389. Mason D (zip code: 1913) 4390. Maureen Bike (zip code: 85750) 4391. M McGillivray (zip code: 97408) 4392. D. Rincon (zip code: 93703) 4393. Deborah Papaleo (zip code: 85044) 4394. Paula Cronin (zip code: 03106) 4395. Mary Gibbons (zip code: 48316) 4396. Marilyn Pierson (zip code: 67567) 4397. Marion Lakatos (zip code: 10520) 4398. Pepper Marts (zip code: 87104) 4399. Mark Polsky (zip code: 33021) 4400. Mary Fulton (zip code: 31406) 4401. Zachary Danko (zip code: 97232) 4402. Mark Roberts (zip code: 77339) 4403. Margery Race (zip code: 78741) 4404. Tony Diaz (zip code: 46356) 4405. Daniel Miller (zip code: 79124) 4406. Devin Henry (zip code: 14802) 4407. Margaret Reiter (zip code: 18352) 4408. Mary Mary (zip code: 97520) 4409. Michele Reynolds (zip code: 48237) 4410. Bill Lindner (zip code: 94904) 4411. Michael Gach (zip code: 96753) 4412. Anthony Odonnell (zip code: 08831) 4413. MARCIA MAROON (zip code: 57042) Pipelines are being pushed all over South Dakota and we don't want them. XI we suppose to go through our county=thank God it was stopped. Only those who could profit personally were disappointed not caring at all about how it would effect others. 4414. Merlie Robertson (zip code: 91307) 4415. Mike Rolbeck (zip code: 95667) 4416. dc katten (zip code: 85331) NO MORE pipelines....they ARE NOT SAFE or RELIABLE! 4417. Brian Todd (zip code: 78628) 4418. Lindsey Caudill (zip code: 78749) 4419. Mr. Sherry Brown (zip code: 20002) 4420. Marta Santos (zip code: 07102) 4421. Andre Meaux (zip code: 27609) 4422. M Rute Correla (zip code: 07201) 4423. Michael Ryan (zip code: 95610) 4424. Marsha Lowry (zip code: 94803-1023) 4425. amy dingman (zip code: 87121) 4426. Alexandra Tumarkin (zip code: 10605) 4427. Krysta UBRICK (zip code: 96122) 4428. Crystal Wilson (zip code: 45433) 4429. D.B. Pope (zip code: 20944) Premeditated mass murder for profit is still premeditated mass murder. 4430. Barbara Moore (zip code: 18017) 4431. Sonia Goldstein (zip code: 10011) 4432. Madeline Shaw (zip code: 10973) We are fighting the CPF power plant and fracked gas Millenium pipeline in the Town of Wawayanda, Orange County NY for all of the reasons outlined here. How can NY support this industry when it bans fracking within the state??? WE ARE ALL AT RISK!!!! 4433. Melissa Simmons (zip code: 45211) 4434. lenore stivalich (zip code: workingfam) 4435. Michael Sixtus (zip code: 92071) 4436. Lilyana Srnoguy (zip code: 59715) 4437. Margaret Cole (zip code: 15129) 4438. Martha Spann (zip code: 26605) 4439. Michele Temple (zip code: 11377) 4440. Michael Rafaniello (zip code: 11215) 4441. Marcia Tendick (zip code: 94532) Please stop making decisions that imperil our planet! No more gas or oil pipelines! 4442. Marshall Mable (zip code: 22306) 4443. Francis Warnock (zip code: 19713) These people are sick. 4444. Michael Tomczyszyn (zip code: 94132-3140) 4445. Mary O'Donnell (zip code: 08067) 4446. Sandra V Mueller Mueller (zip code: 59065-0126) 4447. Maria Scaglione (zip code: 08690) 4448. Kerry Burkhardt (zip code: 14031) 4449. Arlene Fisher (zip code: 94605) 4450. Jean Knowlton Knowlton (zip code: 48848-9608) We've already seen multiple wide-spread disasters from pipelines. It's rare to hear of trucks blowing up - may happen but it doesn't cause nearly the amount of damage that a burst pipeline does. 4451. Dorothy Muir (zip code: 30041) 4452. mukund sharma (zip code: 110029) 4453. Linda Mulder (zip code: 48167) 4454. Edna Mullen (zip code: 55972) 4455. Kim Mullins (zip code: 19711) 4456. Susan Mullins (zip code: 07003) 4457. Amanda Freitas (zip code: 94707-1904) 4458. Michelle Murphy (zip code: 08619) 4459. Jeffrey West (zip code: 95446) 4460. Amy Guskin (zip code: 19353) 4461. Dyan Muse (zip code: 77611) 4462. Gail Caswell (zip code: 94109) 4463. Robert Linzmeier (zip code: 60074) 4464. Linda Holt (zip code: 17073) Pipelines are not safe! 4465. Tara Schell (zip code: 22401) 4466. Mary Egglezos (zip code: 29223) 4467. Valerie Snyder (zip code: 97116) 4468. Matt Larson (zip code: 91104) 4469. Michael Violante (zip code: 33062) 4470. Mandi Woronowicz (zip code: 60513) Clean Energy!!!! And NO FRACKING! 4471. Margaret Wallace (zip code: 95076-9054) 4472. Marilyn Waltast (zip code: 85138) 4473. mike washil (zip code: 15642) 4474. Maggie Wineburgh-Freed (zip code: 90041) 4475. m wilkinson (zip code: 79413) 4476. Mark Winslow (zip code: 22152) 4477. Miranda Leiva (zip code: 91423) 4478. Miriam Rice (zip code: 14886) 4479. Martha Tack (zip code: 36092) 4480. Amy Christenson (zip code: 93955) 4481. Peter Kerr (zip code: 95616) 4482. Robert Myers (zip code: 90740) 4483. Rosemary Murray (zip code: 19468) 4484. Maria Minerva (zip code: 11710) It's time to stop being subservient to big oil and do your job. 4485. Denise Romesburg (zip code: 85021) 4486. Kate Harder (zip code: 60137) 4487. Mzd Brown (zip code: 01752-3759)

COMPANIES/ORGANIZATIONS COMMENTS

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4488. M Kirby (zip code: 19129) We have only one planetary home. We must protect Earth's environment for the sake of future generations.

4489. Nancy Havassy (zip code: 94611) 4490. Charles Jonaltis (zip code: 90046) 4491. Nancy & Tony Lopez (zip code: 10309) 4492. Noel Barnes (zip code: 98058) 4493. Beverly Edwards (zip code: 03084)

4494. nady corvers (zip code: 15047)

4495. Nadya Schmeder (zip code: 94559)

4496. Nadya Tichman (zip code: 94602)

4497. Naira Briblesca Hueper (zip code: 66103)

4498. Ian Simmons (zip code: 96161)

4499. Nalkia Lilly (zip code: 80526)

4500. Caressa Al-Khateeb (zip code: 34690)

4501. Neville Allum (zip code: 30033)

4502. Linda Hartman (zip code: 14072)

4503. Nancy Porter-Steele (zip code: 92020)

4504. Nancy Vann (zip code: 10566)

4505. Nancy Rinkenberger (zip code: 24483)

4506. Nancy Hauer (zip code: 53119)

4507. Nancy Hiestand (zip code: 95616) Now is the time to do the right thing for people and the environment.

4508. Nancy Furlow (zip code: 32118) 4509. Nancy G (zip code: 30067) 4510. Nancy Mead (zip code: 95060) 4511. Nancy Neumann (zip code: 55270) 4512. Nancy Hines (zip code: 98125) 4513. Nancy White (zip code: 99216) 4514. Nancy Pfeiler (zip code: 97304)

4515. Nancy Phillips (zip code: 5055) 4516. Nancy Roessel (zip code: 32038)

We have a to stop burning fossil fuel now!!! 4517. Nancy Stamm (zip code: 34945) 4518. NANCY SEYMOUR (zip code: 55401)

4519. Nancy Wall (zip code: 85716) We cannot continue to depend on fracked gas. The well-being of our future generations demands that we act now to stop fracking and invest in clean energy.

4520. Daniela JIMENEZ (zip code: 33141) 4521. N Rogin (zip code: 7041) 4522. Amelia Narigon (zip code: 60532) 4523. Chris Stiff (zip code: 23188)

4524. George Neste (zip code: 27265) 4525. nathalie camus (zip code: 11423) 4526. Nathan Allen (zip code: 33604) 4527. Nathaniel Lee-Ran (zip code: T3C1G8) 4528. Christine Nathanson (zip code: 94558) 4529. brad kalita (zip code: 97624)

4530. Chuck Hamilton (zip code: 37403)

4531. Dennis Balgemann (zip code: 33917-4407) It seems that both political parties still love their lucrative relationship to the fossil fuel industry. This is a game changer if these pipelines continue to be built, and if the oil companies continue to be given government subsidies. Climate change is an international problem, but it won't be solved if the United States remains culpable for contaminating the atmosphere with CO2

4532. Phoebe Oaks (zip code: 97219)

4533. Natylie Baldwin (zip code: 94521) 4534. Paul Naylor (zip code: 27707) 4535. Naython Williams (zip code: 70124)

4536. Nicole Beck (zip code: 60612) Why the hell are we allowing the fossil fuel industry to run ramshackle all over the US (and the world)

wreaking havoc and exacerbating climate change? 4537. NANCY brt (zip code: 68503) 4538. Friend B (zip code: 53143) 4539. DANIEL ATER (zip code: 28803)

4540. Linda Orr (zip code: 28734) 4541. Neil Cardew-Fanning (zip code: 95714) 4542. Nancy Brothers (zip code: 12724)

4543. Sue Patterson (zip code: 28405) 4544. George Phillips (zip code: 27510) 4545. N Dell (zip code: 29451) 4546. Neal Umphred (zip code: 98052) 4547. Edward Savage (zip code: 24153) 4548. James Neely (zip code: 78750) 4549. Neil Bacher (zip code: 33407) 4550. Matthew Neill (zip code: 28801) 4551. Nelda McLaughlin (zip code: 87401) 4552. Brooke Prlm (zip code: 85749)

SICK AND TIRED IF THIS SHIT!

4553. helen goodspeed (zip code: 10601) 4554. L Nelson (zip code: 95038) 4555. Enrique Baloyra Baloyra (zip code: 33161) 4556. Roark Vane (zip code: 95831) 4557. Roberto Romo (zip code: 94121) 4558. Nathaniel E. Perry (zip code: 99771) 4559. Nancy Robinson (zip code: 93555) 4560. barbara neri (zip code: 48169) 4561. Mary Mac Namara (zip code: 90210) 4562. D. Chalfin (zip code: 01702) 4563. Alyss Sanner (zip code: 93243) 4564. Mary Neveux (zip code: 55345) 4565. Jano Stone (zip code: 84060) 4566. Nancy Woolley (zip code: 98382) 4567. Nezka Pfeifer (zip code: 18505) 4568. Neil Freson (zip code: 14467) 4569. Nadine Alfonso (zip code: 85211)

4570. Natalie Hanson (zip code: 48917) However, you MUST do MUCH more. We MUST keep ALL climate-changing fossil fuels in the ground!

4571. Nancy Brandt (zip code: 60611-2389) 4572. Nancy Hoffman (zip code: 89434)

4573. Kevin Smith (zip code: 14218) 4574. Nick Gaetano (zip code: 92651) 4575. Nicolas Humphrey (zip code: 54301)

4576. Nicole Rosa (zip code: 80903) 4577. Nicki Idol (zip code: 27262) 4578. Nicola Nelson (zip code: 84010) 4579. Nicola Nicolai (zip code: 19425) 4580. Dinah Nieburg (zip code: 22903) 4581. Nigel Thorbell (zip code: 97470) 4582. Krista Nordstrom (zip code: 94114) 4583. Michele Nijpall (zip code: 96717) 4584. Pamela Utterback (zip code: 19460) 4585. Caroline Themm (zip code: 10025) 4586. Nina Diamante (zip code: 90048) 4587. Nancy Bengtson (zip code: 86351) 4588. Brandon Lea (zip code: 92543) 4589. Joey Leftow (zip code: 10040) 4590. Deborah Fobes (zip code: 03901) 4591. Cynthia Kent (zip code: 07109) 4592. Nick J (zip code: 92627) 4593. Nick Leon (zip code: 95125)

4594. Nancy Sullo (zip code: 80304) 4595. Linda Ogren (zip code: 4910) 4596. Nancy Krempa (zip code: 48350) 4597. Nancy Marshall (zip code: 19522) 4598. Nina Aronoff (zip code: 02130) 4599. Nadine LaVonne (zip code: 98107) 4600. Leigh Campbell-Earl (zip code: 48911-5471) 4601. Nancy Leys (zip code: 53216)

4602. Nicki Listerman (zip code: 66047)

4603. Nanouse Wolfe (zip code: 95066)

4604. Nancy McElland (zip code: 08043)

4605. Natalie Duteba (zip code: 95618)

