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October 10, 2007

Docketing Ohio Power Siting Board c/o Public Utilities Commission of Ohio Borden Bldg., 12th Floor 180 East Broad Street Columbus, OH 43266-0573

> Letter of Notification Juniper-Pleasant Valley 138 kV Transmission Line Tap To The Joyce Substation Case No. 07-1111-EL-BLN

Dear Docketing:

NC

FILE

In accordance with Rule 4906-11-01, FirstEnergy Service Company on behalf of American Transmission Systems, Incorporated (ATSI) and The Cleveland Electric Illuminating Company (CEI), transmits one (1) original and eleven (11) copies of the enclosed Letter of Notification. In this Project, ATSI and CEI are proposing to install a single circuit 138 kV transmission line tap from the Q-1 circuit to the new Joyce distribution substation. The new Joyce Substation will be located within the fence line of the existing Juniper Substation, and under the conductors of the Q-1 circuit. The transmission line tap will connect to the conductors of the Q-1 circuit above the Joyce substation, and drop vertically to the substation take-off structure. The Project also involves installing two new poles. One new pole, equipped with a 138kV switch, will be installed along the centerline of the Q-1 circuit, approximately 50 feet west of structure number 2231. A second new pole will be installed directly opposite the new switch pole structure in the Q-2 circuit and is being installed to maintain the required clearance between the Q-1 & Q-2 circuits.

Please be advised of the following:

a) Name and address of the applicants:	American Transmission Systems, Incorporated 76 South Main Street Akron, Ohio 44308		
	The Cleveland Electric Illuminating Company 76 South Main Street Akron, Ohio 44308		
b) Name of proposed facilities:	Juniper-Pleasant Valley 138 kV Transmission Line Tap to the Joyce Substation.		
This is to certi	fy that the images appearing are an		

document delivered in the regular course of husiness. Technician 6M Date Processed 10/11/07 c) Location of proposed facilities: The project is located north of Alexander Road and west of Dunham Road, approximately 2,500 feet North-Northwest (NNW) of the intersection of Alexander Road and Dunham Road, within the centerline of the existing Q-1 & Q-2 transmission lines in the Village of Walton Hills in Cuyahoga County, Ohio.

d) Description of proposed facilities: The project involves installing a new pole on the Q-1 circuit; the pole will be equipped with a 138kV switch located along the centerline of ATSI's existing Juniper-Pleasant Valley Q-1 & Q-2 138 kV transmission lines. An additional pole will be added directly opposite the new switch pole structure on the Q-2 circuit. The existing Juniper-Pleasant Valley Q-1 & Q-2 138 kV transmission lines are located on a common series of steel tower structures.

e) Applicants' representative: Robert A. Frazier Transmission Engineering Energy Delivery Technical Services FirstEnergy Service Company 76 South Main Street Akron, OH 44308-1890

After docketing, please return a time-stamped copy of the Letter of Notification for our records. We have provided a copy of this 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 attached Exhibit 1. Attached for your file are the transmittal letters addressed to the local government representatives of the Village of Walton Hills and Cuyahoga County.

Should the Ohio Power Siting Board desire further information or discussion of this submittal, please contact me at (330) 761-4467.

Sincerely, Labert A. InD

Robert A. Frazier Transmission Engineering Energy Delivery Technical Services FirstEnergy Service Company

Attachments

AMERICAN TRANSMISSION SYSTEMS, INCORPORATED AND THE CLEVELAND ELECTRIC ILLUMINATING COMPANY, SUBSIDIARIES OF FIRSTENERGY CORP.

LETTER OF NOTIFICATION

JUNIPER-PLEASANT VALLEY 138 kV TRANSMISSION LINE TAP TO THE JOYCE SUBSTATION

OPSB CASE NO. 07-____-EL-BLN

October 10, 2007

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

The Cleveland Electric Illuminating Company 76 South Main Street Akron, Ohio 44308

LETTER OF NOTIFICATION JUNIPER-PLEASANT VALLEY 138 kV TRANSMISSION LINE TAP TO THE JOYCE SUBSTATION

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 (A) (1): a. Name and Reference Number

Name of Project:	Juniper-Pleasant Valley 138 kV Transmission Line Tap to
	Joyce Substation ("Project").

2007 LTFR Reference:This project is not identified in the FirstEnergy Corp. 2007Long-Term Forecast Report (LTFR) submitted to the PublicUtility Commission of Ohio.

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

American Transmission Systems, Incorporated ("ATSI") and The Cleveland Electric Illuminating Company ("CEI"), FirstEnergy Corp. subsidiaries, are jointly proposing the Juniper-Pleasant Valley 138 kV Transmission Line Tap to the Joyce Substation Project ("Project"). ATSI's existing Juniper-Pleasant Valley 138 kV transmission line consists of two 138 kV circuits designated as Q-1-JR-PV ("Q-1") & Q-2-JR-PV ("Q-2") supported on a common series of steel tower structures. In this Project, ATSI and CEI are proposing to install a single circuit 138 kV transmission line tap from the Q-1 circuit to the new Joyce distribution substation. The new Joyce Substation will be located within the fence line of the existing Juniper Substation, and under the conductors of the Q-1 circuit. The transmission line tap will connect to the conductors of the Q-1 circuit above the Joyce substation, and drop vertically to the substation take-off structure. The Project also involves installing two new poles. One new pole, equipped with a 138kV switch, will be installed along the centerline of the Q-1 circuit, approximately 50 feet west of structure number 2231. A second new pole will be installed directly opposite the new switch pole structure in the Q-2 circuit and is being installed to maintain the required clearance between the Q-1 & Q-2 circuits.

The general layout of the Project is shown in Exhibit No. 1. The general location of the project is north of Alexander Road and west of Dunham Road, approximately 2,500 feet North-Northwest (NNW) of the intersection of Alexander Road and Dunham Road. The new switch pole installed in the Q-1 circuit is shown in Exhibit 2. The new pole installed in the Q-2 circuit is shown in Exhibit 3.

This Letter of Notification covers the installation of the transmission line tap, and both new poles, but does not cover the installation of the Joyce 13.2 kV Mod Substation. Both new poles, switch and associated hardware will be owned by ATSI. CEI will own the conductors and the hardware associated with the connection to the Joyce substation.

<u>4906-11-01 (A) (1): c. Need for the Project</u>

The substation will provide 138kV to 13.2kV transformation for CEI distribution. The proposed Project is needed to decrease the overloading of existing transformers beyond their nameplate ratings. Building a new substation will alleviate these overloads and decrease the potential for extend outages of CEI's local distribution facilities

<u>4906-11-01 (A) (1): d. Why the Project Meets the Requirements for a Letter of</u> <u>Notification</u>

This Project meets the requirements for a Letter of Notification because the Project is within the types of project defined by Items (1)(c) and (4)(a) of the Application Requirement Matrix for Electric Power Transmission Lines in Appendix A of 4906-1-01 of the Ohio Administrative Code. Which states:

(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 kilovolts and above but less than three hundred kilovolts, and not greater than two miles in length.
- (4) Replacing electric power transmission line structure(s) with a different type of structure(s) or adding additional structure(s) within an existing electric power transmission line and:
 (a) Two miles or less of new right-of-way required.

The existing transmission line operates at 138 kV, and the new structures will be added in the existing transmission line. No new transmission line right-of-way is required for the Project

4906-11-01 (A) (2): Location Relative to Existing or Proposed Lines

The location of the Project is shown in Exhibit No. 6. Exhibit No. 6 (which is not attached to the LON) is the FirstEnergy System Facilities map, included as the last page of Chapter 3 of the confidential portion of the FirstEnergy Corp. 2007 Long-Term Forecast Report to the PUCO in case no. 07-504-EL-FOR under rules 4901:5-5:04 (C) of the Ohio Administrative Code. The map is incorporated by reference only. The map shows ATSI's 345 kV and 138 kV transmission lines and transmission substations, including the location of the Juniper-Pleasant Valley transmission lines. The Project area is located approximately 9 1/4" inches (11 by 17 inch printed version) "down" from the top right edge of the map box and 7 9/16" inches (11 by 17 inch printed version) "in" from the top right edge of the map box. The general location of the Project is shown on Exhibit No. 4 and the general arrangement of the new transmission line structures is shown in Exhibit No. 2 & No.3.

4906-11-01 (A) (3): Alternatives Considered

The layout of the transmission structures was developed to best fit the new facilities with the new substation, the existing transmission lines and CEI owned property at this location.

4906-11-01 (A) (4): Construction Schedule

Construction on the Project is expected to begin on February 1, 2008. The Project is expected to be completed by May 1, 2008.

4906-11-01 (A) (5): Area Map

Exhibit No. 4 depicts the location of the Project site on a partial copy of the United States Geologic Survey, Walton Hills, Ohio Quad, Map ID 41081-C5. To locate and view the Project site, take Interstate 71 north from Columbus to Interstate 271 east to the Forbes Rd./OH-14/Broadway Ave exit (Exit 23). Travel west on Forbes Road to South Oakleaf Rd. Travel south on South Oakleaf for approximately 1 mile and turn right onto Alexander Road. Travel west on Alexander Road for approximately 3 miles, Juniper Substation will be to your right. The new structures will be along the centerline of the second double-circuit transmission line from the north, to the extreme west of Juniper Substation, approximately 50 feet west of the existing transmission line pole structure #2231.

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

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

The Q-1 & Q-2 transmission lines have the following characteristics:

Voltage: Juniper-Pleasant Valley Q-1-JR-PV: 138 kV Juniper-Pleasant Valley Q-2-JR-PV: 138 kV

New Tap Conductors:	795-kcmil 36/1 ACSR
Existing conductors:	795-kcmil 36/1 ACSR
Existing static wire:	1 – 3#6 Alumoweld
Insulators:	138 kV Polymer Suspension and Horizontal Post
Structures:	Exhibit No. 2-138 kV Switch Pole Structure
	Exhibit No. 3-138 kV Pole Structure

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

The following table itemizes the line loading of the Q1& Q2 transmission line. The normal and emergency loading is based on the initial loading of the substation being equally supplied from both the Juniper-Pleasant Valley Q-1-JR-PV 138 kV and Q-2-JR-PV 138 kV transmission lines. The emergency line loading is based on the future projected load of the substation supplied from the existing transmission Q-1 line. The winter rating is based on the continuous maximum conductor ratings (MCR) of the transmission Q-1 line for an ambient temperature of zero degrees centigrade (32 degree F), wind speed of 2.1 kilometers per hour (1.3 miles per hour), and a circuit design operating temperature of 100 degrees centigrade (212 degree F).

Line Name	Normal Loading Amps	Emergency Loading Amps	Winter Rating Amps (WN)
Juniper-Pleasant Valley Q-1-JR-PV 138 kV transmission line.	654A	719A	1,400A
Juniper-Pleasant Valley Q-2-JR-PV 138 kV transmission line.	162A	97A	1,400A

The following EMF calculations were performed using the EPRI EXPOCALC program software. This program software assumed the input transmission line configuration was located on flat terrain. Also, a balanced, three-phase circuit loading was assumed for the transmission circuits. The calculations where based on an approximate model of the transmission line tap based on a horizontal wire arrangement at the bottom of the new poles, with a minimum ground clearance of 24.0 feet. The Q-2 normal load had a higher value than the emergency loading, therefore this was value was used in the emergency loading model. No effect from the existing transmission lines or substation facilities was included in the model and the transmission line right-of-way was modeled as a 120-foot wide right-of-way.

EMF CALCULATIONS		Electric Field kV/Meter	Magnetic Field mGauss
Normal	Under Lowest Conductors	1.56	99
Loading	At Right-of-Way Edges	.055	23
Emergency Loading	Under Lowest Conductors	1.56	109
	At Right-of-Way Edges	.055	26
Winter	Under Lowest Conductors	1.56	247
Rating	At Right-of-Way Edges	.057	29

4906-11-01 (B) (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 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. These fields are thought to be too weak to break molecules or chemical bonds in cells. Extensive research has been conducted over the past three decades to determine whether EMFs are associated with 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 Institutes 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.

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

The following are the estimated capital costs by FERC Accounts for the proposed project:

Account	ATSI Cost	CEI Cost	
350 Land Rights	\$0	\$0	
355 Poles and Fixtures	\$ 40,000	\$ 0	
356 Overhead Conductors & Devices	\$ 40,000	\$ 700	
Removal	\$ 0	<u>\$0</u>	
Total	\$ 80,000	\$ 700	

4906-11-01 C: Socioeconomic Data

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

The new transmission structures will be located within an existing transmission line right-of-way. The existing land use in the immediate area of the proposed Project is listed as Utility*. Based on the U.S. Bureau of Census estimates, the 2000 population of the Village of Walton Hills was 2,400 and the 2000 population of Cuyahoga County was 1,393,845.

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

The new transmission structures will be located in an existing transmission line rightof-way. The right of-way is currently owned by CEI. Installation of the transmission structures will not significantly impact agricultural land.

*(Village of Walton Hills Mater Plan 2004 http://cpc.cuyahogacounty.us/docs/masterplans/waltonhills.pdf)

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

The new transmission structures are located in an existing transmission line right-ofway, in close proximity to an existing substation and in close proximity to existing transmission line structures. Given the limited ground surface impact associated with installing two new transmission line poles, the current existing utility zoned (both electric and underground natural gas pipeline) use of the area; it is unlikely that any archaeological or cultural resources would be disturbed by the limited nature of the proposed Project.

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 search did not identify the existence of any historic sites within or near the Project area. Properties in the OHPO database include all Ohio listings on the National Register of Historic Places as well as districts, sites, buildings, structures, and objects that are significant in American history, architecture, archeology, engineering, and culture.

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

This Letter of Notification is being provided concurrently to the following officials of the Village of Walton Hills and Cuyahoga County.

Village of Walton Hills (Cuyahoga County)

The Honorable Marlene B. Anielski, Mayor Village of Walton Hills 7595 Walton Hills Road Walton Hills, OH 44146

Don Sheehy Village Engineer Village of Walton Hills 7595 Walton Hills Road Walton Hills, OH 44146 Mr. Kevin Hurst Council President Pro Tem Village of Walton Hills 7595 Walton Hills Road Walton Hills, OH 44146

Cuyahoga County

The Honorable Peter Lawson Jones Commissioner, Cuyahoga County Board of County Commissioners 1219 Ontario Street Cleveland, Ohio 44113

The Honorable Timothy F. Hagan Commissioner, Cuyahoga County Board of County Commissioners 1219 Ontario Street Cleveland, Ohio 44113

The Honorable Jimmy Dimora Commissioner, Cuyahoga County Board of County Commissioners 1219 Ontario Street Cleveland, Ohio 44113

Mr. Dennis Madden Cuyahoga County Administrator 1219 Ontario Street Cleveland, Ohio 44113 Ms. Penelope Hughes Clerk of the Board Board of County Commissioners 1219 Ontario Street Cleveland, Ohio 44113

The Honorable Robert C. Klaiber, Jr., P.E., P.S. Cuyahoga County Engineer 2100 Superior Viaduct Cleveland, OH 44113

Mr. Vern J. Hartenburg Executive Director, Cleveland Metroparks 4101 Fulton Parkway Cleveland, OH 44144

Mr. Paul A. Alsenas, Director Cuyahoga County Planning Commission 323 Lakeside Avenue West, Suite 400 Cleveland, Ohio 44113

Copies of the transmittal letters to these officials have been included with the transmittal letter submitting this Letter of Notification to the Ohio Power Siting Board.

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

FirstEnergy's Area Manager will advise local officials of features and the status of the proposed Project as necessary.

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

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

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

There are no known local, state, or federal requirements that must be met prior to commencement of construction on the proposed transmission line Project.

4906-11-01 (D): Environmental Data

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

As part of our investigation, a written request was made with the Ohio Department of Natural Resources (ODNR) on June 19, 2007 to research the presence of any endangered, threatened, or rare species within the project area. The ODNR's response of June 20, 2007, attached as Exhibit No. 5, indicated that they have no records of rare or endangered species within one half mile of the identified project area.

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

The Project is located in an open area of a Utility zoned area along an established transmission line right-of-way. Visual observations of the Project area did not indicate areas of ecological concern in the immediate are of the project. Established existing construction access will be used to reach the construction site

4906-11-01 (D) (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 will meet all applicable safety standards established by OSHA.











Ohio Department of Natural Resources

TEOS INCLEAND ACTIVITIONS

SEAN DI LLEAN, ORDEROR

Division of Natural Areas and Preventes Steven C. Newey, CN87 2045 Mores Rd. Bidg. F-1 Columbus, CH 45225-6893 Phone: (814) 205-8655; Fex: (614) 267-3095

Juna 20, 2007

Robert Frazier FirstEnergy Service Co. 76 S. Main St. Akron. OH 44306

Dear Mr. Frazier:

I have reviewed our Natural Heritage maps and files for the Juniper-Pleasant Valley Q1 138 kV Transmission Line Tap to Joyce Substation project area, including a half mile radius, in Bedford Township, Cuyahoga County, and on the Northfield Quad. The letters on the list below correspond to the areas marked on the accompanying map.

Northfield Quad

A. Cuyahoga Valley National Park - National Park Service

B. Bedford Reservation - Cleveland Metro Parks District

There are no state nature preserves or scenic rivers at the project site. We are also unaware of any unique ecological sites, geologic features, animal assemblages or state parks, forests or wildlife areas in the project vicinity.

Our inventory program has not completely surveyed Ohio and relies on Information supplied by many individuals and organizations. Therefore, a tack of records for any particular area is not a statement that rare species or unique features are absent from that area. Please note that although we inventory all types of plant communities, we only maintain records on the highest quality areas. Also, we do not have data for all Ohio wetlands. For National Wetlands inventory maps, please contact Medge Fitak in the Division of Geological Survey at 614-265-6576.

Please contact me at 814-265-6818 if I can be of further assistance.

Sincerely,

Mr. Moncilla

Debbie Wolschke, Ecological Analyst Natural Heritage Program

nhiceline.com Al

UNIC 10.1

EX2.0HC

SKETCHES/UP - PV - LOYCE

2:17 15-17	8/07 8/07	07- 36 -X	JUNIPER-PLEASANT VALLEY (Q1) 138kV TAP TO JOYCE	
		N.I.S.	FirstEnergy. Transmission Design C.E.I. EXHIBIT 5	