

**TENNESSEE GAS PIPELINE COMPANY**

**300 LINE PROJECT**

**WINTER STABILAZATION PLAN**

**DOCKET NO. CP09-444-000**

**October 2011**

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## 1.0 OVERVIEW

On May 14, 2010, the Federal Energy Regulatory Commission (Commission) issued its "Order Issuing Certificate" in Docket No. CP09-444-000, for Tennessee Gas Pipeline Company's (Tennessee) 300 Line Project (Project). Following submission and Commission approval of the Project's Implementation Plan and pursuant to notices to proceed issued by the Commission, Tennessee commenced construction of certain Project compression station facilities beginning in June 2010 and of certain Project pipeline looping facilities beginning in October 2010. Tennessee anticipates that construction of the Project's pipeline looping facilities will be completed in late October 2011 in order to meet the anticipated in-service date of November 1, 2011. Crews will continue cleanup and/or restoration efforts as long as conditions are favorable for such activities.

Due to the above average amounts of rain encountered in August and September and the approaching colder weather, the ground conditions in some areas are such that it may become no longer practical or environmentally responsible for Tennessee to attempt to continue final cleanup and/or restoration activities. Tennessee has prepared this Winterization Plan (Plan) in order to address the final cleanup and/or restoration portions of the Project in which final restoration will not be achieved. Tennessee will implement the Plan as needed taking into consideration timing restrictions associated with T&E species) and as soil conditions dictate, as discussed further herein. In all instances, the implementation of this Plan will be balanced with worker safety considerations.

To maintain the environmental objectives of the Project as set forth in the Commission certificate order, permits, and the Project Environmental Construction Plans for New Jersey and Pennsylvania (ECPs), Tennessee will implement the following measures and procedures to temporarily stabilize the right-of-way (ROW) and other disturbed areas in lieu of performing final cleanup and restoration prior to the commencement of the Winterization period. These measures and procedures include how these areas will be monitored until weather and soil conditions are favorable to conduct final cleanup and restoration to be implemented as required by the approved ECPs. Tennessee anticipates final cleanup and restoration activities pursuant to the ECPs will resume as soon as practicable in 2012, anticipated to be approximately mid-April.

The Winterization will be implemented when the first of the following conditions occur:

- In areas where the Environmental Inspection (EI) team determines that soil conditions are unfavorable for achieving final grade contours or crews are unable to construct proper permanent slope breakers.
- Topsoil stockpiles are frozen or the temporary work area is not suitable (*i.e.* saturated) and topsoil cannot be uniformly redistributed across disturbed areas.

Tennessee will continue to file the weekly updated Restoration Status Tables with the Commission and once winter stabilization is achieved, Tennessee will provide the Commission a list of specific locations where Winterization has already been implemented and will be implemented on October 26, 2011. In addition, once the Winterization Plan has been implemented, Tennessee will provide the Commission a detailed "punch list" of maintenance type items that will be addressed during the winter, as well as in the spring once restoration activities resume. A contractor will be available during the Winterization period to address erosion issues and landowner concerns that may arise.

If necessary, Tennessee will amend this Plan to accommodate unforeseen conditions or circumstances encountered. Tennessee will obtain appropriate approval(s), including Commission approval, before any amendments to the Plan are implemented.

## 2.0 ENVIRONMENTAL MANAGEMENT

Tennessee is committed to executing this Plan and performing the construction of the entire Project to ensure (i) environmental protection and the safety of workers and the public, and (ii) compliance with all conditions of the Commission certificate order and other permits and clearances. Tennessee will reinforce these commitments through implementation of inspection and reporting procedures as summarized below.

At least one EI will be assigned to each Construction Spread of the Project (1 through 4) to monitor the ROW for erosion, the continued effectiveness of erosion and sediment control measures, and compliance with other permit conditions and plans. The EI will be fully supported by Tennessee management. Additional personnel will be identified and the contact information provided in Table 1 as necessary. The EI will coordinate with the agencies, as necessary, regarding spring cleanup and/or restoration activities.

**Table 1  
Winter Contact Information**

<b>Name</b>	<b>Role</b>	<b>Location</b>	<b>Contact Number</b>
Jamie Ledbetter	Construction Manager	Dickson City, PA	713.829.3149
Mark Hamarich	Project Manager	Houston, TX	713.819.7033
Stephen Weems	Project Manager – Land, Environment, and Outreach	Birmingham, AL	205.937.5674
Sam Lamendola	Chief Environmental Inspector	Honesdale, PA	570.994.2630
Jason Blackwell	Environmental Inspector	Towanda, PA- Spread 1	828.989.5546
Joe Kienzle	Environmental Inspector	Honesdale, PA-Spread 2	715.816.4313
Rob Robertson	Environmental Inspector	West Milford, NJ- Spread 3	601.940.4536
Rick Crippen	Environmental Inspector	Coudersport, PA- Spread 4	607.368.2152
Rob Wooten	Property Rights	Spreads 1 - 4	281.782.7911

## 3.0 LANDOWNER COMMUNICATION

In areas in which final restoration has not been completed (area that have been Winterized) and areas with specific landowner arrangements, Tennessee will begin to contact and notify affected landowners immediately regarding the conditions and proposed action of this Plan. The landowners will be provided:

- A copy of the “Winterization Plan” (once approved).
- An explanation of why the Winterization Plan is being implemented.
- A description of the temporary stabilization measures to be implemented and that winter stabilization measures will not interfere with their day-to-day activities/travel on their property.
- Company personnel (including phone numbers) to contact with questions or problems.
- When restoration activities will most likely resume.

Tennessee’s Land Agents will coordinate with affected landowners, as necessary, regarding spring cleanup and/restoration activities. A summary Table of landowner concerns will be included in the weekly reports submitted to the Commission.

## 4.0 SNOW MANAGEMENT

Although not anticipated to be needed, the following will be implemented after significant snow events are followed by an extended period of freeze. If a snow event is followed immediately by a period of melting, normal project procedures for handling soil or erosion control will still be in effect.

If used, snow removal equipment will remain in the approved construction work area. Snow would typically be graded off the access roads with a motorgrader, snowplow, or dozer. Snow will not be plowed down to the road bed to minimize mixing soils with snow. Equipment tracks may not leave the approved work area. Gaps in the windrowed snow will be left at drainage crossings and as requested by the landowner. Snow will be removed from topsoil or spoil storage areas prior to using.

## **5.0 SITE GRADING WORK PROCEDURES**

The following procedures will be implemented during earthmoving activities:

- In areas where the EI team determines that soil conditions are favorable, the contractor will continue with final cleanup and/or restoration activities.
- In areas where the EI team determines that soil conditions are unfavorable for achieving final grade contours, final grading will be limited. At a minimum, grading and environmental crews will provide positive drainage across the ROW and implement effective long-term soil stabilization measures (such as erosion control devices, mulch, and temporary seeding).
- Where topsoil or spoil stockpiles remain in place during the winter, openings in the topsoil or spoil pile at drainage crossings will be present to allow runoff and snowmelt to be diverted off the work area and minimize interference with runoff.
- There will be no open trench, bell-holes, or similar left over winter.
- Tennessee will remove all filter bags and dewatering structure components located off-ROW prior to freeze-up or snow covering them.
- Since topsoil replacement and/or revegetation activities are not scheduled to occur during frozen topsoil conditions, normal temporary stabilization procedures will be applied as ground conditions permit. The work area will be left in a significantly roughened condition to reduce potential for erosion during snowmelt until final cleanup and restoration efforts are completed.
- Tennessee will work with landowners to accommodate necessary use of their property or travel on the ROW that may be affected by snow drifts directly related to the implementation of the Winterization Plan such as spoil/topsoil piles that have been left.

## **6.0 TEMPORARY AND PERMANENT EROSION CONTROL PROCEDURES**

The following temporary and permanent erosion control and stabilization procedures will be implemented in accordance with the approved Project ECPs. Additional Best Management Practices may be required due to specific site conditions and will be installed at the discretion of the EIs. Tennessee will closely monitor erosion control structures and stabilization efforts during snow-melt periods. Tennessee is committed to ensure that all erosion controls are operational for the duration of winter and to withstand spring thaw and snowmelt periods.

- All erosion control devices (such as slope breakers, sediment traps, straw bales, and silt fences) will be repaired and properly maintained until Project completion. Special measures (including using sand bags, coir logs, and/or compost filter socks) may need to be taken to repair/maintain ECDs during periods of frozen soils.
- Final grade and restoration of ROW contours would continue until the ground becomes too wet or frozen to successfully restore grade to the ROW, as determined by the EI team and/or Construction Manager. In the areas where final grade contours are not able to be achieved, the areas will be graded to provide positive

drainage, and stabilized as best as practicable prior to the commencement of the winter construction period until conditions allow for the final grading to be achieved.

- In sections of ROW where topsoil segregation was completed, the topsoil piles would be left in their stabilized condition and replaced in the spring when the weather conditions permit the proper decompaction of the areas. The exposed subsoil would be seeded with a winter seed and mulched to minimize erosion-related problems. The mulch should be in good condition and care taken to avoid utilizing any mulch containing noxious weed seed.
- In all Project areas, as the condition of the ROW permits, all temporary and/or permanent slope breakers would be installed consistent with the approved erosion control plans and Commission and other agency requirements, and in any other locations where the EI staff and/or Tennessee believes that slope breakers would be necessary. The contractor would be responsible for ensuring the slope breakers are of sufficient size and outflow angle to successfully transport run-off into sediment traps (temporary slope breakers) off-ROW, or into straw bale or silt fence “J-Hooks” located at the ends of the breakers.
- All areas will be seeded with 50 pounds per acre of an annual winter seed. At the contractor’s discretion, application of the final seed mix (in addition to the annual seed) would continue, provided that in the event the final seed mix does not germinate in the spring, over seeding of these areas of insufficient germination will be completed.
- All disturbed Project areas will be mulched at a rate of 3 tons per acre. .
- Timber mats may be left in the wetlands to allow for travel during final restoration activities. Mats will be removed from areas prone to flooding so they do not float off-ROW during spring flooding.
- The contractor will remove equipment bridges and if necessary, leave enough bridge mats at each location to allow for the installation of an equipment bridge adequate to allow crossing of equipment and vehicle traffic needed for final cleanup and restoration. Stream banks will be restored and stabilized in accordance with the ECPs following the removal of equipment bridges.
- The contractor will leave access pads and temporary fence gaps in place. The removal of the access pads and the installation of permanent fencing will be performed as part of final restoration activities.

## **7.0 POST-CONSTRUCTION WINTER MONITORING**

Once the proposed cleanup, restoration, and Winterization activities have been completed for 2011, Tennessee will continue to maintain the appropriate erosion and sedimentation controls as needed during the winter period. Tennessee representatives, as identified above, will be available during this time to address erosion issues and landowner concerns that may arise.

During the anticipated winter shutdown, Tennessee will inspect the ROW on a regular basis (minimum of bi-weekly) and identify where erosion control measures are damaged or are ineffective, and where corrective measures need to be taken when conditions allow. The extent of inspections will be based on precipitation events, runoff amounts, and thawing. Where frozen conditions persist for long periods of time, regular inspections may not be necessary. When snow melts or the ground thaws, the potential for erosion increases and the frequency of inspections would increase.

The inspections will pay particular attention to Winterized areas, environmentally sensitive areas such as steep slopes, wetlands and waterbodies, road crossings, and residential areas. These inspections will identify:

- Erosion control structures requiring maintenance and/or repair.
- Areas of slope instability.
- Areas where significant levels of erosion are occurring.
- Revegetation success.

The EI and Construction Manager will determine the most effective means of dealing with identified problems, taking into consideration the suitability of the construction work area for access by equipment, potential damage that could occur by equipment accessing the construction work area, and the urgency/significance of the problem. Corrective actions may be deferred until spring where no sensitive resources would be impacted, where access is not feasible, or where damage from accessing the site would outweigh the benefits of correcting the issue during the winter.

## **8.0 FINAL CLEANUP, RESTORATION, AND REVEGETATION**

Final cleanup, restoration, and revegetation activities will occur as soon as practicable in 2012 (anticipated to be approximately mid-April) and will be completed in accordance with the approved Project ECPs. Tennessee will notify the Commission and the appropriate agencies prior to the initiation of the final cleanup, restoration, and revegetation activities.