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February 11, 2015

Clyde N. Thompson, Forest Supervisor
Monongahela National Forest
200 Sycamore Street
Elins, West Virginia 26241

REFERENCE: Atlantic Coast Pipeline Scoping Comments

SUBJECT: Deficiency of the ACP ROW Survey Methodology

Dear Supervisor Thompson:

My wife and I are citizens of the Cowpasture River valley of Virginia. My first visit to the Monongahela National Forest and the Fernow Forest Experiment Station was in 1962 as a student from the SUNY College of Forestry and Environmental Sciences. My son, his childhood buddy and I hiked and camped in the Dolly Sods Wilderness in the 1970s. And my wife and I in more recent times have enjoyed the rugged and hauntingly beautiful Red Spruce forests of the Monongahela.

Lizzie and I have invested our life's savings into the Cowpasture River valley, built a heritage beef cattle operation and a guest lodging business. We came to the Cowpasture valley because like much of West Virginia it is remote, rugged, rustic and romantic. Our guests, who often come from the Baltimore, Washington, and Richmond corridor, clearly come here for the same reasons. And they enjoy day-trips into the Monongahela National Forest.

We believe that the Monongahela National Forest should deny the application of the Atlantic Coast Pipeline, LLC for a special use permit to survey for a pipeline right-of-way for three overarching reasons:

I. The application violates the letter of the law as established by the National Environmental Policy Act by deliberately segmenting a 550 mile-long linear development into many pieces, including: the Monongahela National Forest, the George Washington National Forest, the Blue Ridge Parkway, the Appalachian Trail Scenic Corridor and the Great Dismal Swamp National Wildlife Refuge, plus enumerable private parcels.

II. Dominion's application for a Conditional Use Permit failed to establish a methodology and to make provisions now and on the front-end for the collection of critical data, information and measurements about essential environmental factors at risk (i.e., losing streams, caves and springs; surface and ground water resources; rugged mountainous terrain; and landscape aesthetics and scenery) that will be predictably (and negatively) influenced by the construction of a 42” in

diameter natural gas pipeline and further, it is virtually guaranteed that the Federal Energy Regulatory Commission (FERC) will not cause the supplicant to collect in retrospect this environmental intelligence.

III. The application ignores the predictably chilling effect that a major industrial development through the Monongahela National Forest will have on other Forest Service collaborative programs, stakeholders and investments, including: the Central Appalachian Red Spruce Restoration Initiative; the Cooperative Forestry staff's collaboration with West Virginia and Virginia Departments of Forestry; cooperative programs with public and private sector stakeholders in invasive species management; the multi-federal agency Memorandum of Understanding on the Cow Knob Salamander; the Allegheny Highlands Collaborative Landscape Restoration Project with The Nature Conservancy; and collaborative programs with state agencies that provide incentives for non-industrial private forest landowners to cooperate in forest management decisions.

The Atlantic Coast Pipeline, LLC has described its proposed methodology for each of four surveys – i.e., a Routing Survey, an Environmental Survey, a Cultural Resources Survey, and a Civil Survey. In our opinion, the ACP ROW Survey Methodology addresses in only a cursory fashion the most minimal FERC NEPA requirements in order to allow the Atlantic Coast Pipeline, LLC to slip under a very low bar for regulatory compliance. The ACP ROW Survey Methodology blatantly ignores four essential environmental factors, including: (1) losing streams, caves and springs; (2) surface and ground water resources; (3) rugged mountainous terrain; and (4) landscape aesthetics and scenery, and thus, the application is materially deficient. Each deficiency is elaborated below with discussions on its environmental significance, survey methodology, personnel qualifications, agency collaboration, and scientific literature.

DEFICIENCY NO. 1 – LOSING STREAMS, CAVES AND SPRINGS

(1) Losing Streams, Caves and Springs

(a) Significance of the Environmental Factor:

i. Planning Note: The following three criteria are recommended by Cantor (Chapter 4 – Description of Environmental Setting, page 115) to determine whether or not to include a specific environmental factor as part of the essential environmental setting. The environmental factor should be included if any one or more of these three criteria is (are) operative and in this case all three are operative.

ii. Criteria No. 1 – Will the environmental factor be adversely affected by the pipeline construction?

Yes. Both surface and ground water hydrology in karst terrain can be structurally and functionally altered by construction activities. Karst sinkholes can funnel construction contaminants (i.e., sedimentation, bacteria-infected debris and industrial organic chemicals) into caves and ground water aquifers.

iii. Criteria No. 2 – Will the environmental factor exert an influence on the construction of the pipeline?

Yes. Karst sinkholes must be avoided in right-of-way siting. Karst sinkholes will require a protective buffer of natural vegetation. Pipeline infrastructure, underlain by karst terrain, can be damaged by a collapse of the supporting soil.

iv. Criteria No. 3 – Will the environmental factor be of public interest, engender controversy or litigation?

Yes. The general public is informed and concerned about protecting karst terrain features. The Laurel Mountain Preservation Association, Friends of Blackwater, West Virginia Rivers Coalition, Eight Rivers Council, West Virginia Highlands Conservancy, West Virginia Speleological Survey and many others consider that the protection of karst terrain features is a flash-point issue.

(b) Methodology of the Right-of-Way Survey:

i. Planning Note: A written plan that describes the right-of-way survey methodology should specifically include commitments to collect information, measurements and data in the following five areas as a minimum. The methodology should explicitly acknowledge that an "examination of public databases" is insufficient in and by itself because these public databases are know to be incomplete and thus, do not substitute for an on-the-ground investigation.

ii. Define Karst Terrain Features:

- Karst terrain features shall be defined as sinkholes, losing streams, caves and springs.

iii. Examine Public Databases:

- U.S. Bureau of Land Management, Cave Management

iv. Conduct Field Reconnaissance:

- Conduct an on-the-ground field reconnaissance within the survey right-of-way.
- The on-the-ground reconnaissance shall be conducted by a West Virginia-certified professional engineer or geologist, as further defined below.
- The survey right-of-way for karst terrain features shall be specified as the temporary construction right-of-way (i.e., most likely 150 feet) plus a karst protection buffer of and additional 200 feet both left and right.

v. Locate Karst Features:

- Karst terrain features shall be located with GPS receivers capable of obtaining sub-meter accurate positions.
- The perimeters or boundaries of karst sinkholes shall be located and defined within less than one meter.

vi. Measure Karst Feature Attributes:

- Karst sinkhole attributes shall include width, depth and drainage area.
- Karst spring attributes shall be monitored prior to and during construction to document water quality and discharge under high and low flow conditions.
- Karst sinking or losing stream attributes shall include sink- or swallow-hole locations downstream of pipeline river crossings, ground water flow direction and the distance to resurfacing.
- Karst cave attributes shall include openings, depth and direction of passages.

vii. Field Survey Professional Qualifications:

- A Professional Engineer (PE) with a geotechnical (civil) engineering specialty and with a minimum of 8 years of experience in karst geology and/or karst hydrology; or
- A Certified Professional Geologist (CPG) with a minimum of 8 years experience in karst studies and engineering geology; and
- Certified for professional practice in West Virginia.

(c) Collaboration with Federal and State Agencies:

i. Planning Note: State departments are listed below, however, there are several non- or not-for-profit organizations that should be consulted, including: the Laurel Mountain Preservation Association, Friends of Blackwater, West Virginia Rivers Coalition, Eight Rivers Council, West Virginia Highlands Conservancy and West Virginia Speleological Society.

ii. U.S. Bureau of Land Management, Cave Management

(d) Relevant Scientific and Technical Literature:

i. Larry W. Canter, Environmental Impact assessment (New York, New York: McGraw-Hill, 1996), 600 pages.

ii. Neven Kresic, Water in Karst: Management, Vulnerability, and Restoration (New York, New York: McGraw-Hill Professional, 2012), 736 pages.

DEFICIENCY NO. 2 – SURFACE AND GROUND WATER RESOURCES

(2) Surface and Ground Water Resources

(a) Significance of the Environmental Factor:

i. Planning Note: The following three criteria are recommended by Dr. Larry W. Cantor, Professional Engineer, Environmental Impact Assessment, Chapter 4 – Description of Environmental Setting, page 115, to determine whether or not to include a specific environmental factor as part of the essential environmental setting. The environmental factor should be included if any one or more of these three criteria is operative and in this case, all three are operative.

ii. Criteria No. 1 – Will the environmental factor be adversely affected by the pipeline construction?

Yes. Municipal watersheds, municipal water supply wells, private sector domestic water wells, commercial water wells, agricultural springs and seeps in karst terrain are vulnerable to contamination and sedimentation during pipeline construction and operation.

iii. Criteria No. 2 – Will the environmental factor exert an influence on the construction of the pipeline?

Yes. Natural gas pipelines, permanent and temporary service (or maintenance) roads, temporary petrochemical storage and equipment refueling areas, rock materials borrow pits, horizontal drilling sludge disposal impoundments or ponds all must be located, constructed and maintained with water quality protection measures.

iv. Criteria No. 3 – Will the environmental factor be of public interest, engender controversy or litigation?

Yes. The general public is informed and concerned about the possible negative influences of pipeline construction and operations on surface and ground water quality and quantity. The Laurel Mountain Preservation Association, Friends of Blackwater, West Virginia Rivers Coalition, Eight Rivers Council, West Virginia Highlands Conservancy, and many other local non-profit public interest groups consider the protection of surface and ground water quality and quantity as a vitally important issue.

(b) NAPA Compliance Thresholds:

i. Rules-based Vulnerability Measures: Dr. Neven Kresic, Ph.D in Geology, Professor of Groundwater Dynamics at the University of Belgrade, Senior Fulbright Scholar at the U.S. Geological Survey and arguably the world's leading authority on water in karst terrain states, *"Sometimes, with the best intentions, various government agencies...create guidance documents...on karst vulnerabilities that are confusing at best...misleading and potentially harmful. [A] typical example is a recommended minimum distance for which there should be concerns regarding certain practices; if such distance is greater than the rule of thumb, the concern somehow disappears [and] then there is no concern. Whatever the karst-related concern may be, it is*

best to perform a site-specific assessment and not rely on some rules of thumb..." (See: Kresic, page 556).

ii. FERC Guidance Manual for Environmental Report Preparation: The Federal Energy Regulatory Commission recommends a rule-based vulnerability measure for drinking water supplies stating, *"Identify by milepost all drinking water supply wells, including private, community, municipal/public wells, and springs within 150 feet of any area that would be disturbed by construction. This includes the construction right-of-way, extra work areas, new access roads, pipe storage and contractor yards, and sites for new or modified above ground facilities..."* (See: FERC, page 3-27). **NOTE: that there is no scientific basis whatsoever for the FERC-promulgated 150 foot rule of thumb.** None. The only plausible basis for the FERC 150-foot rule would be to establish for the benefit of the supplicant (i.e., Dominion Resources) an artificially low NEPA-compliance threshold.

(c) Methodology of the Right-of-Way Survey:

i. Planning Note: A written plan that describes the right-of-way survey methodology should specifically include commitments to collect information, measurements and data in the following five areas as a minimum. The methodology should explicitly acknowledge that an "examination of public databases" is insufficient in and by itself because these public databases are known to be incomplete or not directly relevant and thus, do not substitute for an on-the-ground investigation.

ii. Define Surface and Ground Water Resources:

- Surface and ground water resources shall be defined as municipal watersheds, municipal water supply wells, private sector domestic water wells, commercial water wells, agricultural springs and seeps on or off lands of the Forest Service and within the Monongahela watersheds or aquifers, and used for human consumption or for livestock, poultry or fishes.
- Acknowledgment: Dominion Resources plans to observe the physical and biological characteristics of ephemeral, intermittent and perennial water bodies, and data on wells.

iii. Examine Public Databases:

- U.S. Bureau of Land Management, Cave Management

iv. Conduct Field Reconnaissance:

- Conduct an on-the-ground field reconnaissance within the survey corridor. The survey corridor for surface and ground water resources shall be specified as the approximate center line of the permanent pipeline right-of-way plus a conservation buffer of one thousand five hundred feet (1,500') both left and right as further defined by hydrological studies of both the surface watershed and the ground water aquifer, and which drainages may not be the same.

- The on-the-ground reconnaissance shall be conducted by a West Virginia-certified professional geologist or hydrologist, as further defined below.

v. Locate Surface and Ground Water Features:

- Surface and ground water features shall be located with GPS receivers capable of obtaining sub-meter accurate positions.
- The ownership of domestic and municipal water wells, agricultural-use wells and springs shall be determined, including: owner(s) names, snail-mail addresses, telephone numbers and e-mail addresses.
- Domestic and municipal water well numbers and drilling logs shall be obtained from property owners, county and/or state agencies.

vi. Locate Gas Pipeline Pollution Hotspots:

- Planning Note: The U.S. Forest Service, the Monongahela National Forest, non-profit public interest groups and stakeholders, and the general public must know now the location of planned or proposed or possible water pollution hotspots, as distinguished from after-the-fact of a FERC-finding of public convenience or through petitions for variances or exceptions.
- Determine the location of gas transmission compressor stations.
- Determine the location of gas pipeline maintenance (i.e., "pig" clean-out) ports.
- Determine the locations of horizontal directional drilling mud effluent discharge.
- Determine the locations of gas pipeline hydrostatic testing waste disposal points.
- Determine the locations of storage areas and dispensing facilities for gasoline, diesel fuel, lubrication oils and greases.
- Determine the locations for the use of herbicides and the chemical compositions of such herbicides.
- Determine the locations of rock trenching, quarrying or borrow pits.
- Determine those areas susceptible to limestone rock leaching.
- Determine the locations for blasting and the specific explosive used.
- Determine the locations of temporary and permanent road crossings of rivers, runs and drafts.
- Determine the locations of vehicle, truck and construction equipment storage, staging or parking areas.
- Determine the locations of proposed surface or ground water withdrawal.
- Determine the locations of proposed dams, impoundments, ponds or

catch-basins.

(d) Collaboration with Federal and State Agencies:

i. Planning Note: State departments are listed below, however, there are several non- or not-for-profit organizations that should be consulted, including: the Laurel Mountain Preservation Association, Friends of Blackwater, West Virginia Rivers Coalition, Eight Rivers Council, West Virginia Highlands Conservancy.

ii. U. S. Army Corps of Engineers, District Engineer, Soil Erosion and Sediment Controls

iii. U. S. Department of Agriculture, Natural Resources Conservation Service

(e) Qualifications of Field Survey Personnel:

i. A Professional Engineer (PE) with a hydrogeological specialty and with a minimum of 8 years of experience; and a Certified Ground Water Professional (CGWP); or

ii. A Certified Professional Geologist (CPG) with a minimum of 8 years experience; and a Certified Ground Water Professional (CGWP); and

iii. Certified for professional practice in the State of West Virginia.

(f) Relevant Scientific and Technical Literature:

i. Larry W. Canter, Environmental Impact Assessment (New York, New York: McGraw-Hill, 1996), 600 pages.

ii. FERC Office of Energy Projects, Guidance Manual for Environmental Report Preparation (Washington, DC: Federal Energy Regulatory Commission, 2002), 150 pages.

iii. Forest Service, Technical Guide to Managing Ground Water Resources (Washington, DC: U.S. Department of Agriculture, Forest Service, Volume 1: National Core BMP Technical Guide, FS-881, 2012), 165 pages.

iv. Forest Service, National Best Management Practices for Water Quality Management on National Forest System Lands (Washington, DC: U.S. Department of Agriculture, Forest Service, Minerals and Geology Management, Engineering, FS-990a, 2007), 165 pages.

v. Neven Kresic, Water in Karst: Management, Vulnerability, and Restoration (New York, New York: McGraw-Hill Professional, 2012), 736 pages.

DEFICIENCY NO. 3 – RUGGED MOUNTAINOUS TERRAIN

(3) Rugged Mountainous Terrain

(a) Significance of the Environmental Factor:

i. Planning Note: The following three criteria are recommended by Cantor (Chapter 4 – Description of Environmental Setting, page 115) to determine whether or not to include a specific environmental factor as part of the essential environmental setting. The environmental factor should be included if any one or more of these three criteria is operative and in this case, all three are operative.

ii. Criteria No. 1 – Will the environmental factor be adversely affected by the pipeline construction?

Yes. Trees, shrubs and grasses will be cleared from 13.5 million square feet of mountainous terrain within the Monongahela. One million five hundred and five thousand nine hundred and forty (1,505,940) cubic yards of debris, soil and rock will be broken loose on steep mountain slopes and in narrow mountain valleys. Mountain sides will be exposed to severe erosion during rains.

iii. Criteria No. 2 – Will the environmental factor exert an influence on the construction of the pipeline?

Yes. Heavy construction equipment must be anchored onto mountain sides. Shallow soils will necessitate trench excavation in the harder sedimentary bedrock with heavy duty rock-ripping equipment and explosives. Erosion control measures will require a herculean effort and most likely will not be effective.

iv. Criteria No. 3 – Will the environmental factor be of public interest, engender controversy or litigation?

Yes. The general public is informed and concerned about excavation in rugged mountainous terrain. The Laurel Mountain Preservation Association, Friends of Blackwater, West Virginia Rivers Coalition, Eight Rivers Council, West Virginia Highlands Conservancy, and many other local non-profit public interest groups consider that the protection of rugged mountainous terrain a critical issue.

(b) Methodology of the Right-of-Way Survey:

i. Planning Note: A written plan that describes the right-of-way survey methodology should specifically include commitments to collect information, measurements and data in the following five areas as a minimum. The methodology should explicitly acknowledge that an "examination of public databases" is insufficient in and by itself because these public databases are known to be incomplete or not directly relevant and thus, do not substitute for an on-the-ground investigation.

ii. Define Rugged Mountainous Terrain:

- Rugged mountainous terrain shall be defined as folded valley and ridge topography with narrow valleys and steep ridges, and with shallow soils or exposed bedrock.

iii. Examine Public Databases:

- USDA Natural Resources Conservation Service, Web Soil Survey

iv. Conduct Field Reconnaissance:

- Conduct an on-the-ground field reconnaissance within the survey right-of-way.
- The survey right-of-way for rugged terrain features shall be specified as the approximate center line of the permanent pipeline right-of-way plus a construction right-of-way (i.e., most likely 150 feet).
- The on-the-ground reconnaissance shall be conducted by a West Virginia-certified professional engineer or geologist, as further defined below.

v. Locate Rugged Terrain Attributes:

- Rugged terrain attributes shall be located with GPS receivers capable of obtaining sub-meter accurate positions with survey sample plots taken every 100 feet (100') along the pipeline right-of-way.
- Depth through surface- and sub-soils to underlying bedrock shall be determined within plus or minus six inches (i.e., 6”) with Ground-Penetrating Radar (GPR) at each survey sample plot. Note: that the depth to bedrock informs Dominion Resources about the extent and costs of excavation with rock-ripping equipment or blasting, the Forest Service about essential water quality best management practices in pipeline construction and quarrying activities, and the general public about blasting dangers and disruptions.
- Soil erodibility class shall be determined at each survey sample plot.
- Slope-steepness shall be measured at each survey sample plot.
- Slope-length shall be measured at each survey sample plot.
- Vegetative cover classes (i.e., forest land, shrub land and grass land) shall be described at each survey sample plot.
- Field survey written notes will be made of exposed bedrock visually located within the survey right-of-way (i.e., 75' left and right).
- Engineering quality color photography shall be taken from four views at each and every river, run or draft crossing – from the pipeline right-of-way center line upstream and downstream, and from the pipeline ROW center line backward and forward.

vi. Predict Rainfall-induced Soil Erosion Losses:

- Planning Note: Predict rainfall-induced soil erosion losses along five hundred (500) foot construction segments beginning at the crest of

each ridge line or mountain top, and proceeding both east and west down to the valley bottoms.

- Determine rainfall and runoff factors.
- Determine the soil erodibility factor.
- Determine the percentage of rock factor.
- Determine the slope-length factor.
- Determine the slope-steepness factor.
- Determine the equipment and vehicular traffic factor.
- Determine the vegetative cover factor.
- Determine the erosion best management factors.

(c) Collaboration with Federal and State Agencies:

i. Planning Note: Federal and state departments are listed below, however, there are several non- or not-for-profit organizations that should be consulted including: the Laurel Mountain Preservation Association, Friends of Blackwater, West Virginia Rivers Coalition, Eight Rivers Council, and West Virginia Highlands Conservancy.

ii. U. S. Army Corps of Engineers, District Engineer, Soil Erosion and Sediment Controls

iii. U. S. Department of Agriculture, Natural Resources Conservation Service

(d) Qualifications of Field Survey Personnel:

i. A Professional Engineer (PE) with a geotechnical (civil) engineering specialty and with a minimum of 8 years of experience; and certified in soil and erosion control, and for Ground-Penetrating Radar studies; or

ii. A Certified Professional Geologist (CPG) with a minimum of 8 years experience; and certified in soil and erosion control and for Ground-Penetrating Radar studies; and

iii. Certified for professional practice in the State of West Virginia.

(e) Relevant Scientific and Technical Literature:

i. Larry W. Canter, Environmental Impact Assessment (New York, New York: McGraw-Hill, 1996), 600 pages.

ii. M. E. Collins, J. A. Doolittle and R. V. Rourke, 1989. “Mapping Depth to Bedrock on a Glaciated Landscape with Ground-Penetrating Radar”, Soil Science Society of America Journal, Volume 53, Number 6, Pages 1806–1812.

iii. Forest Service, Water Erosion Prediction Project (WEPP), WEPP: Road

Interface (Moscow, Idaho: U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station, Moscow Forestry Sciences Laboratory, http://forest.moscowfsl.wsu.edu/engr/software.html, 2015).

iv. Wischmeier, W. H., and Smith, D.D., Predicting Rainfall Erosion Losses: A Guide to Conservation Planning (Washington, District of Columbia: U.S. Department of Agriculture, Agriculture Handbook No. 537, 1978), 66 pages.

v. West Virginia Department of Environmental Protection, West Virginia Erosion and Sedimentation Control Field Manual (Charleston, West Virginia: WVDEP Office of Oil & Gas, 2012), 43 pages.

vi. West Virginia Department of Environmental Protection, Erosion and Sediment Control Best Management Practice Manual, (Charleston, West Virginia: VDEP Division of Water and Waste Management, 2006), Seven Chapters and Three Appendices.

vii. U.S. Army Corps of Engineers, Sediment and Erosion Control Guidelines for Pipeline Projects (Little Rock, Arkansas: USACE Little Rock District), 23 pages.

DEFICIENCY NO. 4 – LANDSCAPE AESTHETICS AND SCENERY

(4) Landscape Aesthetics and Scenery

(a) Significance of the Environmental Factor:

i. Planning Note: The following three criteria are recommended by Dr. Larry W. Cantor, Professional Engineer, Environmental Impact Assessment, Chapter 4 – Description of Environmental Setting, page 115, to determine whether or not to include a specific environmental factor as part of the essential environmental setting. The environmental factor should be included if any one or more of these three criteria is operative and in this case, two are operative.

ii. Criteria No. 1 – Will the environmental factor be adversely affected by the pipeline construction?

Yes. The endlessly rolling blue-gray Allegheny Mountain terrain will be forevermore scarred by the construction and operation of the Atlantic Coast Pipeline and its right-of-way.

iii. Criteria No. 2 – Will the environmental factor exert an influence on the construction of the pipeline?

No.

iv. Criteria No. 3 – Will the environmental factor be of public interest, engender controversy or litigation?

Yes. The general public is informed and concerned about the negative influences of pipeline construction and operations on landscape aesthetics and scenery throughout the Monongahela National Forest, and of the harm this will do to fragile tourism-based economies, including: the Laurel Mountain Preservation Association, Friends of Blackwater, West Virginia Rivers Coalition, Eight Rivers Council, West Virginia Highlands Conservancy, and many other local non-profit public interest groups.

(b) NEPA Compliance:

The National Environmental Policy Act of 1969 (42 U.S.C. 4321) directs the Federal Government to "(2) assure for all Americans . . . healthful, productive, and aesthetically and culturally pleasing surroundings; (3) attain the widest range of beneficial uses of the environment without degradation, [or] risk to health . . .; (4) preserve important historic, cultural, and natural aspects" of our environment. It further directs agencies to "insure the integrated use of the natural and social sciences and the environmental design arts in planning and in decision-making which may have an impact on man's environment." This act directs agencies to develop methods and procedures "which will insure that [scenery and other] unquantified environmental amenities and values may be given appropriate consideration in decision-making along with economic and technical considerations." See: FSM 2380.11b.

(c) Methodology of the Right-of-Way Survey:

i. Planning Note: A written plan that describes the right-of-way survey methodology should specifically include commitments to collect information, measurements and data in preparation for applying landscape aesthetic resource management decision-making criteria, as further illuminated below.

ii. Define Landscape Aesthetics and Scenery:

- Landscape aesthetics and scenery shall be defined as any view of the valley and ridge providence of West Virginia and the blue-gray Alleghney Mountains – from civil war battlefields; from wild area hiking trails; from scenic automobile routes or byways; from rivers, runs and drafts; from wilderness areas that may in the short-term become impaired by the construction of a 42 inch pipeline and its ancillary structures or support facilities, or in the long-term by the operation of a permanent right-of-way and/or the creation of a grass or brush and herbicide-controlled dead zone.

iii. Forest Service Policy States (See: FSM2380.3):

- Inventory, evaluate, manage, and, where necessary, restore scenery as a fully integrated part of the ecosystems of National Forest System lands and of the land and resource management and planning

process.

- Employ a systematic, interdisciplinary approach to scenery management to ensure the integrated use of the natural and social sciences and environmental design.
- **Ensure scenery is treated equally with other resources.**
- Apply scenery management principles routinely in all National Forest System activities.

iv. Constituents of Aesthetic Values:

- Citizens and private sector landowners within the Monongahela National Forest or within 15 miles.
- Vacationers and lodging guests within the Monongahela National Forest or within 15 miles.
- The 20-odd million people who live and toil in the Baltimore, Washington and Richmond corridor; in Pittsburg, Columbus and Cincinnati Metropolitan Areas; and who may only envision the beauty, peace and tranquility of the National Forests.

v. Conduct Field Reconnaissance:

- Conduct an on-the-ground field reconnaissance within the survey corridor and beyond both left and right for no less than five miles that locates all places or positions affording a good view of the pipeline and right-of-way.
- Develop topographic view-shed models and enfilade perspectives from all pipeline vantage points to determine what aspects of the pipeline and its right-of-way will be actually seen by citizens and visitors.

vi. Illustrative Pipeline Vantage Points:

- Planning Note: Pipeline vantage points must be considered in both summer with full foliage and in winter without deciduous leaves.
- Vantage points where the pipeline right-of-way will cross U.S. Highways located with GPS receivers capable of obtaining sub-meter accurate positions.
- Points where the pipeline right-of-way will cross West Virginia state and county routes similarly located.
- Vantage points where the pipeline right-of-way will cross Forest Service or West Virginia hiking, bicycling or horseback riding trails.
- Points within Civil War Battlefields or encampments from which the pipeline right-of-way may be seen.
- Vantage points where the pipeline right-of-way will cross U.S. Forest Service roads.

(d) Collaboration with Federal and State Agencies:

i. Planning Note: Federal, state and local departments are listed below, however, there are several non- or not-for-profit organizations that should be consulted, including: the Laurel Mountain Preservation Association, Friends of Blackwater, West Virginia Rivers Coalition, Eight Rivers Council, and West Virginia Highlands Conservancy.

ii. U.S. Forest Service, Washington Office, Director of Recreation, Heritage, and Wilderness Resources Management

(e) Qualifications of Field Survey Personnel:

i. The Forest Supervisor has the responsibility to ensure that Forest and District personnel, including, but not limited to, ecologists, wildlife biologists, silviculturists, recreation planners and managers, landscape architects, timber sale planners and administrators, engineers, land management planners, special use authorization administrators, and range specialists, have an appropriate awareness and understanding of laws, regulations, and direction related to the management of landscape aesthetics and scenery.

ii. A licensed and professional Landscape Architect, trained and certified in conducting visual/aesthetic environmental impact assessments at the forest, watershed and scenic view levels with eight years of experience.

(f) Relevant Scientific and Technical Literature:

i. Larry W. Canter, Environmental Impact Assessment (New York, New York: McGraw-Hill, 1996), 600 pages.

ii. FERC Office of Energy Projects, Guidance Manual for Environmental Report Preparation (Washington, DC: Federal Energy Regulatory Commission, 2002), 150 pages.

iii. Forest Service, Landscape Aesthetics: A Handbook for Scenery Management (Washington, DC: U.S. Department of Agriculture, Forest Service, Handbook No. 701, 1995), 104 pages.

iv. Forest Service, Appendix B – The Visual Modification Class Approach to Assessing Impacts on Aesthetics/Visual Resources (Lawrence Headley & Associates).

v. Forest Service, Forest Service Manual -- Recreation, Wilderness, and Related Resource Management, Chapter 2380 - Landscape Management (Washington, DC: USDA Forest Service, FSM 2300, May 2, 2003), 15 pages.

NOW THEREFORE: This citizen of the Cowpasture River valley does hereby petition the U.S. Forest Service and respectfully requests that the Forest Supervisor for the Monongahela National Forest establish conditions for issuing a “Special Use Authorization” and more specifically, that the Atlantic Coast

Pipeline, LLC shall amend its application and survey methodology to include comprehensive inventories of four essential environmental factors, including: (1) losing streams, caves; (2) surface and ground water resources; (3) rugged mountainous terrain; and (4) landscape aesthetics and scenery, as further enumerated above.

In summary, forest management practices exert a major influence over the quality of life enjoyed by citizens and landowners in close proximity to our National Forests and over citizens who live far away, including: those who may never visit the National Forest itself. Theodore Roosevelt more than 100 years ago advised us hence, *"Here is your country. Cherish these natural wonders, cherish the natural resources, cherish the history and romance as a sacred heritage, for your children and your children's children. Do not let selfish men or greedy interests skin your country of its beauty, its riches or its romance."*

Lizzie and I offer the above recommendations in the spirit of collaboration for your consideration and we thank you for this opportunity to provide public comments into the scoping process of the Monongahela National Forest.

With warm regards,

C. Nelson Hoy, Forester & Rancher
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