

FILE

ATSI

American Transmission Systems, Inc.
a subsidiary of FirstEnergy Corp.

RECEIVED-DOCKETING DIV

76 South Main St.
Akron, Ohio 44300

2013 JAN 31 PM 2:30

1-800-646-0400

PUCO

January 31, 2013

Ms. Barcy F. McNeal
Secretary to the Commission
Docketing Division
The Public Utilities Commission of Ohio
180 East Broad Street
Columbus, OH 43215-3793

**Letter of Notification
East Akron – Sammis and Lowellville – Sammis 138 kV
Transmission Lines Relocation Project
Case No. 13-0341-EL-BLN**

Dear Ms. McNeal:

In accordance with Rule 4906-11-01 of the Ohio Administrative Code, American Transmission Systems, Incorporated, ("ATSI"), transmits the enclosed original and eleven (11) copies of the Letter of Notification for the above captioned project. In this project, ATSI is proposing the relocation of the existing East Akron – Sammis and Lowellville – Sammis 138 kV transmission lines located in Knox Township in Jefferson County, Ohio (the "Project"). As proposed and described in this Letter of Notification Application, the Project will consist of removing a 960-foot portion of the existing East Akron – Sammis 138 kV Transmission Line and a 300-foot portion of the existing Lowellville – Sammis 138 kV Transmission Line and associated transmission structures and installing new transmission structures. In addition, approximately 250 feet of new, 138 kV transmission line will be constructed between the two segments of the East Akron – Sammis 138 kV Transmission Line. The work will be constructed entirely within ATSI's existing transmission rights-of-way on property owned by Ohio Edison Company, a FirstEnergy affiliate. This work will be conducted in order to remove the existing transmission lines from property that ATSI recently sold. ATSI will request expedited processing for this Letter of Notification and will submit the appropriate fees under separate cover.

Please be advised of the following:

- a) Name and address of the applicant: American Transmission Systems, Incorporated
76 South Main Street
Akron, Ohio 44308
- b) Name of proposed facilities: East Akron – Sammis and Sammis – Lowellville 138 kV
Transmission Lines Relocation Project.

This is to certify that the images appearing are an accurate and complete reproduction of a case file document delivered in the regular course of business
Technician Am Date Processed 1/31/13

- c) Location of proposed facilities: The Project is located on the former Toronto Generating Plant property and adjacent properties owned (or recently sold by) Ohio Edison along the Ohio River in Knox Township in Jefferson County, Ohio.
- d) Description of proposed facilities: In this Project, ATSI is proposing the removal of a 960-foot portion of the existing East Akron – Sammis 138 kV Transmission Line and a 300-foot portion of the existing Lowellville – Sammis 138 kV Transmission Line and associated transmission structures and the installation of new, transmission structures. In addition, ATSI proposed to construct approximately 250 feet of new, temporary 138 kV transmission line between the two segments of the East Akron – Sammis 138 kV Transmission Line.
- e) Applicant's representative: Jay A. Ruberto, Senior Advisor
Transmission & Substation Engineering
FirstEnergy Service Company
76 South Main Street, A-GO-10
Akron, Ohio 44308

We have provided a copy of the Letter of Notification by certified mail, with return receipt requested, to each official of the political subdivisions immediately affected by the proposed project as listed in the Letter of Notification. Copies of the transmittal letters addressed to the local government representatives will be submitted under separate cover.

Should the Ohio Power Siting Board desire further information or discussion of this submittal, please contact me at (304) 534-7472.

Sincerely,



Jay A. Ruberto
Senior Advisor, Transmission & Substation
Design
FirstEnergy Service Company

Attachments

**AMERICAN TRANSMISSION SYSTEMS, INCORPORATED
SUBSIDIARY OF FIRSTENERGY CORP.**

**LETTER OF NOTIFICATION APPLICATION TO THE
OHIO POWER SITING BOARD FOR A CERTIFICATE OF
ENVIRONMENTAL COMPATIBILITY AND PUBLIC NEED
FOR THE**

**EAST AKRON – SAMMIS AND LOWELLVILLE – SAMMIS
138 kV TRANSMISSION LINES RELOCATION PROJECT**

OPSB CASE NO.: 13-034/-EL-BLN

JANUARY 2013

**American Transmission Systems, Incorporated
76 South Main Street
Akron, Ohio 44308**

**LETTER OF NOTIFICATION
EAST AKRON – SAMMIS AND LOWELLVILLE – SAMMIS 138 KV
TRANSMISSION LINES RELOCATION PROJECT**

The following information is being provided in accordance with the procedures delineated in Ohio Administrative Code Section 4906-11-01: Letter of Notification Requirements of the Rules and Regulations of the Ohio Power Siting Board.

4906-11-01(B): Letter of Notification Requirements

4906-11-01(B)(1)a: Name and Reference Number

Name of Project: East Akron – Sammis and Lowellville – Sammis 138 kV
Transmission Lines Relocation Project

2012 LTFR Reference: This Project is not identified in FirstEnergy Corp.'s 2012 Electric Long-Term Forecast Report ("LTFR") submitted to the Public Utility Commission of Ohio in Case Number 12-0504-EL-FOR.

4906-11-01(B)(1)b: Brief Description of Project

American Transmission Systems, Incorporated ("ATSI"), a wholly owned subsidiary of FirstEnergy Corp., is filing this Letter of Notification ("LON") for the proposed East Akron – Sammis and Lowellville – Sammis 138 kV Transmission Lines Relocation Project ("Project"). The Project consists of removing an approximate 960-foot portion of the existing East Akron – Sammis 138 kV Transmission Line and an approximate 300-foot portion of the existing Lowellville – Sammis 138 kV Transmission Line.¹ In addition, six new poles will be installed and approximately 250 feet of new 138 kV transmission line will be constructed between the two segments of the East Akron – Sammis 138 kV Transmission Line. This work is being proposed to remove existing 138 kV transmission lines from property that the Ohio

¹ The new structures installed as part of this Project will likely be temporary. ATSI anticipates installing permanent steel structures and connecting the future Toronto Transmission Substation, which will be proposed to the Board as a separate LON.

Edison Company (“Ohio Edison”), another wholly owned FirstEnergy Corp. subsidiary, recently sold.² The general location of the Project is shown in Figure 1. The Project is located near the Ohio River in Knox Township, Jefferson County, Ohio.

The Project will consist of installing six single circuit guyed wood poles and approximately 250 feet of new 138 kV transmission line between the two segments of the East Akron – Sammis 138 kV Transmission Line on property owned by Ohio Edison adjacent to, and west of, the former Toronto Generating Plant property. Installation of these structures and transmission line will allow for the removal of the existing 138 kV transmission lines on the portion of the former Ohio Edison-owned Toronto Generating Plant property that was sold. ATSI will remove the transmission line and it is anticipated that the new owner of the property will remove the existing transmission structures.

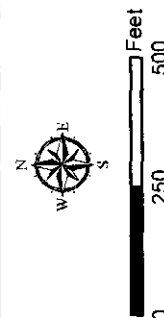
The former Toronto Generating Plant property was recently subdivided into two parcels: the northern parcel comprised of approximately 44.8 acres was sold and Ohio Edison retained ownership of the approximately 14.7 acres southern parcel. ATSI anticipates proposing to extend the existing 138 kV transmission lines to this southern parcel as part of the future Toronto Transmission Substation Project that may be located on the southern parcel, depending on the outcome of siting studies for that Project. The current Project is needed, however, to remove the existing transmission lines from the northern property that was sold by Ohio Edison.

² In December 2012, Ohio Edison sold approximately 44.8 acres of the former Toronto Generating Plant property to Plains Marketing LP (“northern parcel”). Ohio Edison retained approximately 14.7 acres (“southern parcel”).



East Akron - Sammis and Lowellville - Sammis
138 kV Transmission Lines Relocation Project
Figure 1: General Location Map

Canlon
Pittsburgh



- Legend**
- 1,000 Ft Buffer
 - Delineated Wetlands
 - Wetlands (NWI)
 - Stream (NHD)
 - Proposed Construction
 - Line Construction
 - Line Removal
 - New Laminated Wood Poles
 - Existing Transmission Structures
 - White Lines Represent Possibility
 - Owned Properties Where Work Will Occur
 - Municipality Boundary
 - Parcels
 - Existing Transmission
 - Railroad

ATSI

American Transmission Systems, Inc.
a subsidiary of FirstEnergy Corp.

4906-11-01(B)(1)c: Why the Project Meets the Requirements for a Letter of Notification

The Project meets the requirements for a Letter of Notification because the Project is within the types of projects defined by Items (1)(c) and (4)(a) of Attachment A of the Board's interim process defined in the Board's September 4, 2012 Finding and Order in Docket 12-1981-GE-BRO. This Project qualifies under both of the following subsections of that Order:

(1) Rerouting or extension or new construction of single or multiple circuit electric power transmission line(s) as follows:

(c) Line(s) one hundred twenty-five kV and above, but less than three hundred kV, and not greater than 0.2 miles in length.

(4) Replacing electric power transmission line structure(s) with a different type of structure(s) or adding structure(s) within an existing electric power transmission line and:

(a) Two miles or less of new right-of-way required.

The proposed Project requires the installation of six new structures and approximately 250 feet (0.05 mile) of new transmission line on property owned by Ohio Edison. The existing lines are owned by ATSI and located on property recently sold by Ohio Edison.

4906-11-01(B)(2): Need for the Project

The Project is needed to allow for the removal of the existing transmission lines located on the former Toronto Generating Plant property previously owned by Ohio Edison. The former plant property was divided into two parcels, a northern parcel and a southern parcel, with the northern parcel being sold. This Project involves relocating the East Akron – Sammis and Lowellville – Sammis 138 kV Transmission Lines to

new structures installed on the southern parcel, property owned by Ohio Edison located adjacent to the former Toronto Generating Plant property.

4906-11-01(B)(3): Location Relative to Existing or Proposed Lines

The location of the Project relative to existing or proposed transmission lines is described in reference to the FirstEnergy System Facilities map which is referenced in a April 16, 2012 filing in FirstEnergy Corp.'s 2012 Long-Term Forecast Report submitted to the Public Utility Commission of Ohio ("PUCO") in case no. 12-0504-EL-FOR. The map was redacted from the public filings in that case due to the fact that it contains confidential and critical energy infrastructure information. The map shows ATSI's 345 kV and 138 kV transmission lines and transmission substations, including the location of the East Akron – Sammis and Lowellville – Sammis 138 kV Transmission Lines. The Project area is located approximately 2 inches (11 by 17 inch printed version) from the right edge of the map box and 3 7/8 inches (11 by 17 inch printed version) from the bottom of the map box. The general location of the Project is shown in this LON as Figure 1.

4906-11-01(B)(4): Alternatives Considered

No other viable alternatives have been identified.

4906-11-01 (B) (5): Construction Schedule

Construction of the proposed Project is proposed to occur between May 1, 2013 and May 31, 2013 with a June 1, 2013 in-service date.

4906-11-01 (B) (6): Area Map

The general location of the Project is shown in Figure 1. To locate and view the project site, from Columbus, Ohio travel east on I-70 toward Pittsburgh, Pennsylvania for approximately 79 miles. Take exit 180B to merge onto I-77 N toward Cleveland. Take exit 47 to merge onto US-22 E/Cadiz Road toward Cadiz. Continue to follow US-22 E for approximately 61 miles. Take the OH-213 N exit toward OH-7 N/E Liverpool. Merge onto OH-213 S. OH-213 S turns left and becomes OH-7 N.

Continue on OH-7 N for approximately 9 miles. Take the exit toward OH-152/Empire/Richmond. After approximately 0.43 mile, turn right onto County Highway 7f/Old State Highway 7. Continue straight onto County Highway 7f/Old State Highway 7 for approximately 0.7 mile. The proposed Toronto Transmission Substation site is located to the left on the southeast side of County Highway 7f/Old State Highway 7. The existing 138 kV transmission lines that currently terminate at the substation property will be relocated to the Ohio Edison owned property located west of the former Toronto Generating plant property adjacent to County Route 7.

4906-11-01(B)(7): Property Owner List

The Project will be located on property owned by the Ohio Edison, a FirstEnergy Corp. subsidiary. Ohio Edison recently subdivided the former Toronto Generating Plant property and sold the northern parcel to Plains Marketing LP. As part of this transaction, Ohio Edison acquired a temporary easement in order to access and remove the existing transmission lines from the property that was sold. No new easements or right-of-way are needed to complete the Project.

4906-11-01(C): Technical Features of the Project

4906-11-01(C)(1): Operating Characteristics

The East Akron – Sammis and Lowellville – Sammis 138 kV Transmission Lines are operated at 138 kV. The proposed relocation of the lines will not change their operating characteristics. No new property rights are required for the proposed Project. Exhibit 1 shows a typical double circuit dead end structure and a typical tangent single circuit structure that would be used for this Project.

4906-11-01(C)(2)a: Calculated Electric and Magnetic Fields

The following table itemizes the line loadings for the East Akron – Sammis and the Lowellville – Sammis 138 kV Transmission Lines.

Line Name	Normal Loading Amps	Emergency Loading Amps	Winter Rating Amps
East Akron – Sammis 138 kV Transmission Line	500	615	1440
Lowellville – Sammis 138 kV Transmission Line	0	0	1440

The following calculations provide an approximation of the magnetic and electric fields strengths within the 138 kV transmission line right-of-way. The calculations provide an approximation of the electric and magnetic field levels based on specific assumptions utilizing the EPRI EMF Workstation 2009 program software. This software assumes the input transmission line configuration is located on flat terrain. Also, the software assumes a balanced, three-phase circuit loading for the transmission circuit. The model utilizes the normal, emergency and winter ratings of the transmission lines.

EMF CALCULATIONS		Electric Field kV/meter	Magnetic Field mGauss
Normal Loading	Under Lowest Conductors	6.03	70.30
	At Right-of-Way Edges	0.25 / 2.25	7.25 / 2.53
Emergency Loading	Under Lowest Conductors	6.03	86.47
	At Right-of-Way Edges	0.25 / 2.25	8.50 / 3.11
Winter Rating	Under Lowest Conductors	2.93	193.85
	At Right-of-Way Edges	0.15 / 0.08	20.00 / 71.25

4906-11-01(C)(2)b: EMF Discussion

Background Information

Electric and magnetic fields (“EMFs”) are naturally occurring in the environment and can be found in the Earth’s interior and in the human body. EMFs are generated essentially anywhere where there is a flow of electricity, including electrical appliances and power equipment. Electric fields are associated with the voltage of the source; magnetic fields are associated with the flow of current in a wire. The strength of these fields decreases rapidly with distance from the source. EMFs associated with electricity use are not disruptive to cells like x-rays or ultraviolet rays from the sun. EMF fields are generally considered too weak to break molecules or chemical bonds in cells. Extensive research over the past two decades has been undertaken to

determine whether EMFs are associated with adverse health effects, and although the research and debate on this issue continues, there is no firm basis to conclude that EMFs cause adverse health effects. A number of independent scientific panels have reviewed the research and have stated that there is no basis to conclude that EMFs cause adverse health effects nor has it been shown that levels in everyday life are harmful.

Recent Developments

As a part of the National Energy Policy Act of 1992, the Electric and Magnetic Fields Research and Public Information Dissemination (“EMF RAPID”) program was initiated within the five-year effort under the National EMF Research Program. The culmination of this five-year effort resulted in a final RAPID Working Group report, which was released for public review in August 1998. The Director of the National Institute of Environmental Health Sciences (“NIEHS”) then prepared a final report to Congress after receiving public comments. The NIEHS’ Director’s final report, released to Congress on May 4, 1999, concluded that extremely low frequency electric and magnetic fields (“ELF-EMF”) exposure cannot be recognized at this time as entirely safe because of weak scientific evidence that exposure may pose a leukemia hazard. The Director further stated that the conclusion of this report is insufficient to warrant aggressive regulatory concern.

Sources for Additional Information

The following websites sponsored by federal agencies or other organizations provide additional information on EMF:

- Centers for Disease Control/National Institute for Occupational Safety and Health: <http://www.cdc.gov/niosh/topics/emf/>
- National Institute of Environmental Health Sciences (NIEHS) EMF Rapid Program: <http://www.niehs.nih.gov/health/topics/agents/emf/>

4906-11-01(C)(3): Estimated Costs

The estimated capital costs for the Project are approximately \$343,000.

4906-11-01(D): Socioeconomic Data

4906-11-01(D)(1): Land Use

The Project is located in Knox Township, Jefferson County, Ohio. The removed transmission line and the new construction will occur on property owned, or formerly owned, by Ohio Edison. Figure 1 depicts a 1,000-foot buffer around the Project area. Land use within the 1,000-foot buffer includes the former Toronto Generating Plant, which has been retired and demolished; transmission rights-of-way; and undeveloped, forested land. No residences are located within 1,000 feet of the Project area. The closest developed residential areas are located south of the Project area within the City of Toronto to the southeast and Knox Township to the southwest. Because the Project will be constructed on property owned by Ohio Edison within existing transmission rights-of-way, no changes or impacts to current land use are anticipated.

4906-11-01(D)(2): Agricultural Land

On December 8, 2012, The Louis Berger Group, Inc. (“LBG”), ATSI’s routing and permitting consultant for this Project, received information regarding agricultural district land from the Jefferson County Auditor. Based on this information, no agricultural district land, or land used for agricultural purposes, is crossed or located within 1,000 feet of the Project area. The Project will not result in any impacts to agricultural land.

4906-11-01(D)(3): Archaeological or Cultural Resources

The Project is located within existing transmission right-of-ways on property owned, or formerly owned, by Ohio Edison. New structures will be located entirely within the existing transmission line corridor. Given the nature of the Project, it is unlikely that any archaeological or cultural resource would be disturbed by the limited nature of relocating the transmission line and installing intermediate structures.

As part of ATSI’s investigation of the Project site, a search of the Ohio Historic Preservation Office (“OHPO”) National Register of Historic Places on-line database

was conducted. This investigation did not identify the existence of any historic sites within the Project area. The OHPO database includes all Ohio listings on the National Register of Historic Places, including districts, sites, buildings, structures, and objects that are significant in American history, architecture, archaeology, engineering, and culture. On December 5, 2012, ATSI submitted a letter to the OHPO regarding its studies for the Harmon – Toronto 345 kV Transmission Line Project and the Harmon and Toronto substations, which includes the area proposed for this relocation project. No response has been received to date.

4906-11-01(D)(4)a: Documentation of Letter of Notification Transmittal

The following officials of Knox Township and Jefferson County, Ohio will receive a copy of the LON. Copies of the transmittal letters to these officials are included with this LON.

Jefferson County

Thomas Graham, County Commissioner
Jefferson County
301 Market Street, First Floor
Steubenville, Ohio 43952

Dave Maple, County Commissioner
Jefferson County
301 Market Street, First Floor
Steubenville, Ohio 43952

Adam Scurti, County Commissioner
Jefferson County
301 Market Street, First Floor
Steubenville, Ohio 43952

Jim Branagan, County Engineer
Jefferson County
598 State Route 43
Wintersville, Ohio 43953

John A. Corrigan, County Clerk of Court
Jefferson County Courts
P.O. Box 1326
Steubenville, Ohio 43952

Domenick Mucci Jr., Director
Jefferson County Regional Planning
Commission
500 Market Street, Suite 614
Steubenville, Ohio 43952

Knox Township

Donald R. Elder, Trustee
Knox Township
15006 State Route 152
Toronto, Ohio 43964

Donald L. Miller, Trustee
Knox Township
998 County Road 47
Toronto, Ohio 43964

John M. Danko, Trustee
Knox Township
56 Township Road 244
Toronto, Ohio 43964

Angie Renee Allison, Fiscal Officer
Knox Township
2407 Township Road 246
Toronto, Ohio 43964

4906-11-01(D)(4)b: Public Information Program

This Project will occur within existing transmission rights-of-way on property owned, or formerly owned, by Ohio Edison. ATSI's manager of External Affairs will advise local officials of features and the status of the proposed Project as necessary.

4906-11-01(D)(5): Current or Pending Litigation

There is no known current or pending litigation involving this project.

4906-11-01(D)(6): Local, State, and Federal Requirements

Project construction is expected to disturb less than 1 acre of soil. Therefore, ATSI is not required to apply for coverage under Ohio's National Pollutant Discharge Elimination System ("NPDES") general permit for stormwater discharge during construction activities. ATSI and its contractors will incorporate appropriate best management practices during construction to minimize and control any potential offsite soil and erosion impacts. No other known local, state, or federal requirements are required prior to commencement of construction on the proposed transmission line relocation project.

4906-11-01(E): Environmental Data

4906-11-01(E)(1): Endangered, Threatened, and Rare Species Investigation

As part of ATSI's investigation of potential projects that include the footprint of this Project, requests were submitted to the ODNR and USFWS on October 5, 2012 requesting information on the presence of any endangered, threatened, or rare species within the Project area. The Project area discussed in the letter to ODNR included the study areas for the Harmon – Toronto 345 kV Transmission Line and the Harmon and Toronto transmission substations, which include the area proposed for this Project. The ODNR's November 2, 2012 response indicated that the portion of the project

located in Jefferson County is within the range of the state and federally endangered Indiana bat (*Myotis sodalis*), two state and federally endangered mussels, the sheepnose mussel (*Plethobasus cyphus*) and the snuffbox mussel (*Epioblasma triquetra*), and the species of special concern eastern hellbender (*Cryptobranchus a. alleganiensis*). The eastern hellbender is also an Ohio state endangered species. The ODNR indicated that the project is also within the range of the black bear (*Ursus americanus*), a state endangered species, but due to the mobility of this species, the project is not likely to impact this species. At the time of the filing of this LON, no response has been received by USFWS.

No in-stream work will occur as part of this Project; therefore, no impacts to the two endangered mussels or the eastern hellbender, an entirely aquatic salamander that inhabits perennial streams, will occur. Tree clearing required for this Project is limited to an area approximately 250 feet in length and 100 feet in width within a parcel owned by Ohio Edison.

ATSI has consulted with USFWS regarding the federally-listed Indiana bat (*Myotis sodalis*). The project would result in a limited amount of tree clearing (no more than 0.25 acre of trees over 5 inch diameter at breast height). USFWS has indicated that if this clearing is completed prior to March 31, then ATSI does not need to conduct any further surveys or consultation. ATSI intends to complete the tree clearing prior to March 31, 2013.

The ODNR provided a GIS shapefile that identifies reported locations of threatened, endangered, or species of special concern within 1,000 feet of the Project boundaries. Based on this file, the ODNR does not have any records of these species located within the Project area. One species of state concern, the longnose dace (*Rhinichthys cataractae*), a freshwater minnow, was identified within approximately 500 feet of the Project. This species was observed at this site in 1983 in an area is located outside of the Project boundaries. Further, the ODNR did not raise any concerns with this

Project for the longnose dace. The Project will not impact streams in any way any, and therefore no impacts to aquatic species are expected.

ODNR also recommended reviewing the Project area for potential abandoned underground mines (“AUMs”), abandoned oil and gas wells, and reclaimed or unreclaimed strip mining. Based on the ODNR data, none of these areas are located within the Project area. ATSI submitted follow-up letters to ODNR and USFWS on January 18, 2013 to research potential impacts to threatened and endangered species, or species of special concern associated with this Project. ATSI is in the process of consulting further with USFWS and ODNR. Copies of written responses will be provided to the OPSB upon receipt.

4906-11-01(E)(2): Areas of Ecological Concern

Wetland Delineation

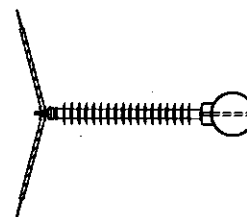
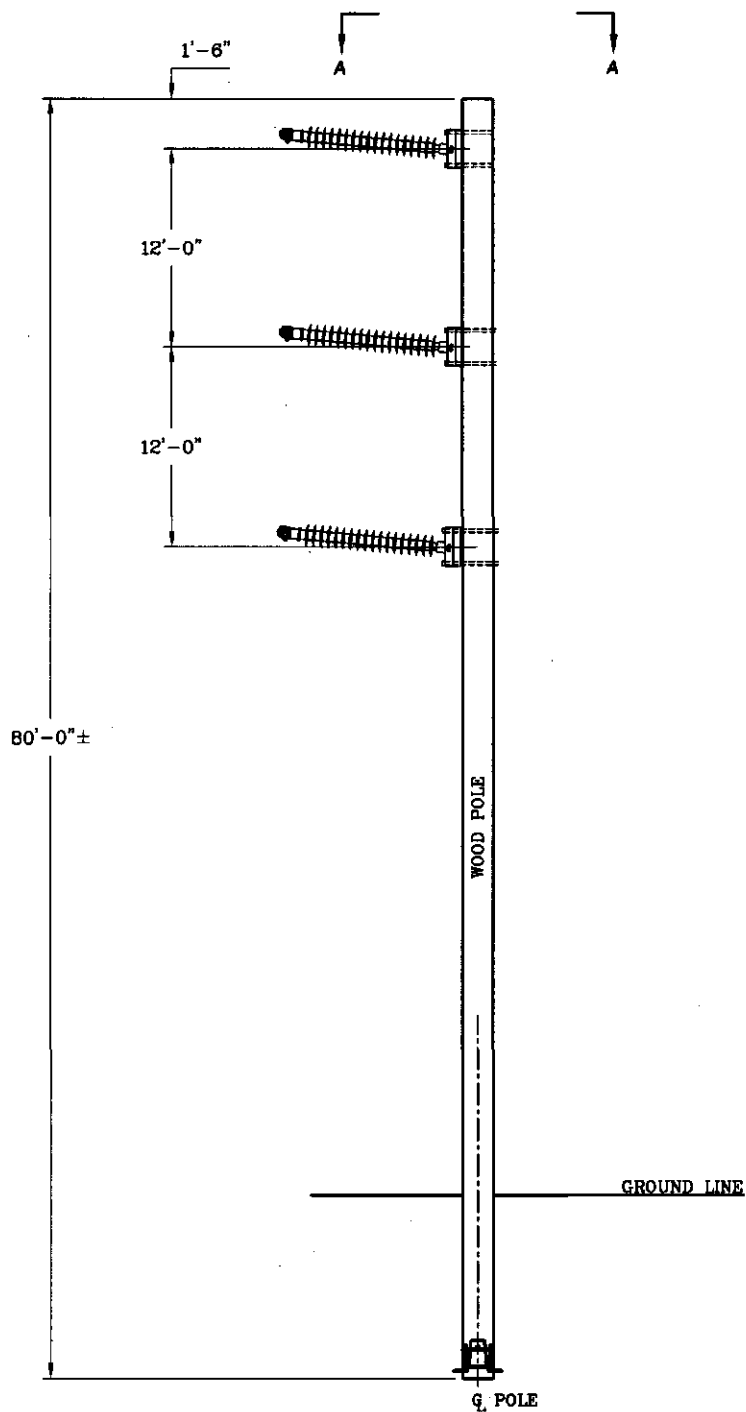
LBG conducted field wetland delineations within the Project area in October 2012. Wetlands were delineated in accordance with the Ohio Environmental Protection Agency (“OEPA”) Ohio Rapid Assessment Method for Wetlands v. 5.0 (“ORAM”). ORAM was developed to determine the relative ecological quality and level of disturbance of a particular wetland in order to meet requirements under Section 401 of the Clean Water Act. Each wetland is given a score using a range from 0 (low quality and high disturbance) to 100 (high quality and low disturbance). Wetlands scored from 0 to 29.9 are grouped into “Category 1,” 30 to 59.9 are “Category 2,” and 60 to 100 are “Category 3.” LBG delineated one wetland (wetland CH-Y) within the Project area. CH-Y is a palustrine scrub-shrub (“PSS”) Category 2 wetland (ORAM score of 40). No streams were delineated within the Project area. A copy of the completed wetland delineation forms is included in Exhibit 2.

Wetland CH-Y is crossed by the existing East Akron – Sammis 138 kV Transmission Line right-of-way. The portion of the line that crosses this wetland will be removed as part of the Project. ATSI will not disturb this wetland during removal of the

transmission line. No other areas of ecological concern were identified within the Project area.

4906-11-01(E)(3): Additional Information

Construction and operation of the proposed Project will be in accordance with the requirements specified in the latest revision of the NESC as adopted by the PUCO and all applicable safety standards established by OSHA.



SECTION A - A

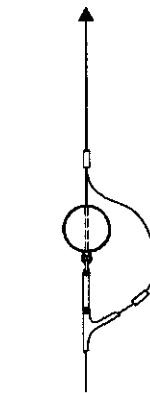
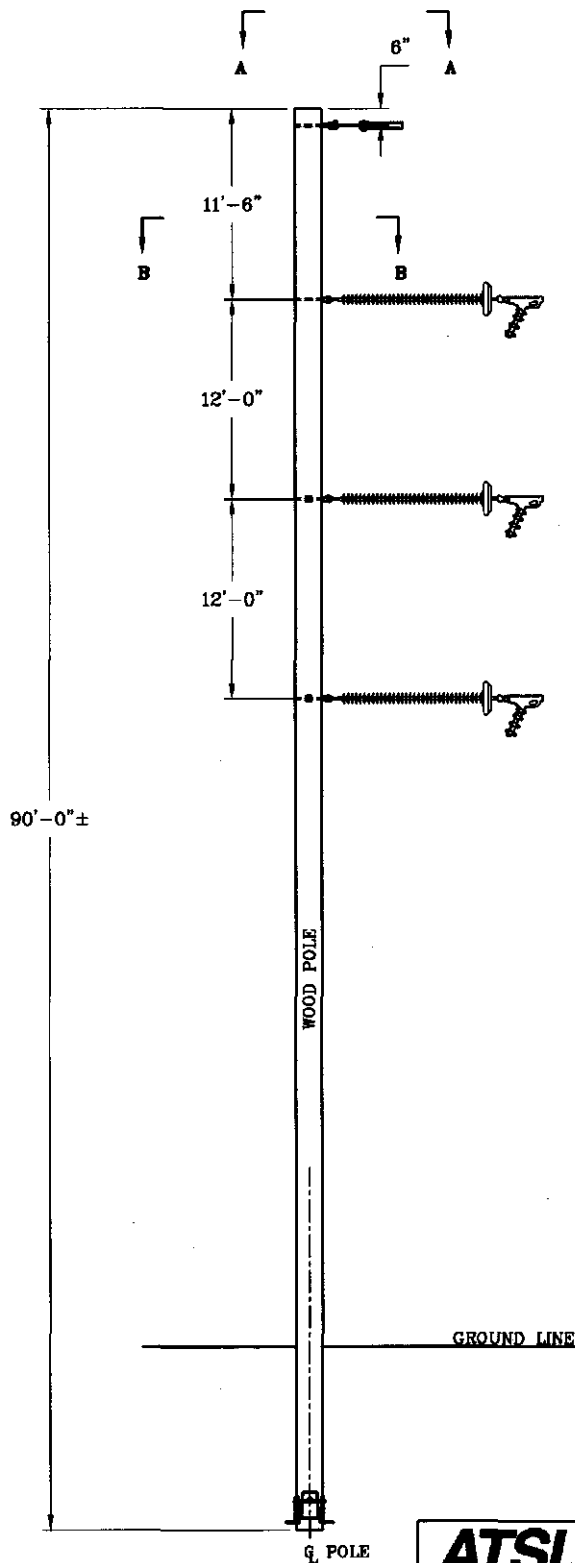
ATSI.

American Transmission Systems, Inc.
a subsidiary of FirstEnergy Corp.

EAST AKRON-SAMMIS &
LOWELLVILLE-SAMMIS 138kV
T-LINE RELOCATION PROJECT

TANGENT STRUCTURE

EXHIBIT 1



SECTION A - A



SECTION B - B

ATSI

American Transmission Systems, Inc.
a subsidiary of FirstEnergy Corp.

EAST AKRON-SAMMIS &
LOWELLVILLE-SAMMIS 138kV
T-LINE RELOCATION PROJECT

DEAD END STRUCTURE

EXHIBIT 1

Background Information

Name: <i>Craig Hanley</i>	
Date: <i>10-18-12</i>	
Affiliation: <i>Louis Berger Group</i>	
Address: <i>412 Mt. Kemble Ave Morristown NJ 07962</i>	
Phone Number: <i>973 407 1462</i>	
e-mail address: <i>chanlon@louisberger.com</i>	
Name of Wetland: <i>CH-V</i>	
Vegetation Community(ies): <i>PSS</i>	
HGM Class(es):	
Location of Wetland: include map, address, north arrow, landmarks, distances, roads, etc.	
Lat/Long or UTM Coordinate	
USGS Quad Name	
County	<i>Jefferson</i>
Township	<i>Toronto</i>
Section and Subsection	
Hydrologic Unit Code	
Site Visit	<i>Y</i>
National Wetland Inventory Map	<i>N</i>
Ohio Wetland Inventory Map	<i>N</i>
Soil Survey	<i>N</i>
Delineation report/map	<i>Y</i>

Name of Wetland: CH-Y	
Wetland Size (acres, hectares):	
Sketch: Include north arrow, relationship with other surface waters, vegetation zones, etc.	
Comments, Narrative Discussion, Justification of Category Changes:	
Final score : 40	Category: mod 2

Site: CH-Y Rater(s): C. Hanlon Date: 10-18-12

1	1
max 6 pts.	subtotal

Metric 1. Wetland Area (size).

Select one size class and assign score.

- ☐ >50 acres (>20.2ha) (6 pts)
- ☐ 25 to <50 acres (10.1 to <20.2ha) (5 pts)
- ☐ 10 to <25 acres (4 to <10.1ha) (4 pts)
- ☐ 3 to <10 acres (1.2 to <4ha) (3 pts)
- ☐ 0.3 to <3 acres (0.12 to <1.2ha) (2pts)
- ☒ 0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt)
- ☐ <0.1 acres (0.04ha) (0 pts)

9	10
max 14 pts.	subtotal

Metric 2. Upland buffers and surrounding land use.

2a. Calculate average buffer width. Select only one and assign score. Do not double check.

- ☒ WIDE. Buffers average 50m (164ft) or more around wetland perimeter (7)
- ☐ MEDIUM. Buffers average 25m to <50m (82 to <164ft) around wetland perimeter (4)
- ☐ NARROW. Buffers average 10m to <25m (32ft to <82ft) around wetland perimeter (1)
- ☐ VERY NARROW. Buffers average <10m (<32ft) around wetland perimeter (0)

2b. Intensity of surrounding land use. Select one or double check and average.

- ☐ VERY LOW. 2nd growth or older forest, prairie, savannah, wildlife area, etc. (7)
- ☒ LOW. Old field (>10 years), shrub land, young second growth forest. (5)
- ☐ MODERATELY HIGH. Residential, fenced pasture, park, conservation tillage, new fallow field. (3)
- ☐ HIGH. Urban, industrial, open pasture, row cropping, mining, construction. (1)

13	23
max 30 pts.	subtotal

Metric 3. Hydrology.

3a. Sources of Water. Score all that apply.

- ☐ High pH groundwater (5)
- ☒ Other groundwater (3)
- ☒ Precipitation (1)
- ☐ Seasonal/intermittent surface water (3)
- ☐ Perennial surface water (lake or stream) (5)

3c. Maximum water depth. Select only one and assign score.

- ☐ >0.7 (27.6in) (3)
- ☐ 0.4 to 0.7m (15.7 to 27.6in) (2)
- ☒ <0.4m (<15.7in) (1)

3e. Modifications to natural hydrologic regime. Score one or double check and average.

- ☐ None or none apparent (12)
- ☒ Recovered (7)
- ☐ Recovering (3)
- ☐ Recent or no recovery (1)

3b. Connectivity. Score all that apply.

- ☐ 100 year floodplain (1)
- ☐ Between stream/lake and other human use (1)
- ☐ Part of wetland/upland (e.g. forest), complex (1)
- ☐ Part of riparian or upland corridor (1)

3d. Duration of inundation/saturation. Score one or dbl check.

- ☐ Semi- to permanently inundated/saturated (4)
- ☐ Regularly inundated/saturated (3)
- ☐ Seasonally inundated (2)
- ☒ Seasonally saturated in upper 30cm (12in) (1)

Check all disturbances observed

- | | |
|---|---|
| <input type="checkbox"/> ditch | <input type="checkbox"/> point source (nonstormwater) |
| <input type="checkbox"/> tile | <input type="checkbox"/> filling/grading |
| <input type="checkbox"/> dike | <input type="checkbox"/> road bed/RR track |
| <input type="checkbox"/> weir | <input type="checkbox"/> dredging |
| <input type="checkbox"/> stormwater input | <input type="checkbox"/> other |

9	32
max 20 pts.	subtotal

Metric 4. Habitat Alteration and Development.

4a. Substrate disturbance. Score one or double check and average.

- ☐ None or none apparent (4)
- ☒ Recovered (3)
- ☐ Recovering (2)
- ☐ Recent or no recovery (1)

4b. Habitat development. Select only one and assign score.

- ☐ Excellent (7)
- ☐ Very good (6)
- ☐ Good (5)
- ☐ Moderately good (4)
- ☒ Fair (3)
- ☐ Poor to fair (2)
- ☐ Poor (1)

4c. Habitat alteration. Score one or double check and average.

- ☐ None or none apparent (9)
- ☒ Recovered (6)
- ☐ Recovering (3)
- ☐ Recent or no recovery (1)

Check all disturbances observed

- | | |
|---|---|
| <input type="checkbox"/> mowing | <input checked="" type="checkbox"/> shrub/sapling removal |
| <input type="checkbox"/> grazing | <input type="checkbox"/> herbaceous/aquatic bed removal |
| <input type="checkbox"/> clearcutting | <input type="checkbox"/> sedimentation |
| <input type="checkbox"/> selective cutting | <input type="checkbox"/> dredging |
| <input type="checkbox"/> woody debris removal | <input type="checkbox"/> farming |
| <input type="checkbox"/> toxic pollutants | <input type="checkbox"/> nutrient enrichment |

32

subtotal this page

Site: CHY Rater(s): C. Hanlon Date: 10-18-12

32
subtotal first page
0 32
max 10 pts. subtotal

Metric 5. Special Wetlands.

Check all that apply and score as indicated.

- ☐ Bog (10)
- ☐ Fen (10)
- ☐ Old growth forest (10)
- ☐ Mature forested wetland (5)
- ☐ Lake Erie coastal/tributary wetland-unrestricted hydrology (10)
- ☐ Lake Erie coastal/tributary wetland-restricted hydrology (5)
- ☐ Lake Plain Sand Prairies (Oak Openings) (10)
- ☐ Relict Wet Prairies (10)
- ☐ Known occurrence state/federal threatened or endangered species (10)
- ☐ Significant migratory songbird/water fowl habitat or usage (10)
- ☐ Category 1 Wetland. See Question 1 Qualitative Rating (-10)

8 40
max 20 pts. subtotal

Metric 6. Plant communities, interspersions, microtopography.

6a. Wetland Vegetation Communities.

Score all present using 0 to 3 scale.

- ☐ Aquatic bed
- ☐ Emergent
- ☒ 3 Shrub
- ☒ 1 Forest
- ☐ Mudflats
- ☐ Open water
- ☐ Other

6b. horizontal (plan view) Interspersion.

Select only one.

- ☐ High (5)
- ☐ Moderately high (4)
- ☒ Moderate (3)
- ☐ Moderately low (2)
- ☐ Low (1)
- ☐ None (0)

6c. Coverage of invasive plants. Refer to Table 1 ORAM long form for list. Add or deduct points for coverage

- ☐ Extensive >75% cover (-5)
- ☐ Moderate 25-75% cover (-3)
- ☐ Sparse 5-25% cover (-1)
- ☐ Nearly absent <5% cover (0)
- ☒ Absent (1)

6d. Microtopography.

Score all present using 0 to 3 scale.

- ☐ Vegetated hummocks/tussocks
- ☐ Coarse woody debris >15cm (6in)
- ☐ Standing dead >25cm (10in) dbh
- ☐ Amphibian breeding pools

Vegetation Community Cover Scale

0	Absent or comprises <0.1ha (0.2471 acres) contiguous area
1	Present and either comprises small part of wetland's vegetation and is of moderate quality, or comprises a significant part but is of low quality
2	Present and either comprises significant part of wetland's vegetation and is of moderate quality or comprises a small part and is of high quality
3	Present and comprises significant part, or more, of wetland's vegetation and is of high quality

Narrative Description of Vegetation Quality

low	Low spp diversity and/or predominance of nonnative or disturbance tolerant native species
mod	Native spp are dominant component of the vegetation, although nonnative and/or disturbance tolerant native spp can also be present, and species diversity moderate to moderately high, but generally w/o presence of rare threatened or endangered spp
high	A predominance of native species, with nonnative spp and/or disturbance tolerant native spp absent or virtually absent, and high spp diversity and often, but not always, the presence of rare, threatened, or endangered spp

Mudflat and Open Water Class Quality

0	Absent <0.1ha (0.247 acres)
1	Low 0.1 to <1ha (0.247 to 2.47 acres)
2	Moderate 1 to <4ha (2.47 to 9.88 acres)
3	High 4ha (9.88 acres) or more

Microtopography Cover Scale

0	Absent
1	Present very small amounts or if more common of marginal quality
2	Present in moderate amounts, but not of highest quality or in small amounts of highest quality
3	Present in moderate or greater amounts and of highest quality

40

End of Quantitative Rating. Complete Categorization Worksheets.

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont

Project/Site: TORONTO SUBSTATION City/County: Toronto/Jefferson Sampling Date: 10/18/12
 Applicant/Owner: FIRST ENERGY State: OH Sampling Point: ch-y-w
 Investigator(s): C Hanlon Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): _____
 Slope (%): _____ Lat: 40.4839 Long: -80.6077 Datum: WGS84
 Soil Map Unit Name: Ud NWI classification: PSS

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No _____
Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____	
Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	
Remarks: All three wetland criteria were satisfied at this data point, thus the area is a wetland.	

HYDROLOGY

Wetland Hydrology Indicators:		Secondary Indicators (minimum of two required)
<u>Primary Indicators (minimum of one is required; check all that apply)</u>		
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Surface Soil Cracks (B6)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Water Marks (B1)	<input checked="" type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Moss Trim Lines (B16)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Iron Deposits (B5)		<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		<input checked="" type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Aquatic Fauna (B13)		<input type="checkbox"/> Microtopographic Relief (D4)
		<input checked="" type="checkbox"/> FAC-Neutral Test (D5)
Field Observations:		
Surface Water Present? Yes _____ No <input checked="" type="checkbox"/>	Depth (inches): _____	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____
Water Table Present? Yes _____ No <input checked="" type="checkbox"/>	Depth (inches): _____	
Saturation Present? Yes _____ No <input checked="" type="checkbox"/> (includes capillary fringe)	Depth (inches): _____	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks:		

VEGETATION (Five Strata) – Use scientific names of plants.

 Sampling Point: ch-y-wet

Tree Stratum (Plot size: <u>30</u>)	Absolute % Cover	Dominant Species?	Indicator Status															
1. <u>Robinia pseudoacacia</u>	<u>20</u>	<u>YES</u>	<u>FACU</u>	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>4</u> (A) Total Number of Dominant Species Across All Strata: <u>6</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>67%</u> (A/B)														
2. <u>Ulmus rubra</u>	<u>40</u>	<u>YES</u>	<u>FAC</u>															
3. _____																		
4. _____																		
5. _____																		
6. _____																		
7. _____																		
<u>60</u> = Total Cover				Prevalence Index worksheet: <table style="width: 100%;"> <tr> <th>Total % Cover of:</th> <th>Multiply by:</th> </tr> <tr> <td>OBL species <u>20</u></td> <td>x 1 = <u>20</u></td> </tr> <tr> <td>FACW species <u>20</u></td> <td>x 2 = <u>40</u></td> </tr> <tr> <td>FAC species <u>100</u></td> <td>x 3 = <u>300</u></td> </tr> <tr> <td>FACU species <u>50</u></td> <td>x 4 = <u>200</u></td> </tr> <tr> <td>UPL species _____</td> <td>x 5 = _____</td> </tr> <tr> <td>Column Totals: <u>190</u> (A)</td> <td><u>560</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>2.94</u>	Total % Cover of:	Multiply by:	OBL species <u>20</u>	x 1 = <u>20</u>	FACW species <u>20</u>	x 2 = <u>40</u>	FAC species <u>100</u>	x 3 = <u>300</u>	FACU species <u>50</u>	x 4 = <u>200</u>	UPL species _____	x 5 = _____	Column Totals: <u>190</u> (A)	<u>560</u> (B)
Total % Cover of:	Multiply by:																	
OBL species <u>20</u>	x 1 = <u>20</u>																	
FACW species <u>20</u>	x 2 = <u>40</u>																	
FAC species <u>100</u>	x 3 = <u>300</u>																	
FACU species <u>50</u>	x 4 = <u>200</u>																	
UPL species _____	x 5 = _____																	
Column Totals: <u>190</u> (A)	<u>560</u> (B)																	
Sapling Stratum (Plot size: <u>15</u>)																		
1. <u>Prunus serotina</u>	<u>10</u>	<u>YES</u>	<u>FACU</u>															
2. <u>Fraxinus caroliniana</u>	<u>20</u>	<u>YES</u>	<u>OBL</u>															
3. _____																		
4. _____																		
5. _____																		
6. _____																		
7. _____																		
<u>30</u> = Total Cover																		
Shrub Stratum (Plot size: <u>15</u>)																		
1. _____																		
2. _____																		
3. _____																		
4. _____																		
5. _____																		
6. _____																		
7. _____																		
_____ = Total Cover																		
Herb Stratum (Plot size: <u>5</u>)																		
1. <u>Verbesina alternifolia</u>	<u>60</u>	<u>NO</u>	<u>FAC</u>	Hydrophytic Vegetation Indicators: ___ 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% <input checked="" type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ ___ 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ___ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.														
2. <u>Persicaria bicornis</u>	<u>20</u>	<u>YES</u>	<u>FACW</u>															
3. <u>Ageratina altissima</u>	<u>10</u>	<u>NO</u>	<u>FACU</u>															
4. _____																		
5. _____																		
6. _____																		
7. _____																		
8. _____																		
9. _____																		
10. _____																		
11. _____																		
12. _____																		
<u>90</u> = Total Cover																		
Woody Vine Stratum (Plot size: <u>30</u>)																		
1. <u>Vitis labrusca</u>	<u>10</u>	<u>YES</u>	<u>FACU</u>	Definitions of Five Vegetation Strata: Tree – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH). Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH. Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height. Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size. Includes woody plants, except woody vines, less than approximately 3 ft (1 m) in height. Woody vine – All woody vines, regardless of height.														
2. _____																		
3. _____																		
4. _____																		
5. _____																		
<u>10</u> = Total Cover																		
Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____																		

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: ch-y-wet

[illegible]

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont

Project/Site: TORONTO SUBSTATION City/County: Toronto/Jefferson Sampling Date: 10/18/12
 Applicant/Owner: FIRST ENERGY State: OH Sampling Point: ch-y-up
 Investigator(s): C Hanlon Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): _____
 Slope (%): _____ Lat: 40.4839 Long: -80.6077 Datum: WGS84
 Soil Map Unit Name: Ud NWI classification: PSS

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes _____ No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes _____ No <input checked="" type="checkbox"/>
Hydric Soil Present? Yes _____ No <input checked="" type="checkbox"/>	
Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>	
Remarks:	

HYDROLOGY

Wetland Hydrology Indicators:		Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)		
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Surface Soil Cracks (B6)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Moss Trim Lines (B16)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Iron Deposits (B5)		<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Aquatic Fauna (B13)		<input type="checkbox"/> Microtopographic Relief (D4)
		<input type="checkbox"/> FAC-Neutral Test (D5)
Field Observations:		
Surface Water Present? Yes _____ No <input checked="" type="checkbox"/>	Depth (inches): _____	Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>
Water Table Present? Yes _____ No <input checked="" type="checkbox"/>	Depth (inches): _____	
Saturation Present? Yes _____ No <input checked="" type="checkbox"/>	Depth (inches): _____ (includes capillary fringe)	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks:		

VEGETATION (Five Strata) – Use scientific names of plants.

 Sampling Point: ch-y-up

Tree Stratum (Plot size: <u>30</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
		= Total Cover		
Sapling Stratum (Plot size: <u>15</u>)				
1. <u>Rosa multiflora</u>	<u>5</u>	<u>NO</u>	<u>FACU</u>	
2. <u>Rubus sp</u>	<u>20</u>	<u>NO</u>	<u>NI</u>	
3. <u>Elaeagnus angustifolia</u>	<u>30</u>	<u>YES</u>	<u>FACU</u>	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
		<u>55</u> = Total Cover		
Shrub Stratum (Plot size: <u>15</u>)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
		= Total Cover		
Herb Stratum (Plot size: <u>5</u>)				
1. <u>Verbesina alternifolia</u>	<u>5</u>	<u>NO</u>	<u>FAC</u>	
2. <u>Dipsacus fullonum</u>	<u>30</u>	<u>YES</u>	<u>FACU</u>	
3. <u>Sabatia brachiata</u>	<u>20</u>	<u>NO</u>	<u>FACU</u>	
4. <u>Vicia sp</u>	<u>10</u>	<u>NO</u>	<u>NI</u>	
5. <u>Alliaria petiolata</u>	<u>40</u>	<u>YES</u>	<u>FACU</u>	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
12. _____	_____	_____	_____	
		<u>105</u> = Total Cover		
Woody Vine Stratum (Plot size: <u>30</u>)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
		= Total Cover		

Dominance Test worksheet:
 Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)
 Total Number of Dominant Species Across All Strata: 8 (B)
 Percent of Dominant Species That Are OBL, FACW, or FAC: 13% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species <u>5</u>	x 3 = <u>15</u>
FACU species <u>125</u>	x 4 = <u>500</u>
UPL species _____	x 5 = _____
Column Totals: <u>130</u> (A)	<u>515</u> (B)

Prevalence Index = B/A = 3.96

Hydrophytic Vegetation Indicators:
 ___ 1- Rapid Test for Hydrophytic Vegetation
 ___ 2 - Dominance Test is >50%
 ___ 3 - Prevalence Index is ≤3.0¹
 ___ 4 - Morphological Adaptations² (Provide supporting data in Remarks or on a separate sheet)
 ___ Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Five Vegetation Strata:
Tree – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).
Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.
Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.
Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size. Includes woody plants, except woody vines, less than approximately 3 ft (1 m) in height.
Woody vine – All woody vines, regardless of height.

Hydrophytic Vegetation Present? Yes _____ No ☒

Remarks: (Include photo numbers here or on a separate sheet.)

Sampling Point: ch-y-up

Eastern Mountains and Piedmont – Version 2