DUKE ENERGY OHIO EXHIBIT _____

BEFORE

THE PUBLIC UTILITIES COMMISSION OF OHIO

In the Matter of the Application of Duke Energy Ohio, Inc., for a Certificate of Environmental Compatibility and Public Need for the C314V Central Corridor Pipeline Extension Project.	)))))	Case No. 16-253-GA-BTX

DIRECT TESTIMONY OF

DANIEL P. EARHART

ON BEHALF OF

DUKE ENERGY OHIO, INC.

March 26, 2019

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ATTACHMENTS:

I. INTRODUCTION AND PURPOSE

Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A. My name is Daniel P. Earhart and my business address is 9400 Ward Parkway, Kansas City, Missouri 64114.

Q. BY WHOM ARE YOU EMPLOYED AND IN WHAT CAPACITY?

A. I am employed by Burns & McDonnell as Project Manager, in the Environmental Services Division.

Q. PLEASE BRIEFLY SUMMARIZE YOUR EDUCATIONAL BACKGROUND AND PROFESSIONAL EXPERIENCE.

A. I graduated from the University of Missouri-Columbia in 2004 with a Bachelor of Science Degree in Forestry and a Minor in Soil Science. I was a project manager for Bio-Gard, Inc. from 2004 until joining Burns & McDonnell in 2007. I have over 10 years' experience on a variety of projects including the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), the Resource Conservation and Recovery Act (RCRA), and Formerly Used Defense Sites (FUDS) environmental investigation and remediation projects. I have also participated in and served as project manager for linear facilities projects ranging from a few miles to over 100 miles in length.

Q. PLEASE SUMMARIZE YOUR RESPONSIBILITIES AS PROJECT MANAGER, ENVIRONMENTAL SERVICES.

A. As a Project Manager in the Environmental Services Division, I participated in, and am responsible for, client interaction and coordination, regulatory interaction,

developing scopes of work, personnel assignments, project deliverables, and project accounting.

Q. HAVE YOU PREVIOUSLY TESTIFIED BEFORE THE OHIO POWER SITING BOARD?

A. No.

Q. ON WHOSE BEHALF ARE YOU TESTIFYING?

A. I am testifying on behalf of Duke Energy Ohio, Inc. (Duke Energy Ohio or Company).

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY IN THIS PROCEEDING?

A. My testimony will provide the rationale and results of the Environmental Screening that was conducted by Burns & McDonnell regarding the proposed alternate route for the Central Corridor Pipeline (CCP).

II. BURNS & McDONNELL ENVIRONMENTAL SCREENING

Q. WHAT WAS THE PURPOSE OF PERFORMING ENVIRONMENTAL SCREENING?

A. As discussed by Duke Energy Ohio witness Gary Hebbeler, Burns & McDonnell conducted an environmental screening of the properties along the proposed alternate route for the CCP. The environmental screening was performed to identify potential environmental impacts associated with the current and historical usage of the properties along the proposed alternate route, adjoining properties, and adjacent off-site sources. The purpose of the environmental screening was to identify properties along the proposed alternate route that may have soil and/or groundwater impacts based on current or historical activities. The environmental screening data

was used in the evaluation of the route placement and to support pipeline permitting and construction. The environmental screening information was also utilized to identify locations with soil and/or groundwater impacts that could potentially require re-routing and to verify route certainty.

Q. WAS THE ENVIRONMENTAL SCREENING CONDUCTED ON BOTH PROPOSED ROUTES?

A. No.

Q. WHY NOT?

A. The scope of work for the environmental screening was for the alternate route only as directed by Duke Energy Ohio.

Q. SUMMARIZE THE ENVIRONMENTAL SCREENING PROCESS THAT WAS CONDUCTED FOR THE ALTERNATE ROUTE.

A. The environmental screening process was a multi-tiered approach taking into consideration the following factors: distance from the proposed route; regulatory program and current status of the site(s); historical knowledge of the area and/or site(s); anticipated pipeline construction depths and excavation methods. The environmental screening conducted for the alternate route is not a Phase I Environmental Site Assessment and is not intended to meet the ASTM E1527-13 *Standard Practice for Environmental Site Assessment: Phase I Environmental Site Assessment Process* or Ohio Administrative Code (O.A.C.) 3745-300-06 *Phase I Property Assessments for the Voluntary Action Program*. The first step in the environmental screening process was to review environmental database reports from federal, state, and local environmental agencies for environmental sites

located within or adjacent to the proposed CCP alternate route. A summary report listing sites in environmental databases (ASTM environmental databases) was procured from Environmental Data Resources, Inc., (EDR) along the proposed route. A search distance of ½-mile each direction from the centerline (1-mile total) of the proposed route was selected. These sites were first reviewed to identify if sufficient information was available to determine if the listed site(s) was or was not a concern for the proposed alternate route. If the site(s) was a concern or did not have enough information, additional investigation was conducted.

Additional investigation efforts included a review of site status through regulatory databases and submitting Freedom of Information Act (FOIA) requests, as well as a review of available technical reports including: environmental assessments and studies, property assessments, and geologic studies. Reviews of these reports were conducted to determine the current status of the sites, historical contamination, location of impacts on the property, and any remedial actions that would have an impact on the proposed alternate route. Databases supplied by the Ohio Environmental Protection Agency (Ohio EPA) were reviewed by Burns & McDonnell, including the Ohio EPA eDocument Search. The Bureau of Underground Storage Tanks Regulation (BUSTR) maintains the Ohio Tank Tracking and Environmental Regulations (OTTER) site (https://apps.com.ohio.gov/fire/otter/), which was utilized to review records and information on underground storage tanks.

Based on the review of available environmental information, select locations along the proposed alternate route were identified for limited site

investigations to evaluate soil and groundwater (if present) conditions. The site investigation was limited only to the location of the proposed alternate route on the respective property and included the collection of samples to the anticipated depth of the excavation at that location. Samples were collected from the selected locations and submitted to ALS Environmental (ALS) in Cincinnati, Ohio, for analysis. ALS is an Ohio EPA Voluntary Action Program (VAP) and American Association for Laboratory Accreditation (A2LA) accredited laboratory. Analytical results were used to evaluate the presence of contaminants and any potential impact to the proposed alternate route.

Q. WERE GEOTECHNICAL BORING LOCATIONS PART OF THE ENVIRONMENTAL SCREENING PROCESS?

A. Yes.

Q. PLEASE EXPLAIN.

A. Geotechnical samples were collected and analyzed for geotechnical properties that were being assessed for design purposes along the proposed alternate route. Samples were collected for environmental analyses at select geotechnical locations if the planned geotechnical boring was in the same area that was identified for a limited site investigation due to review of available environmental information. The geotechnical borings were advanced by Terracon (a local geotechnical engineering company) using hollow stem augers and split spoon sampling devices to collect soil cores. Soil cores were screened with a photo ionization detector (PID) by Burns & McDonnell personnel and visually observed for signs of impacted soils (i.e., staining). If elevated PID readings occurred or if visual staining was noted, a

sample from that interval was collected and submitted for analysis. If no PID readings or visual staining were present, a soil sample was collected within the top five feet of the boring as this was the most likely location of any historical surface spills or impact. The remaining geotechnical borings for the proposed alternate route that were not identified for environmental sample collection were screened with a PID and visually observed for impacted soils due to the industrial and or commercial type facilities near the boring location. If elevated PID readings occurred or if visual staining was noted, a sample from that interval was collected and submitted for analysis. If no PID readings or visual staining was present, no samples were collected.

III. FIELD INVESTIGATION PROTOCOLS

Q. IN THE COURSE OF PERFORMING THE ENVIRONMENTAL SCREENING, WERE FORMAL PROCEDURES OR PROTOCOLS DEVELOPED FOR THE FIELD INVESTIGATION?

A. Yes.

Q. PLEASE EXPLAIN THOSE PROCEDURES AND PROTOCOLS.

A. Soil sample collection for environmental analysis was conducted using direct push sampling equipment (*e.g.*, Geoprobe®) to a depth of 10 feet below ground surface (bgs) or with hollow stem augers and a split spoon sampling at select geotechnical boring locations. Once removed from the sampling device, Terracon personnel split open the acetate sleeve or split spoon sampler and the soil sample was visually inspected by Burns & McDonnell personnel. Soil samples were field screened using a PID. If PID readings or staining were noted, a sample was collected from that interval. If no PID readings or staining was present a sample was collected from

the top five feet of the environmental boring and submitted for analysis. Samples were analyzed for contaminants based on records and document review.

Q. HOW DID YOU DETERMINE SAMPLE LOCATIONS AND ANALYSES TO BE PERFORMED?

A. During the environmental screening, areas of interest (AOI) were identified, which required additional background investigation. These sites were selected based on proximity to the proposed route and the potential for impacts to soil and/or groundwater. The goal of the additional background investigation was to obtain site-specific information pertaining to each site to better understand the type and location of contamination at the sites and thereby better evaluate potential impact to the proposed route.

During the review of the AOIs, instances occurred where additional soil data was deemed necessary to fill a data gap. A data gap occurred when review of historical environmental information indicated potential impacts to the respective property, but specific data was not available in the limited area of the proposed alternate route. AOIs that had a data gap dictated the location and analyses completed during the environmental screening. Samples were analyzed for contaminants based on records and document review, which may include: RCRA metals, volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), total petroleum hydrocarbons-diesel range organics (TPH-DRO), and TPH-gasoline range organics (GRO).

Q. WHEN COLLECTING ENVIRONMENTAL SAMPLES, WHAT DETERMINED THE TOTAL DEPTH OF THE BORING AND DEPTH INTERVAL SAMPLES THAT WERE COLLECTED?

A. The total depth that the environmental borings were advanced was 10 feet below ground surface (bgs). This depth was determined based on the potential depth of the proposed pipeline. The geotechnical boring depths ranged from 15 feet to 100 feet bgs, which was dictated by the design information needed at potential trenchless crossing locations (total depth of potential horizontal directional drill or auger bore). The sample interval was selected based on PID reading, staining or odor, and presence of fill. In the absence of elevated PID readings or staining, the soil sample was collected within the top five feet of the boring as this was the most likely location of any historical surface spills or impact.

Q. WHAT WERE THE ANALYTICAL RESULTS OF THE ANALYTICAL SAMPLING COMPARED TO?

A. Soil data was compared to VAP Generic Numerical Standards for the Commercial/Industrial Land Use Category and Construction or Excavation Activity Category. These categories were utilized based on the property use as defined in O.A.C. 3745-300-08 Generic Numerical Standards. Although the VAP standards are being utilized as screening levels for soil data, Duke Energy Ohio is not entering the VAP as part of the proposed CCP or on behalf of any other parties.

O.A.C. 3745-300-08(C)(2)(b) and (c) describe commercial and industrial land use categories, respectively. Commercial land use is land use with potential exposure of adult workers during a business day and potential exposures of adults

and children who are customers, patrons, or visitors to commercial facilities during the business day. Commercial land use has potential exposure of adults to dermal contact with soil, inhalation of vapors and particles from soil and ingestion of soil. Examples of commercial land uses include, but are not limited to, warehouses, retail gasoline stations, retail establishments, professional offices, hospitals and clinics, religious institutions, hotels, motels, and parking facilities.

Likewise, industrial land use is land use with potential exposure of adult workers during a business day and potential exposures of adults and children who are visitors to industrial facilities during the business day. Industrial land use has potential exposure of adults to dermal contact with soil, inhalation of vapors and particles from soil and ingestion of soil. Examples of industrial land uses include, but are not limited to: lumberyards; power plants; manufacturing facilities such as metalworking shops, plating shops, blast furnaces, coke plants, oil refineries, brick factories, chemical plants and plastics plants; assembly plants; non-public airport areas; limited access highways; railroad switching yards; and marine port facilities.

Construction or excavation activities include invasive activities that result in potential exposure of adult workers during the business day for a portion of one year. Exposures during construction or excavation activities are of greater intensity and shorter duration than those for the commercial and industrial land use categories. Construction or excavation activities have potential exposures of adults to dermal contact with soil, inhalation of vapors and particles from soil, and ingestion of soil. Examples of construction or excavation activities include but are

not limited to maintenance or installation of utilities; installation of building footers or foundations; grading; trenching; or laying utility lines or cable.

If the Generic Numerical Standards was not published for a compound, the US EPA Regional Screening Level for industrial soil was utilized. Total petroleum hydrocarbon (TPH) screening levels are based on TPH Action Levels for a Class 1 Soil as presented in the Bureau of Underground Storage Tanks Regulation Technical Guidance.

IV. TESTING RESULTS

Q. DID YOU PREPARE A REPORT SUMMARIZING THE RESULTS OF THE ENVIRONMENTAL SCREENING?

A. Yes. A copy of that report is provided as Attachment DPE-1. The appendix to the report, showing all of the actual test results, is not included, due to its size.

Q. DID ANY SAMPLES COLLECTED DURING THE ENVIRONMENTAL SCREENING EXCEED THE APPLICABLE SCREENING LEVELS?

A. No. Environmental samples did not exceed the applicable screening standards as indicated previously.

Q. WHAT FINDINGS IN THE ENVIRONMENTAL SCREENING REPORT WERE RELATED TO CONSTRUCTION CONSIDERATIONS FOR THE ALTERNATE ROUTE?

A. Based on the review of available environmental information and analytical results from the environmental screening, construction considerations of the proposed alternate route include soil and groundwater management, worker health and safety during construction and operation, and maintenance activities.

A Soil and Groundwater Management Plan may be prepared for construction activities utilizing data obtained and interpreted in this report. The Soil and Groundwater Management Plan may describe soil, groundwater, and waste management and minimization strategies to be followed during construction. Due to variability of surface and subsurface conditions, the information in the Soil and Groundwater Management Plan may be used in conjunction with appropriate field screening efforts (*e.g.* PID, visual, and olfactory assessment) and laboratory confirmation techniques as necessary to field verify appropriate soil and groundwater conditions.

V. CONCLUSION

Q. DOES THIS CONCLUDE YOUR PRE-FILED DIRECT TESTIMONY?

A. Yes.