

STATE OF NEW HAMPSHIRE
BEFORE THE ENERGY FACILITY SITE EVALUATION COMMITTEE

Docket No. 08-_____

Application of Tennessee Gas Pipeline Company for a Certificate of Site and Facility

TESTIMONY OF CHARLES MALCOLM ON BEHALF OF
TENNESSEE GAS PIPELINE COMPANY

1 **Q. Please state your name, title and business address for the record.**

2 A. My name is Charles Malcolm. I am a Project Manager in the Engineering
3 Department for Tennessee Gas Pipeline Company. My business address is 1001 Louisiana St.,
4 Houston, Texas 77002.

5 **Q. Would you briefly summarize your educational background and**
6 **employment experience in the natural gas industry.**

7 A. I graduated from The University of Texas at Arlington with a Bachelor of Science
8 in Mechanical Engineering. I am a Licensed Professional Engineer in the State of Texas.
9 I am a Project Manager in the Engineering Department for Tennessee Gas Pipeline Company, an
10 El Paso Corporation subsidiary. In that role, I am responsible for managing capital projects
11 including capital expansion projects for compression and operation and maintenance capital
12 projects for pipelines, compressor stations and storage facilities. Prior to this position, I worked
13 in the automation group for Tennessee, and previously performed automation work for several

1 pipeline companies. Prior to my work for Tennessee, I also worked for Lone Star Gas Company
2 in their Compressor Design Group, Plant Design Group, and System Planning Group.

3 **Q. In what capacity are you testifying today?**

4 A. I am here today to represent the Applicant, Tennessee Gas Pipeline Company
5 (“Tennessee”) before the Energy Facility Site Evaluation Committee (“EFSEC” or
6 “Committee”).

7 **Q. Please summarize the purpose of your testimony before the Committee**
8 **today.**

9 A. The purpose of my testimony is to explain why the construction of a “Compressor
10 Station” in Pelham and improvements to an existing “Metering Station” in Concord (“the
11 Project”) will not unduly interfere with the orderly development of the region and why it will not
12 have an unreasonable adverse effect on aesthetics, historic sites, air and water quality, the natural
13 environment, and public health and safety.

14 **Q. Please explain why the Project will not unduly interfere with the orderly**
15 **development of the region?**

16 A. The Compressor station will be constructed within an existing industrial area in
17 Pelham known as the Pelham Industrial Park, on an eleven acre tract that is owned by Tennessee.
18 The new compressor station will increase the capacity of natural gas to the region by 30,000
19 Dth/d. The additional capacity will increase the availability of natural gas, which is widely
20 recognized as a desirable replacement for less efficient and dirtier coal and fuel oil. The
21 additional gas supply will result in direct benefits to the region in future growth developments
22 and at the least cost to New Hampshire consumers. Construction of the Project will accomplish

1 these goals with minimal impact to the environment and without imposing any significant
2 burden upon municipal support services.

3 Planning and construction of the Project is also consistent with local and regional zoning
4 and development planning. Tennessee has reviewed all the relevant municipal zoning
5 ordinances for Concord and Pelham to ensure construction of the facilities will be consistent
6 with orderly regional development. The Compressor Station is located entirely within the
7 municipal limits of the Town of Pelham, which has been consulted to identify any proposed
8 future development within a quarter mile radius of the Project.

9 **Q. What steps has Tennessee taken to ensure that due consideration is given to**
10 **the views of municipal and regional planning commissions and municipal governing**
11 **bodies?**

12 A. Tennessee is committed to providing opportunities for both municipalities and
13 affected landowners to communicate concerns and issues regarding the Project. As part of the
14 design and planning phases of the Project, Tennessee met with town officials from Pelham on
15 December 28, 2007, and with town officials from Windham on January 22, 2008. The primary
16 purpose of each of these meetings was to present an overview of the Project to municipal
17 officials, answer questions, and solicit comments.

18 **Q. Please explain why the Project will not have an unreasonable adverse effect**
19 **on aesthetics?**

20 A. Visual impacts due to the construction and operation of the Compressor Station
21 are not expected to be significant because of its location within an existing industrial park. The
22 surrounding properties include Williams Scotsman (mobile office and portable buildings) to the
23 west and a multi-tenant warehouse building to the south. A retirement community is located

1 across Beaver Brook to the north; trees along Beaver Brook will be preserved to the extent
2 practicable to provide visual and sound buffers to the development. Tennessee is planning to
3 design the exterior lighting for the Compressor Station to be as non-intrusive as practicable and
4 to minimize illumination of the night sky. No residences or buildings are located in or within
5 fifty feet of the proposed workspace at the Project site.

6 The land necessary for construction of the Compressor Station is approximately 6.8
7 acres, which consists of 2.6 acres of temporary workspace and 4.2 acres for operation of the
8 facility. Approximately 4.8 acres of the 11.6-acre parcel will be utilized as a buffer and visual
9 screen both during and after construction. This acreage will not be affected by either the
10 construction or operation of the facility.

11 Tennessee will construct a private, paved station roadway to provide access to the
12 Compressor Station. No temporary access roads will be needed for construction. The access
13 road will be approximately fifteen feet in width. The access road will be located within the 4.2-
14 acre area designated for permanent disturbance for operation of the Compressor Station.

15 The land requirement for the modifications to the existing Meter Station is approximately
16 0.80 acres and is entirely located within an existing disturbed, industrial area. Approximately
17 0.50 acres will be used for operation of the modified piping and is located within the boundaries
18 of the existing meter station. The remaining 0.30 acres is located directly south of the meter
19 station and will be used as temporary workspace only. No modification of existing land use will
20 occur because of the Meter Station piping modifications.

21 **Q. Please explain why the Project will not have an unreasonable adverse effect**
22 **on historic sites?**

1 A. Because the Project requires a FERC Certificate of Public Convenience and
2 Necessity under Section 7(c) of the Natural Gas Act, it is being reviewed under Section 106 of
3 the National Historic Preservation Act (“NHPA”) of 1966, as amended. Prior to authorizing an
4 undertaking, (e.g., the issuance of a FERC approval or Certificate), Section 106 of the NHPA
5 requires federal agencies, including FERC, to take into account the effect that an undertaking has
6 on cultural resources listed or eligible for listing in the National Register of Historic Places
7 (“National Register”) (36 CFR Part 60). The agency must also afford the Advisory Council on
8 Historic Preservation (“ACHP”) the opportunity to comment on the undertaking. The Section
9 106 process is coordinated at the state level by the State Historic Preservation Office (“SHPO”),
10 represented by the New Hampshire Division of Historical Resources (“DHR”). The issuance of
11 a federal agency Certificate or approval depends, in part, on obtaining comments from the NH
12 SHPO.

13 Tennessee’s cultural resource consultants, Public Archaeology Laboratory (“PAL”),
14 initiated Section 106 consultation with NH SHPO on August 8, 2007, with a letter presenting the
15 results of an identification survey that was conducted, for review and comment. The
16 identification survey included review of NH SHPO’s files, a walkover survey of the Project area,
17 and excavation of a total of 120 test pits. The identification survey yielded no potentially
18 significant archaeological sites or aboveground resources.

19 On September 4, 2007, the NH SHPO concurred that no significant archaeological
20 resources were identified within the boundaries of the Compressor Station Project area.
21 Additionally, on December 18, 2007, a letter was submitted to the NH SHPO recommending that
22 the Meter Station portion of the Project will have no effect on historic properties. Confirmation

1 from NH SHPO has not yet been obtained but is anticipated because the Metering Station
2 modifications are located entirely within a previously disturbed industrial area.

3 **Q. Please explain why the Project will not have an unreasonable adverse effect**
4 **on air quality?**

5 A. The primary source of air emissions will be a new Solar Centaur compressor
6 turbine, which is equipped with a SoLoNOx™ combustion system to control emissions of NOx.
7 The compressor is rated at 6,130 hp. The turbine will be exclusively fueled by natural gas.
8 Other sources of air emissions at the facility will include a gas-fired emergency generator, a gas-
9 fired fuel gas heater rated at no more than 1.5 MMBtu/hour heat input, gas-fired space heaters
10 rated at a total of no more than 1.5 MMBtu/hr heat input, and a gas-fired water heater rated at no
11 more than 1.0 MMBtu/hr heat input.

12 The turbine is subject to both New Hampshire Department of Environmental Services
13 (“NHDES”) regulations for Reasonably Available Control Technology (“RACT”)—Env-A
14 1211.06(d)—and Federal New Source Performance Standards (“NSPS”) for turbines (40 CFR
15 60, Subpart KKKK). Both regulations require that the turbine’s NOx emissions be no higher
16 than 25 ppmvd @ 15% O₂. The vendor of the turbine (Solar Turbines) guarantees that the turbine
17 will meet this requirement. The NSPS also require that the turbine use a low-sulfur fuel.
18 Pipeline natural gas meets this criteria. On December 22, 2007, EPA promulgated NSPS
19 Subpart JJJJ regulation, which would apply to the emergency generator. Tennessee has not made
20 the final equipment selection; however, Tennessee will comply with the applicable emissions
21 standards as appropriate. The emergency generator is exempt from New Hampshire NO_x RACT
22 requirements per Env-A 1211.01(j).

1 Potential air quality impacts were evaluated with dispersion modeling to determine
2 compliance with National Ambient Air Quality Standards (“NAAQS”). The EPA and NHDES-
3 recommended AERMOD model was used to predict maximum potential ground level
4 concentrations that may result from facility emissions. Maximum concentrations are less than
5 Significant Impact Levels for all pollutants and averaging periods. Therefore, concentrations are
6 insignificant relative to the NAAQS, and compliance is demonstrated.

7 The natural gas-fired sources are clean-burning and will meet both the opacity and
8 particulate matter emissions standards. Because the facility’s potential to emit is less than fifty
9 tons per year for all criteria air pollutants and less than ten tons per year for Hazardous Air
10 Pollutants, the facility will not be a “major source” with respect to regulations for Nonattainment
11 New Source Review, Prevention of Significant Deterioration, and Title V Operating Permits.

12 **Q. Please explain why the Project will not have an unreasonable adverse effect**
13 **on water quality?**

14 A. Tennessee will follow its Spill Prevention, Control and Countermeasure and the
15 FERC’s Plan and Procedures (2003) to ensure that the installation, operation, and maintenance
16 of the Compressor Station and modifications at the Meter Station do not adversely affect
17 groundwater. There are no private water wells within 250 feet of any designated workspace
18 areas at the Compressor Station, and there are no public or private water supplies within 250 feet
19 of NHDES Wellhead Protection Area within the vicinity of the Laconia Meter Station

20 The Compressor Station and the Meter Station sites are not located over a primary,
21 principal, or sole source aquifer as mapped by the U.S. Environmental Protection Agency
22 (“USEPA”). The Pelham-Brook Aquifer, located along Beaver Brook south of the Project site,
23 has been identified by the Nashua Regional Planning Commission as the only potential source

1 aquifer for the Town of Pelham. Correspondence from the USEPA stated that the Project will
2 not adversely affect any aquifer resources.

3 There is an existing water distribution line and associated easement located adjacent to
4 Tennessee's existing pipeline right-of-way. Tennessee will coordinate with the applicable
5 municipal agency prior to construction to ensure that the water distribution line is adequately
6 identified in the field and protected during construction of the Compressor Station. Tennessee
7 does not anticipate any impacts to the water line associated with construction or operation of the
8 Project.

9 **Q. Please explain why the Project will not have an unreasonable adverse effect**
10 **on the natural environment?**

11 **A. I. Fish.**

12 The Project area is not located within 0.25-mile of the Federal Wild, Scenic, and
13 Recreational River System. Construction at the Compressor Station and the modifications to the
14 Meter Station will not cross or directly impact any water-bodies and, therefore, will not affect
15 any fisheries, fisheries of special concern, or significant fish habitats such as spawning or rearing
16 areas, or federally-listed essential fish habitat.

17 **II. Wildlife.**

18 The wildlife populations that utilize the Project sites will not be permanently adversely
19 affected by the Project. While temporary impacts upon food, cover and water sources may
20 occur, none of the species located within the Project sites are specialized in such a way that
21 construction of the Compressor Station and modification to the Meter Station will inhibit the
22 overall fitness or reproductive output of the populations as a whole. Wetland buffer zones along
23 the riparian corridor of Beaver Brook will remain undisturbed, and human activity in the

1 Compressor Station site's upland forest habitat will be infrequent post-construction. Many of the
2 mammal, bird, reptile, and amphibian species are adaptive to changing habitat conditions and
3 possess the capability to expand or shift their home ranges to find alternative sources of food,
4 water, and shelter until construction is complete and temporary workspace areas become re-
5 established.

6 Tennessee and its contractors will strive to minimize impacts to wildlife by expediting
7 construction to the greatest extent practicable. Restoration of temporary workspace will occur
8 immediately after construction has been completed, and the areas of impact will be monitored
9 until final site stabilization is achieved.

10 **III. Wetlands and Vegetation.**

11 The Project will not impact wetland areas present within the Compressor Station
12 property. A construction setback of no less than fifty feet will be maintained. Tennessee will
13 install erosion control barriers, stabilize exposed soils and restore temporary workspace areas to
14 protect nearby wetland areas from on-site activities and related soil disturbances.

15 In areas where workspace or permanent construction within forested areas is
16 unavoidable, these areas will be cleared, and standard erosion control/cover species will be
17 planted after construction is completed. Temporary workspace that was identified as forest
18 during field surveys will be allowed to revert to forest. Areas that are already vegetated with
19 grasses or early successional species will be restored after construction has been completed. The
20 operation and maintenance of the Compressor Station is expected to have little additional impact
21 after site clearing and restoration is completed.

22 **Q. Please explain why the Project will not have an unreasonable adverse effect**
23 **on public health and safety?**

1 A. Tennessee is designing the Compressor Station with noise-reduction technology
2 and maintaining existing vegetative buffers around the work areas to ensure residences are not
3 disrupted by the construction and operation of the Compressor Station. A noise impact
4 assessment was conducted to determine the likelihood of the Project complying with applicable
5 regulatory environmental noise limits. When compared to the measured existing sound levels,
6 the future sound levels, which take into account the potential noise impacts of the Project, are
7 expected to fully comply with regulatory limits.

8 Tennessee will operate and maintain the proposed facilities in accordance with the applicable
9 safety standards established by the DOT [49 Code of Federal Regulations (“C.F.R.”) Part 192]. The
10 standards imposed are in accordance with the Natural Gas Pipeline Safety Act of 1968, as amended.
11 Regularly scheduled maintenance will ensure that the proposed Project facilities meet standard service
12 requirements. Standard Tennessee operations at existing stations include activities such as calibration,
13 maintenance and inspection of equipment, as well as the monitoring of pressure, temperature, and
14 vibration data, and traditional landscape maintenance such as mowing and application of fertilizer, etc.
15 Standard Tennessee operations currently also include the periodic checking of safety and emergency
16 equipment and cathodic protection systems. Project facilities will be marked and identified in accordance
17 with applicable regulations. Overall, maintenance activities will be in compliance with requirements of
18 the Commission’s (2003) Plan as well as other applicable regulatory requirements.

19 **Q. What testing will take place before the Project is brought into service?**

20 A. Prior to placing the station in-service, Tennessee proposes to conduct pressure
21 testing of the piping system in accordance with applicable codes. Before the new Compressor
22 Station is put into service, Tennessee proposes to develop and implement a station
23 commissioning plan. Tennessee anticipates that the plan would include the checking and testing
24 of controls and safety features including the emergency shutdown system, relief valves, gas and

1 fire detection facilities, over-speed, vibration, and other on- and off-engine protection and safety
2 devices.

3 **Q. Does this conclude your pre-filed testimony?**

4 A. Yes, but I would be happy to answer questions from members of the Committee,
5 Committee Counsel, or members of the public.

Dated: April 21, 2008

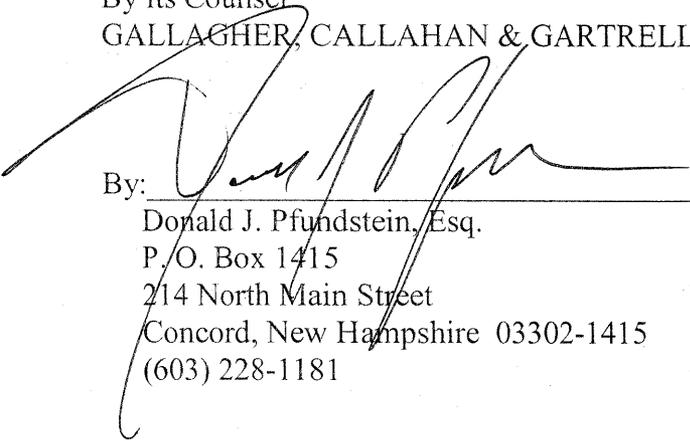
Charles Malcolm
Charles Malcolm
Project Manager, Engineering Department
Tennessee Gas Pipeline Company

Certification of Service

I hereby certify that a copy of the foregoing was this date forwarded via hand delivery or U.S. first class mail, postage prepaid, to the Site Evaluation Committee service list, Attorney General as Counsel for the Public, Town of Pelham Board of Selectmen and Concord City Council.

TENNESSEE GAS PIPELINE COMPANY
By Its Counsel
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9/22/18

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