

**U.S. DEPARTMENT OF TRANSPORTATION
PIPELINE AND HAZARDOUS MATERIALS SAFETY ADMINISTRATION**

Special Permit Analysis and Findings

Class 1 to 3 Location

Special Permit Information:

| | |
|---------------------------------|----------------------------------|
| Docket Number: | PHMSA-2019-0202 |
| Requested By: | Columbia Gas Transmission, LLC |
| Operator ID#: | 2616 |
| Original Date Requested: | October 15, 2019 |
| Original Issuance Date: | March 31, 2022 |
| Effective Dates: | March 31, 2022 to March 31, 2032 |
| Code Section(s): | 49 CFR 192.611 |

Purpose:

The Pipeline and Hazardous Materials Safety Administration (PHMSA), Office of Pipeline Safety (OPS),¹ provides this information to describe the facts of the subject special permit application submitted by Columbia Gas Transmission, LLC (TCO),² to discuss any relevant public comments received with respect to the application, to present the engineering and safety analysis of the special permit application, and to make findings regarding whether the requested special permit should be granted and, if so, under what conditions. TCO requested that PHMSA waive compliance from the 49 Code of Federal Regulations (CFR) 192.611 for natural gas transmission pipeline segments, where the class location has changed from a Class 1 to a Class 3 location.

¹ Throughout this special permit the usage of “PHMSA” or “PHMSA OPS” means the U.S. Department of Transportation’s Pipeline and Hazardous Materials Safety Administration Office of Pipeline Safety.

² TCO is a wholly-owned, subsidiary of TC Energy.

Pipeline System Affected:

This special permit application applies to the TCO request for a waiver from the class location change requirements in 49 CFR 192.611 for 10,801 feet (approximately 2.046 miles) of the 30-inch diameter gas transmission Line MC Pipeline located in Montgomery County, Maryland. Without this special permit, 49 CFR 192.611(a) would require TCO to replace the four (4) *special permit segments* with stronger pipe or reduce the pipeline maximum allowable operating pressure (MAOP) for a Class 1 to Class 3 location change.

Pipe specifications including outside diameter, year installed, seam type, coating type, pipe grade, wall thickness, MAOP, minimum pressure test pressure, and pressure test factor based on the minimum test pressure are detailed in **Table 1 – Pipe Specifications by Line Name**.

| Table 1 – Pipe Specifications by Line Name | | | | | | | | | |
|---|---------------------------|----------------|-----------|--------------|-------|-------------------------|-------------|---------------------------|----------------------|
| Line Name | Outside Diameter (inches) | Year Installed | Seam Type | Coating Type | Grade | Wall Thickness (inches) | MAOP (psig) | Min. Test Pressure (psig) | Pressure Test Factor |
| MC | 30 | 1962 | SAW | Asphalt | X60 | 0.312 / 0.375 | 898 | 1,275 | 1.42 |

Note: SAW is single submerged arc welded seam pipe.

Special Permit Request:

On October 15, 2019, TCO applied to PHMSA for a special permit seeking relief from 49 CFR 192.611 for the below listed *special permit segments*, where a class location change occurred from the original Class 1 to a Class 3 on the 30-inch diameter Line MC Pipeline located in Montgomery County, Maryland.

Special Permit Segments:

This proposed special permit applies to the *special permit segments* in **Table 2 – Special Permit Segments**.

Table 2 – Special Permit Segments

| Special Permit Segment Number | Outside Diameter (inches) | Line Name | Length (feet) | Start Survey Station (SS) | End Survey Station (SS) | County or Parish, State | No. Dwellings | Year Installed | Seam Type | MAOP (psig) | Material Records – Condition 13(d) required |
|-------------------------------|---------------------------|-----------|---------------|---------------------------|-------------------------|-------------------------|---------------|----------------|-----------|-------------|---|
| 1 | 30 | Line MC | 3,453 | 553+57 | 588+10 | Montgomery, MD | 20 | 1962 | SAW | 898 | Yes |
| 2 | 30 | Line MC | 2,685 | 596+56 | 623+41 | Montgomery, MD | 35 | 1962 | SAW | 898 | Yes |
| 3 | 30 | Line MC | 3,415 | 281+49 | 315+64 | Montgomery, MD | 74 | 1962 | SAW | 898 | Yes ³ |
| 4 | 30 | Line MC | 1,248 | 337+91 | 350+39 | Montgomery, MD | 2 | 1962 | SAW | 898 | Yes |

Note: SAW is single submerged arc welded seam pipe.

Special Permit Inspection Area:

The *special permit inspection area* is defined as the area that extends 220 yards on each side of the centerline as listed in **Table 3 – Special Permit Inspection Area**.

Table 3 – Special Permit Inspection Area

| Special Permit Inspection Area Number | Special Permit Segment(s) Included | Outside Diameter (inches) | Line Name | Start Survey Station (SS) | End Survey Station (SS) | Length ⁴ (miles) |
|---------------------------------------|------------------------------------|---------------------------|-------------------|---------------------------|-------------------------|-----------------------------|
| 1 | 1, 2, 3, and 4 | 30 | Line VC - Line MC | 0+00 (Line VC) | 1603+78 (Line MC) | 40.5 |

The *special permit inspection area* is located in Loudoun County, Virginia, and Montgomery and Howard Counties, Maryland.⁵ **Figures 1 through 3** are maps showing the 30-inch diameter Line VC – Line MC Pipeline *special permit segments*, *special permit inspection area*, and class locations.

Public Notice:

On September 8, 2020, PHMSA posted a notice of this special permit request in the Federal Register (85 FR 55574) with a closing date of October 8, 2020. PHMSA received an anonymous comment recommending that PHMSA not issue any special permits and take other actions related to energy legislation. PHMSA’s statute and regulations provide pipeline operators the opportunity to apply for special permits and PHMSA uses the conditions placed on permit grants

³ TVC material records for 3,377 feet of the original 1962 pipe from 281+53 to 314+32 and 314+66 to 315+64 were not provided.

⁴ If the *special permit inspection area* footage does not extent from launcher to receiver then the *special permit inspection area* would need to be extended.

⁵ The *special permit inspection area* includes the *special permit segments*.

to protect public safety and the environment. PHMSA is an executive agency that does not take legislative actions.

PHMSA has reviewed this special permit application to ensure the special permit conditions address pipeline safety and integrity threats to the pipeline in the *special permit segments* and *special permit inspection area*. The special permit will require TCO's Operations and Maintenance (O&M) Manual and Procedures to provide a systematic program to review and remediate the pipeline for safety concerns. Additional operational integrity reviews and remediation requirements will be required by this special permit for these *special permit segments* for Class 1 to 3 location changes.

The TCO special permit application letter, Federal Register notice, Special Permit, Final Environmental Assessment (FEA) and Finding of No Significant Impact (FONSI), and all other pertinent documents are available for review in Docket No. PHMSA-2019-0202 in the Federal Docket Management System (FDMS) located on the internet at www.Regulations.gov.

Analysis:

Background: On June 29, 2004, PHMSA published in the Federal Register (69 FR 38948) the criteria it uses for the consideration of applications for class location change waivers, now being granted or denied through a special permit. First, certain threshold requirements should be met on a pipeline *special permit segment* for a class location change special permit to be granted. Second, the age and manufacturing process of the pipe; system design, and construction; environmental, operating, and maintenance histories; and integrity management program elements are evaluated as significant criteria. These significant criteria are presented in matrix form and can be reviewed in the FDMS, Docket No. PHMSA-RSPA-2004-17401. Third, special permits will only be granted when pipe conditions and active integrity management provides a level of safety greater than or equal to a pipe replacement or pressure reduction. The operator's federal pipeline safety regulation compliance history is also evaluated as part of the criteria matrix for acceptability prior to issuance of a special permit.

Threshold Requirements: Each of the threshold requirements published by PHMSA in the June 29, 2004, Federal Register notice is discussed below for the TCO special permit request.

1) No pipeline segments in a class location changing to Class 4 location will be considered.

- This special permit request is for *special permit segments* on the TCO 30-inch diameter Line MC Pipeline, where a change has occurred from a Class 1 location to a Class 3 location.
 - TCO meets this requirement.
- 2) No bare pipe will be considered.
- The TCO *special permit segments* are externally coated with asphalt.
 - TCO has not reported any coating issues such as disbonded coating.
 - TCO meets this requirement.
- 3) No pipe containing wrinkle bends will be considered.
- There are no wrinkle bends in the *special permit segments*.
 - TCO meets this requirement.
- 4) No pipe segments operating above 72% of the specified minimum yield strength (SMYS) will be considered for a Class 3 special permit.
- The *special permit segments* operate at or below 72% SMYS.
 - TCO meets this requirement.
- 5) Records must be produced that show a hydrostatic test to at least 1.25 x MAOP and 90% of SMYS.
- The *special permit segments* on the Line MC Pipeline was tested to at least 1.42 times the MAOP.
 - TCO meets this requirement.
- 6) Inline inspection (ILI) must have been performed with no significant anomalies identified that indicate systemic problems such as stress corrosion cracking (SCC).
- TCO ran ILI tools on the Line MC Pipeline in 2019 in the *special permit inspection area*.
 - TCO has not found any SCC indications in or within 20 miles of the *special permit segment*.
 - TCO meets this requirement.
- 7) Criteria for consideration of a class location change waiver, being considered through the special permit, published by PHMSA in the Federal Register (69 FR 38948), define a *waiver inspection area (special permit inspection area)* as up to 25 miles of pipe on either side of the *waiver segment (special permit segment)*.

- A special permit would be contingent upon TCO’s incorporation of the *special permit segments* in its written integrity management program as covered segments in a high consequence area (HCA) in accordance with 49 CFR 192.903 and to assess and remediate threats to the *special permit inspection area*.
- TCO’s defined *special permit inspection area* is 40.5 miles in length.

Criteria Matrix: The data submitted by TCO for the *special permit segments* has been compared to the class location change special permit criteria matrix. The data fall within the *probable acceptance or the possible acceptance* column of the criteria matrix, except for PHMSA enforcement findings which fall under the *requires substantial justification*.

- The *special permit segments* fall in the *probable acceptance* column of the criteria matrix for:
 - Design stress, pipe material, depth of pipe cover, test pressure, test failures, type service, pressure fluctuations, safety related conditions, leaks and failures, direct assessment, ILI type, ILI program, and damage prevention program.
- The *special permit segments* fall in the *possible acceptance* column of the criteria matrix for:
 - Class 1 to 3 location, pipe manufacturer, pipe coating type (may shield cathodic protection (CP)), local geology, CP, and HCA program.
- The *special permit segments* fall in the *requires substantial justification* column of the criteria matrix for:
 - TCO has identified issues in girth welds within the *special permit segments* and pipe girth weld records are not available. TCO will complete **Special Permit Condition 6 – Girth Welds**;
 - The coating type may shield CP when disbonded, causing SCC.⁶ TCO will complete **Special Permit Condition 7 – Stress Corrosion Cracking Threat**; and

⁶ Two (2) types of SCC are found on pipelines: High pH (9 to 11) SCC and near-neutral pH (6 to 8) SCC. Coal tar and asphalt coatings that are disbonded are more prone to having SCC.

- Inspection findings (Enforcement History) – PHMSA enforcements are in the “Past Enforcement History – January 1, 2011 through June 21, 2021” section below.

Operational Integrity Compliance:

To inform PHMSA’s decision about whether a special permit could provide a level of safety greater than or equal to a pipe replacement or pressure reduction and is consistent with pipeline safety, PHMSA reviewed this special permit request to understand the known type of integrity threats that are in the *special permit segments* and *special permit inspection area*. This integrity information was used to design special permit conditions to provide a systematic program to review and remediate the pipeline for safety concerns. Additional operational integrity review and remediation requirements are required by this special permit to ensure that the operator has an ongoing program to locate and remediate safety threats. These threats to integrity and safety include any issues with the pipe coating quality, CP effectiveness, operations damage prevention program, pipe depth of soil cover, weld seam and girth weld integrity, anomalies in the pipe steel and welds, and material and structures either along or near the pipeline that could cause the CP system to be ineffective. PHMSA has carefully designed a comprehensive set of conditions that TCO must implement to comply with this special permit.

Past Enforcement History – January 1, 2011 through June 21, 2021:

From January 1, 2011, through June 21, 2021, TCO was cited in forty (40) enforcement actions with a total of \$752,400 in assessed civil penalties. PHMSA initiated one (1) Corrective Action Order, ten (10) Notices of Amendment, thirteen (13) Notices of Probable Violation, three (3) Safety Orders, and eleven (11) Warnings Letter against TCO. TC Energy acquired TCO in 2016. Since TC Energy became owner of TCO, PHMSA has issued four (4) Notice of Amendments, one (1) Notice of Probable Violations, one (1) Safety Order, and seven (7) Warning Letters with a total of \$47,500 in collected penalties to TC Energy on the TCO pipeline system.

Tables 4 and 5 below show PHMSA enforcement actions and civil penalties for TCO:

| Table 4: TCO Enforcement Matters from January 1, 2011, through June 21, 2021 | | | | | | |
|---|-------------------------|---------------------|------------------------------|--------------|----------------|-----------|
| Status | Corrective Action Order | Notice of Amendment | Notice of Probable Violation | Safety Order | Warning Letter | Total |
| CLOSED | 1 | 11 | 12 | 3 | 12 | 39 |
| OPEN | 0 | 0 | 1 | 0 | 0 | 1 |
| Total | 1 | 11 | 13 | 3 | 12 | 40 |

| Table 5: TCO Enforcement Civil Penalty Status January 1, 2011 through June 21, 2021 | | | | |
|--|----------------|-----------|-------------------|-----------|
| Proposed | Awaiting Order | Assessed | Withdrawn/Reduced | Collected |
| \$879,200 | \$0 | \$752,400 | \$126,800 | \$752,400 |

From January 1, 2011, through June 21, 2021, PHMSA initiated the enforcement cases outlined in **Tables 6 and 7** against the four (4) pipeline companies owned by TC Energy, the operator of TCO. TC Energy owns the ANR Pipeline Company (ANR), Columbia Gas Transmission, LLC (TCO), Columbia Gulf Transmission, LLC (CGT), and Great Lakes Gas Transmission Company (GLGT) pipeline systems (Operator identification #s 405, 2616, 2620, and 6660). TC Energy acquired the TCO and CGT pipeline systems in 2016.

| Table 6: Enforcement Matters from January 1, 2011 through June 21, 2021 ANR, TCO, CGT, and GLGT through June 21, 2021 | | | | | | |
|--|-------------------------|---------------------|------------------------------|--------------|----------------|-----------|
| Status | Corrective Action Order | Notice of Amendment | Notice of Probable Violation | Safety Order | Warning Letter | Total |
| CLOSED | 3 | 17 | 23 | 3 | 21 | 67 |
| OPEN | 0 | 0 | 3 | 0 | 0 | 3 |
| Total | 3 | 17 | 26 | 3 | 21 | 70 |

| Table 7: Enforcement Civil Penalty Status for ANR, TCO, CGT, and GLGT January 1, 2011 through June 21, 2021 | | | | |
|--|----------------|-------------|-------------------|-------------|
| Proposed | Awaiting Order | Assessed | Withdrawn/Reduced | Collected |
| \$1,881,600 | \$0 | \$1,678,000 | \$203,600 | \$1,678,000 |

The type of 49 CFR Part 192 enforcement violations against TC Energy on these four (4) pipeline systems from January 1, 2011 through June 21, 2021 were as follows: 49 CFR, 190.203, 191.15, 191.17, 191.22, 191.23, 191.25, 191.5, 192.107, 192.12, 192.161, 192.163, 192.167, 192.171, 192.201, 192.225, 192.227, 192.241, 192.303, 192.305, 192.309, 192.319, 192.455, 192.463, 192.465, 192.467, 192.471, 192.473, 192.475, 192.477, 192.479, 192.481, 192.491, 192.503, 192.505, 192.603, 192.605, 192.609, 192.612, 192.615, 192.616, 192.619, 192.620, 192.625, 192.631, 192.703, 192.705, 192.707, 192.709, 192.711, 192.727, 192.731, 192.735, 192.736, 192.739, 192.743, 192.745, 192.751, 192.805, 192.905, 192.907, 192.909, 192.911, 192.929, 192.933, 192.935, 192.949, 193.2011, 193.2017, 193.2503, 193.2509, 193.2513, 193.2605, 193.2609, 193.2637, 193.2801, 193.2903, 199.105, and 199.225.

Findings:

Based on the information submitted by TCO and PHMSA's analysis of the technical, operational, and safety issues, PHMSA finds that granting this special permit to TCO to operate *special permit segments* on the 30-inch diameter Line MC Pipeline located in Montgomery County, Maryland, is consistent with pipeline safety.

TCO's enforcement record since 2016 does not reflect sustained and substantial noncompliance with 49 CFR Part 192. PHMSA has designed special permit conditions to effectively assess and remediate threats to the *special permit segments* and *special permit inspection area*, including assessments to evaluate pipe girth welds that have not been non-destructively tested and any SCC. To ensure TCO properly implements the special permit conditions, TCO will be required to give PHMSA an annual review of their compliance with the special permit.

PHMSA finds that no significant negative impact to human safety and the environment will result from the issuance and full implementation of a special permit that waives the requirements of 49 CFR 192.611 for class location changes from Class 1 to a Class 3 location. This permit requires TCO to implement the special permit conditions that include safety requirements on the operations, maintenance, and integrity management of the *special permit segments* and the *special permit inspection area*.

Completed in Washington DC on: March 31, 2022

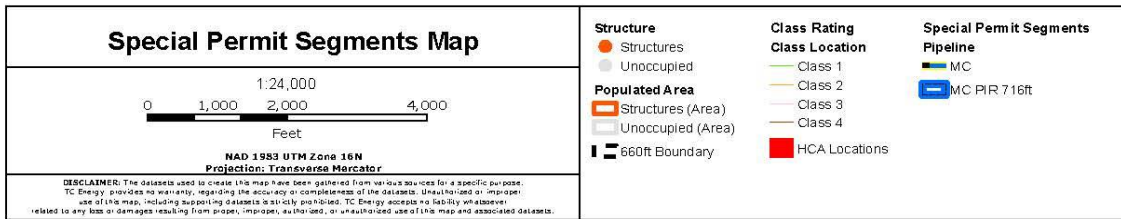
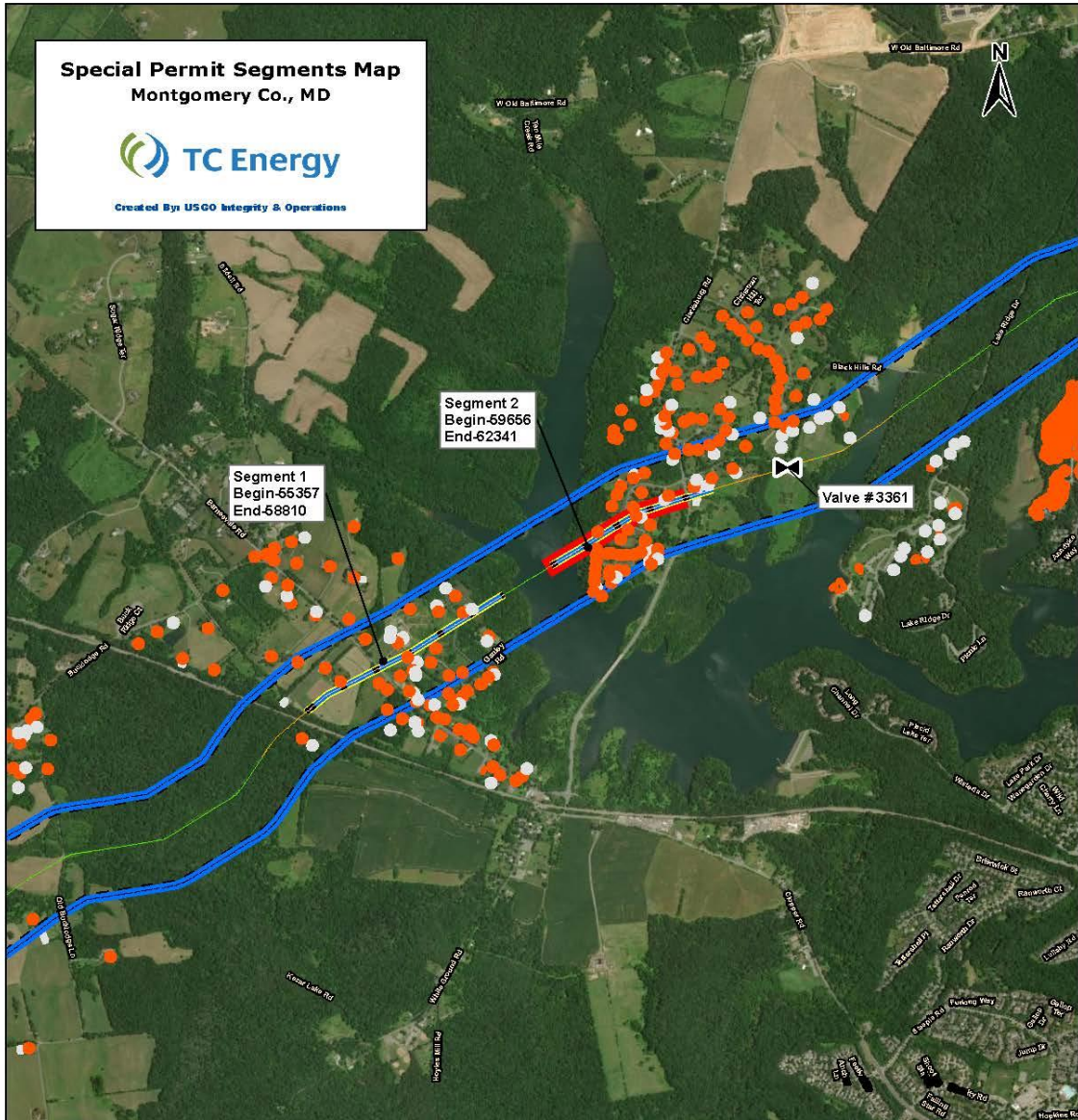
Prepared by: PHMSA - Engineering and Research Division

**Figure 1 – 30-inch TCO Line VC & MC Route Map
Special Permit Segments and Inspection Area**



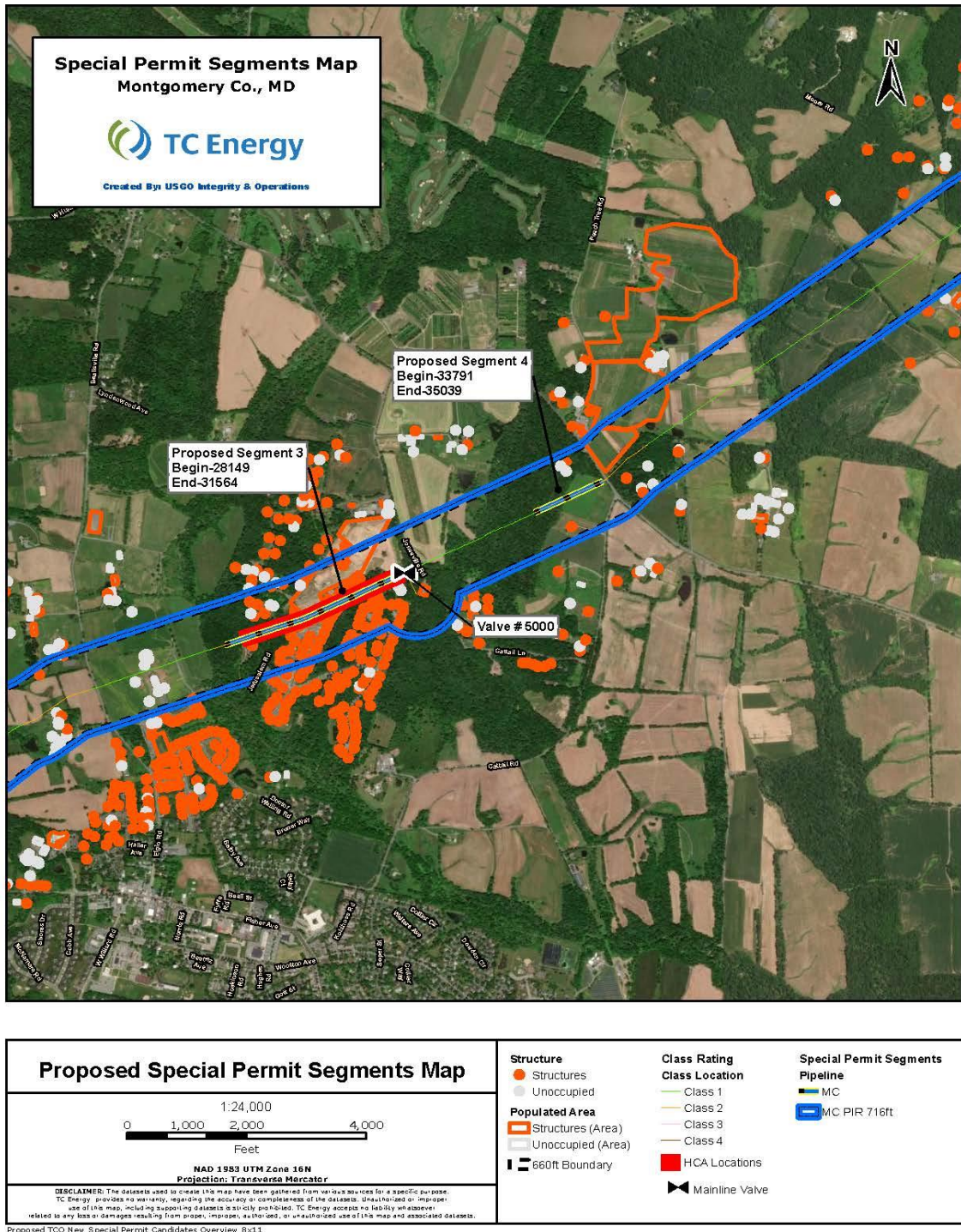
| | |
|--|---|
| Special Permit Inspection Area | |
| <p>1:326,715 0 2.5 5 10 Miles</p> | |
| <p>NAD 1983 UTM Zone 16N Projection: Transverse Mercator</p> <p><small>DISCLAIMER: The datasets used to create this map have been gathered from various sources for a specific purpose. TC Energy provides no warranty, regarding the accuracy or completeness of the datasets. Unauthorized or improper use of the map, including supporting datasets is strictly prohibited. TC Energy accepts no liability whatsoever related to any loss or damages resulting from proper, improper, authorized, or unauthorized use of the map and associated datasets.</small></p> | |
| <ul style="list-style-type: none"> Launcher Receiver Location Compressor Station Meter Station | <ul style="list-style-type: none"> Mainline Valve TC Energy Pipeline New Special Permit Segment - Pipeline MC |

**Figure 2 – 30-inch TCO Line MC Route Map
Special Permit Segments 1 and 2**



SPS_Map_Template_NewApplications_MC_8x11

**Figure 3 – 30-inch TCO Line MC Route Map
Special Permit Segments 3 and 4**



Final Page of the Special Permit Analysis and Findings