



VALLEY LATERAL PROJECT

RESOURCE REPORT 11 ***Reliability and Safety***

FERC Docket No. CP16-__-000

November 2015

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TABLE 11A-1 Area Classifications Along the Valley Lateral

RESOURCE REPORT 11—RELIABILITY AND SAFETY	
Filing Requirement	Location in Environmental Report
<ul style="list-style-type: none"> Describe measures proposed to protect the public from failure of the proposed facilities (including coordination with local agencies). (§ 380.12 (m)(1)) 	Sections 11.1 and 11.3
<ul style="list-style-type: none"> Discuss hazards, the environmental impact, and service interruptions which could reasonably ensue from failure of the proposed facilities. (§ 380.12 (m)(2)) 	Section 11.1
<ul style="list-style-type: none"> Discuss design and operational measures to avoid or reduce risk. (§ 380.12 (m)(3)) 	Sections 11.1 and 11.3
<ul style="list-style-type: none"> Discuss contingency plans for maintaining service or reducing downtime. (§ 380.12 (m)(4)) 	Sections 11.3
<ul style="list-style-type: none"> Describe measures used to exclude the public from hazardous areas. Discuss measures used to minimize problems arising from malfunctions and accidents (with estimates of probability of occurrence) and identify standard procedures for protecting services and public safety during maintenance and breakdowns. (§ 380.12 (m)(5)) 	Section 11.3

FERC COMMENTS ON DRAFT RESOURCE REPORT 11	LOCATION OR RESPONSE TO COMMENT
OCTOBER 1, 2015 COMMENTS	
<u>Resource Report 11 – General Project Description</u>	
50. In section 11.1, describe how Millennium would monitor for changes in population density, such that higher classification standards must be met. In addition, discuss how and when Millennium would be required to meet these new standards.	Resource Report 11, Section 11.1.
51. Indicate whether Millennium would install remote or automatic mainline shutoff valves on the pipeline.	There are no mainline valves proposed on the Valley Lateral pipeline.

LIST OF ACRONYMS AND ABBREVIATIONS

CFR	Code of Federal Regulations
Columbia	Columbia Gas Transmission, LLC
CPV	CPV Valley, LLC
HCA	high consequence area
Millennium	Millennium Pipeline Company, L.L.C.
MP	milepost
Part 192	Title 49 CFR Part 192
Project	Valley Lateral Project
USDOT	U.S. Department of Transportation

11.0 RELIABILITY AND SAFETY

Millennium Pipeline Company, L.L.C. (Millennium) is seeking authorization from the Federal Energy Regulatory Commission pursuant to Section 7(c) of the Natural Gas Act¹ to construct, install, own, operate, and maintain the Valley Lateral Project (Project). The Project will provide firm transportation of natural gas to the new 650 megawatt gas-powered CPV Valley Energy Center being constructed by CPV Valley, LLC (CPV) in the town of Wawayanda, New York. The Project, as proposed, includes approximately 7.8 miles of new natural gas pipeline that will extend from Millennium's existing main line pipeline north to the CPV Valley Energy Center as well as ancillary aboveground facilities. The target in-service date for the Project is April 2017.

The Project consists of the following components and facilities:

- approximately 7.8 miles of new 16-inch diameter pipeline in Orange County, New York;
- one delivery meter station and associated piping at the CPV Valley Energy Center, approximate milepost (MP) 7.8;
- one launcher facility (MP 0.0); and
- one receiver facility at the CPV Valley Energy Center (MP 7.8).

Resource Report 11 addresses the potential hazard to the public from failure of Project components resulting from accidents, incidents, natural catastrophes, or acts of third parties. In addition, this Resource Report addresses the procedures that would be used and design features that would be incorporated to avoid undue hazards or effects, and what measures, including equipment, training, emergency response, and emergency notification procedures, would be implemented to protect the public from failure of the Project due to accidents, incidents, or natural catastrophes. More details concerning the design, construction, and operation of the Project can be found in Resource Report 1.

11.1 NATURAL GAS PIPELINE INDUSTRY STANDARDS

The proposed pipeline and aboveground facilities will be designed, constructed, operated, and maintained in accordance with the United States Department of Transportation (USDOT) Minimum Federal Safety Standards stated in Title 49 of Code of Federal Regulations (CFR) Part 192 (Part 192). The regulations are intended to ensure adequate protection for the public from natural gas pipeline failures. Part 192 specifies material selection and qualification, minimum design requirements, and protection from internal, external, and atmospheric corrosion.

¹ 15 U.S.C. § 717f(c) (2012).

11.1.1 Class Locations

Part 192 defines four area classifications based on population density in the vicinity of the pipeline. The classification area extends for 220 yards (660 feet) on either side of the centerline of any continuous 1-mile length of pipeline. The four area classes as defined by federal law are as follows:

- Class 1: Class location unit with 10 or fewer buildings intended for human occupancy.
- Class 2: Class location unit with more than 10 but fewer than 46 buildings intended for human occupancy.
- Class 3: Class location unit with 46 or more buildings intended for human occupancy or where pipeline lies within 100 yards of any building, or small, well-defined outside area occupied by 20 or more people on at least five days a week for 10 weeks in any 12 month period.
- Class 4: Class location unit where buildings with four or more stories aboveground are prevalent.

Class locations representing more populated areas require more stringent considerations in pipeline design, wall thickness, testing, and operation. For example, pipelines constructed in Class 1 locations must be installed with a minimum depth of cover of 30 inches in normal soil and 18 inches in consolidated rock. Class 2, 3, and 4 locations, as well as drainage ditches of public roads and railroad crossings, require a minimum depth of cover of 36 inches in normal soil and 24 inches in consolidated rock (49 CFR § 192.327). Pipeline design pressures, wall thickness, hydrostatic test pressures, maximum allowable operating pressure, inspection and testing of welds and frequency of pipeline patrols and leak surveys must also conform to higher standards in more populated areas.

Millennium has completed classification studies of the Project area. Millennium will design and construct the entire pipeline to meet or exceed the minimum standards required by class location. Class locations and design factors are included on the alignment sheets provided in Appendix 1A of Resource Report 1. Class locations by milepost are included in Table 11A-1. In regard to changes in class location, the pipeline will be operated in accordance with CFR 49, title 192 subpart L, including specifically, Section 192.609 (Change in Class Location: Required Study) and Section 192.611 (Change in Class Location: Confirmation or revision of maximum allowable operating pressure) and the timeframes required therein.

Millennium has committed to comply with the minimum depth requirements for Class 2, 3, and 4 in those areas that are Class 1. In addition, Millennium has committed to providing a minimum of 4 feet of cover in active agricultural lands that will be crossed by the Project. These commitments meet or exceed the USDOT's Minimum Federal Safety Standards stated in Part 192. Millennium's proposal to meet or exceed class location requirements takes into consideration future planning and population growth. While Millennium will comply with the Change in Class Location requirements noted above, Millennium anticipates the current design will adequately meet federal safety standards as the population increases in the area for the foreseeable future, particularly given that there was a 0.9 percent change in population for Orange County from 2010 to 2014 (US Census Data). Additionally the wall thickness of the pipe being installed will be for Class 3, regardless of the existing Class location.

Part 192 also prescribes the minimum standards for operating and maintaining pipeline facilities, including the requirement to establish a written plan governing these activities. Under Part 192.615, each pipeline operator must also establish an emergency plan that provides written procedures to minimize the hazards from a gas pipeline emergency. Key elements of the plan include procedures for:

- Receiving, identifying, and classifying emergency events (gas leakage, fires, explosions, and natural disasters);
- Establishing and maintaining means of communication with local fire, police, and public officials, and coordinating emergency response;
- Making personnel, equipment, tools, and materials available at the scene of an emergency;
- Protecting people first and then property, and making them safe from actual or potential hazards; and
- Emergency shutdown and pressure reduction of any section of system and safety restoring service.

Each operator must establish and maintain liaison with appropriate fire, police, and public officials to learn the resources and responsibilities of each organization that may respond to a gas pipeline emergency, and coordinate mutual assistance in responding to emergencies. The operator must also establish a continuing education program to enable customers, the public, government officials, and those engaged in excavation activities to recognize a gas pipeline emergency. Millennium currently uses Columbia Gas Transmission, LLC (Columbia) as the operator of its pipeline system and intends to use Columbia as the operator of the Project once it is constructed. As Millennium's operator, Columbia conducts annual emergency training for their operations personnel. Local fire departments are invited to attend and participate in a mock emergency drill that is included as part of this training program.

11.1.2 Pipeline Integrity Management

Millennium will comply with the USDOT rule on Gas Transmission Pipeline Integrity Management (49 CFR 192 – Subpart O). This rule requires an operator of a covered pipeline segment to develop and follow a written integrity management program that identifies the procedures for monitoring and maintaining pipeline integrity throughout its system, most specifically for sections of pipe within High Consequence Areas (HCAs). The required elements of the integrity management program are described in 49 CFR 192.911. The primary components of the integrity management program are:

- An identification of all HCAs and covered pipeline segments;
- An identification of threats to each covered pipeline segment;
- A direct assessment plan, if applicable;
- Provisions for remediating conditions found during an integrity assessment; and
- A process for continual evaluation and assessment.

11.1.3 High Consequence Areas

HCAAs are established by one of the methods described below:

- All Class 3 and 4 Locations;
- Class 1 or 2 Locations where the potential impact radius is greater than 660 feet and the area within a potential impact circle contains 20 or more buildings intended for human occupancy; or
- areas within a potential impact circle containing 20 or more buildings intended for human occupancy, or an identified site such as: (1) an outside area or open structure that is occupied by 20 or more persons for at least 50 days in any 12- month period; (2) a building that is occupied by 20 or more persons for at least 5 days a week for 10 weeks in a 12-month period; or (3) a facility occupied by persons who are confined, are of impaired mobility, or would be difficult to evacuate.

No HCAAs will be crossed by the Project.

11.2 HISTORICAL OPERATING RECORD

The federal standards and company practices described above for the Project are the same as those that currently apply to the remainder of Millennium's system. Adherence to these standards and practices has enabled Millennium to maintain an excellent safety record to date; the construction and operation of the proposed facilities for the Project will not increase the existing low risk of accidents or other public hazards at the site.

11.3 MEASURES TO PROTECT THE PUBLIC

Millennium's operator maintains operating plans and procedures that are periodically reviewed by USDOT's Pipeline and Hazardous Materials Safety Administration. All operating personnel are trained to perform their activities in accordance with these plans and procedures. These standards provide specific directions in preventive maintenance and patrols of facilities, as well as procedures to be followed in the event of accident, incident, or natural catastrophe. Periodic training sessions and review of operating and emergency procedures are conducted for affected operations employees. This training includes safe operation of pipeline valves and equipment; facilities, including meter stations and compressor stations; hazardous material handling procedures; fire-fighting school; public liaison programs, and general operating procedures. The proposed Project facilities will be operated and maintained in accordance with these standards.

The Project will fully adhere to USDOT regulatory requirements pertaining to safety. These safety regulations will be reinforced by Millennium's operator's comprehensive and strictly enforced corporate practices.

11.3.1 Surveys

The following discussion details the surveys and frequencies at which they will be completed along Millennium's facilities. These inspections include aerial patrols, leakage surveys, and cathodic protection. Weather permitting, the aerial and foot patrols of all pipelines and facilities will be performed along with scheduled preventive maintenance. Any unusual situation or condition will be reported and investigated immediately. The Project facilities constructed by Millennium will have inspection surveys consistent with these standards:

- Leakage Survey:
 - Annually
- Cathodic Protection:
 - Rectifier readings six times per year.
- Inspections:
 - Test station readings annually; and
 - Critical Bond readings six times per year.

Leakage surveys are instrumental in early detection of leaks and can reduce the likelihood of pipeline failure. Leakage surveys are conducted in accordance with Millennium's standards, using advanced technology.

Columbia, as Millennium's operator, is also a member of New York's Dig Safely System. Through One Call and similar organizations, contractors provide notification to a central agency of proposed excavation, which in turn notifies Columbia of the excavation locations. If Millennium facilities are located in the area of proposed contractor activity, they will be marked in the field and Millennium's standards will be followed to ensure that the facility is not compromised.

11.3.2 Equipment

Millennium's transmission system includes many equipment features that are designed to increase the overall safety of the system and protect the public from a potential failure in the system due to accidents, incidents, or natural catastrophes.

Cathodic protection systems are installed at various points along the pipelines to mitigate corrosion of the pipeline facilities. The cathodic protection system applies a low voltage current to the pipeline to offset

natural soil and groundwater corrosion potential. The functional capability of cathodic protection systems is inspected frequently to ensure proper operating conditions for corrosion mitigation.

Data acquisition systems are present at all metering stations along the system. If system pressures fall outside a predetermined range, an alarm is activated and notice is transmitted to Millennium's Gas Control Center. The alarm provides notice that pressures at the station are not within an acceptable range.

Most of the heavy equipment and operators used for pipeline construction are provided by outside contractors. A list of contractors who are available to respond to Millennium's needs in the event of an emergency are available in the Site Specific Emergency Plans. As Millennium's operator, Columbia employs qualified field personnel who can be immediately dispatched to the scene of an emergency if the need should arise. Additionally, Columbia's Site Specific Emergency Plans identifies local first responders along the length of Millennium's pipelines and the notification process that will be followed in the event of an emergency. As required by the USDOT, routine emergency drills (referred to as table top drills) are carried out on an annual basis. These drills involve both Columbia and local first responders.

APPENDIX 11A

Supplemental Tables

TABLE 11A-1	Area Classifications Along The Valley Lateral	11A-1
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**TABLE 11A-1
Area Classifications Along the Valley Lateral**

Town	Begin MP	End MP	Class Location^{a, b}
Minisink	0.00	1.29	1
Minisink	1.29	2.39	2
Wawayanda	2.39	2.41	2
Wawayanda	2.41	4.62	1
Wawayanda	4.62	6.65	2
Wawayanda	6.65	7.76	1
<p>Notes:</p> <p>a: Class Definitions: Class 1: Location with 10 or fewer buildings intended for human occupancy. Class 2: Location with more than 10 but fewer than 46 buildings intended for human occupancy.</p> <p>b: Pipeline shall incorporate a design factor to meet or exceed DOT Title 49, CFR 192 minimum requirements for class location and crossings with consideration for potential future upgrades to class.</p>			