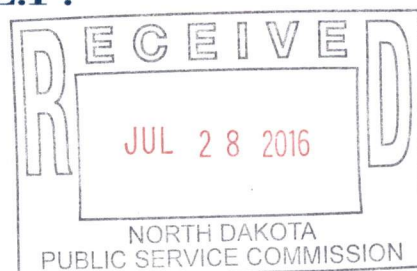


PLAINS
ALL AMERICAN
PIPELINE, L.P.



July 28, 2016

Mr. Darrell Nitschke
North Dakota Public Service Commission
600 E. Boulevard, Dept. 408
Bismark, ND 58505

RE: ND PSC Case No. PU-12-40 – Nelson Takeoff to Ross Pipeline
Submittal of Tree and Shrub Survival Report

Dear Mr. Nitschke,

Enclosed you will find our first tree and shrub survival report associated with the Nelson Takeoff to Ross Pipeline in Mountrail County, ND. Replanting occurred in the fall of 2014 and the spring of 2015. We plan to follow-up this spring survey with a second survey later this year. A second report will come to you prior to the October 1, 2016 deadline.

We understand that Mr. Patrick Fahn is the individual assigned to this particular project, and we did speak with him last week to let him know this report would be forthcoming. If you could please pass this along to him, we would certainly appreciate it.

If there are any questions regarding this report, you can reach me at 713-993-5096 or via email at cehoward@paalp.com.

Regards,

Carol E. Howard
Environmental Permitting & Compliance Specialist

157 PU-12-40 Filed: 7/28/2016 Pages: 7
Tree and Shrub Survival Report

Plains Pipeline, L.P.

Carol Howard

Tree and Shrub Survival Report

**Nelson Takeoff to Ross Pipeline Project
Mountrail County, North Dakota**



Prepared by
Plains All American Pipeline, L.P.
333 Clay Street, Suite 1600
Houston, Texas 77002

ND PSC Case Number: PU-12-40

July 28, 2016

Table of Contents

1	Introduction	1
1.1	Background	1
2	Survival Survey	1
2.1	Survival Requirements	1
2.2	Planting	1
2.3	Annual Precipitation	1
2.4	Spring 2016 Survey Results	2

List of Tables

Table 1: Monthly Recorded Rainfall at National Weather Service Station in Williston, ND

Appendices

Appendix A Tree Mitigation Plan

1 Introduction

1.1 Background

Plains All American Pipeline, L.P. (Plains) completed construction of the Nelson to Ross Pipeline (NRP) in 2015. The NRP is a new 16.89-mile, 10.75-inch outside-diameter crude oil pipeline that originates from a piping connection near Stanley, North Dakota and terminates at Plains' Ross Rail Terminal near Ross, North Dakota. The Project is located entirely within Mountrail County, North Dakota. Its construction required the removal of trees and shrubs within the Project right-of-way. The Project is under the jurisdiction of the North Dakota Public Service Commission (ND PSC).

A Tree/Shrub Replacement Plan was submitted in November 2014 which discussed the approach that Plains took and the ND PSC approved to mitigate tree and shrub removal. The plan was approved in December 2014 and implemented in the fall of 2014 and spring of 2015. This survival report documents the number of trees and shrubs surviving in 2015 and Spring 2016. This is the first of 3 years of survival monitoring. The second survival monitoring will occur in the Fall 2016 and the third and final monitoring will cover the Spring and Fall 2017.

2 Survival Survey

2.1 Survival Requirements

Many of the trees and shrubs identified during the pre-construction inventory were avoided, due to the several bores and neck downs along the pipeline route. Approximately 16 trees and shrubs were removed during construction; therefore, the total number to be replaced was a minimum of 32 trees based on the 2:1 replacement requirement. Survival requirements will be based on the 32 required replacements.

At the end of 3 years of monitoring (2017), 75% of the trees, or 24, are required to have survived to meet the obligations set by the ND PSC.

2.2 Planting

Three landowners within the Project area had trees impacted during construction. Trees were replanted at five different locations on the subsequent owner's properties. In total, 32 trees were replanted which fulfilled the 2:1 mitigation requirement (Appendix A).

2.3 Annual Precipitation

According to National Weather Service preliminary climatological data for Williston, North Dakota (approximately 60 miles west of the project area), 17.11 inches of precipitation were recorded from January 1, 2015 through May 30, 2016 (Table 1). This amount is 1.87 inches below average for this time period, suggesting that weather conditions were slightly dry for tree growth.

Table 1: Monthly Recorded Rainfall at National Weather Service Station in Williston, ND

Month	Recorded Precipitation (inches)	Normal Precipitation (inches)	Difference (inches)
January-15	0.48	0.59	-0.11
Feb-15	0.46	0.39	0.07
March-15	0.47	0.71	-0.24
Apr-15	0.27	1.00	-0.73
May-15	1.82	1.92	-0.10
Jun-15	1.90	2.52	-0.62
July-15	1.55	2.54	-0.99
Aug-15	0.89	1.45	-0.56
September-15	2.22	1.06	1.16
Oct-15	1.07	0.92	0.15
November-15	0.36	0.65	-0.29
Dec-15	0.55	0.62	-0.07
January-16	0.38	0.59	-0.21
Feb-16	0.75	0.39	0.36
March-16	0.18	0.71	-0.53
Apr-16	1.95	1.00	0.95
May-16	1.81	1.92	-0.11
Total	17.11	18.98	-1.87

Source: National Oceanic and Atmospheric Administration

2.4 Spring 2016 Survey Results

The plantings for each landowner were revisited in May 2016. Replanted trees were in generally good condition. Trees or shrubs which had any portion of living plant material were considered alive. Deciduous trees that had lost their foliage were considered alive if they appeared healthy and had stems that did not break easily when bending. Of the 32 trees that were replanted in the fall of 2014 and spring of 2015, 30 were alive during the May survey (Appendix A). The current survival rate is above the required 75% (24 trees) at 93.75%.

Appendix A

Tree Mitigation Plan

**Plains All-American Pipeline, LLC Nelson Takeoff to Ross Pipeline Tree Mitigation Plan
Case No. PU-12-40**

Landowner	Location (Station #)	Species Removed	Number Removed	Species Replanted	Number Replanted	Location Replanted	1st Year Survival	2nd Year Survival	3rd Year Survival
Thompson/Milford & Springer - Thompson/June	306+00	American elm (<i>Ulmus americana</i>)	4	Ponderosa pine (<i>Pinus ponderosa</i>)	8	Removal site	8		
Thompson/Milford & Springer - Thompson/June	312+00	American elm	6	Ponderosa pine	12	Removal site	10		
Thompson/Milford & Springer - Thompson/June	319+00	American elm	1	Ponderosa pine	2	Removal site	2		
Trulson/Curtis & Leslie	496+00	Downy hawthorne (<i>Crateagus mollis</i>)	4	Ponderosa pine	8	Removal site	8		
Nelson Hubbard Properties LLLP & Carolle Grisham Trust	161+50	Unknown	1	Ponderosa pine	2	Removal site	2		
Total			16	Total		32			