

Plains Pipeline, LP

Highway 1804 Pipeline
Re-Route North Project
10" Crude Oil Pipeline Project
PU-15-614
KLJ#1216104

December 9, 2016

Prepared for:

North Dakota Public Service Commission
600 East Boulevard Ave
Bismarck, ND 58505-0480





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EXECUTIVE SUMMARY

The North Dakota Public Service Commission, (PSC) File Case Number PU-16-614, retained KLJ to complete topsoil inspections during construction of the 10" crude oil line known as the Highway 1804 Pipeline Re-route North Project (Project) in Williams County, North Dakota (ND), constructed by Precision Pipeline, LLC. The purpose of the inspections was to ensure the project was constructed in compliance with the siting laws and rules and the applicable PSC Orders for the Project, which includes a requirement that topsoil must be segregated from subsoil during installations of the pipeline.

Construction of the 8.5-mile pipeline project began 10 August, 2016. During this time, contractor started stripping topsoil. KLJ reviewed project documents to become familiar with the Project and PSC Orders for the Project. For second inspection, KLJ visually inspected the construction right of way on 31 August, 2016, observing contractor conducting topsoil and subsoil removal along with the segregation of soil type on Right of Way located along Highway 1804. For third inspection, KLJ visually inspected the Project right of way area on 9 November, 2016. These site visit inspections were conducted to observe the completion of the topsoil and subsoil removal and segregation done by the contractor., and overall verification of pipeline depth. Overall soil removal and storage processes appeared to be done properly and the work was satisfactory. The project was well maintained and appeared to have been constructed as planned with numerous efforts to minimize impacts. There were minor noteworthy issues that may need to be resolved for the project to be considered complete and in full compliance which include 1) written verification of some items in particular documentation of associated GIS files, and 2) topsoil and subsoil stored piles along edge of right of way could be too close together and have touched. 3) Vegetation established throughout the project due to no seeding had been done at time of inspections. Follow up actions taken by Plains Pipeline, LP. to address these issues that can be confirmed in writing or with photos that will not require a subsequent site visit.

Recommended Action Steps:

Issue 1) - Written verification-Review internally, clarify, then request if needed. Several items may need written verification, if so, the PSC should review items, since some may not be needed or maybe best verified in some other way.





Issue 2) - Soil types along edge of Right of Way were moved further apart so touching was no longer an issue.

Issue 3) - Written documentation, requested if needed, on satisfactory establishments of vegetation throughout the project, as at time of inspection, seeding had not been completed. Soil amendments or reseeding maybe necessary if former land uses cannot be attained in the next couple years.



BACKGROUND AND SCOPE

Introduction

The Plains Pipeline, LP (Project), also known as the “Highway 1804 Pipeline Re-Route North Project” connects the proposed pipeline that will originate at the Northern portion of the existing pipeline originating at the Highway 1806 Re-Route South Tie-in and terminate at the side hill junction block value. (Appendix A, Figure 3.A.1-Project map and observation point map). The Project will be constructed by Precision Pipeline, LLC and operated by Plains Pipeline, LP. The Project includes a 10-inch diameter underground crude oil pipeline with a total length of approximately 8.5 miles, with location in Williams county, ND. The Project is under the jurisdiction of the North Dakota Public Service Commission (PSC), which issued its Findings of Fact, Conclusions of Law, and Order in Case No. PU-15-614 on 16 December, 2015, granting a Certificate of Corridor Compatibility No. 175 and Route Permit No. 187, too Plains Pipeline LP, for the Highway 1804 Pipeline Re-Route North Project, (Project).

Regulatory Purpose and Scope of Work

The North Dakota Energy Conversion and Transmission Facility Act (North Dakota Century Code Chapter 49-22) authorized the Public Service Commission to determine that the location, construction, and operation of jurisdictional energy conversion and transmission facilities will produce minimal adverse effects on the environment and the welfare of citizens of North Dakota. Construction inspections ensure that such projects are constructed in compliance with the siting laws (North Dakota Century Code Chapter 49-22) and rules (North Dakota Administrative Code Article 69-06) and the applicable Commission Orders.

The North Dakota PSC retained KLJ to complete a construction inspection, and specifically a topsoil inspection, of the Project. The inspection process included a review of the Application for Corridor Compatibility and Route Permit, Order, and other applicable documents. PSC Order #11 states: “Company understands and agrees that the pipeline will be buried to a minimum depth from the ground surface to the top of the pipe of 48 inches in range land, 48 inches for cultivated land, 48 inches at the bottom of the ditch for road crossings, and 72 inches across undeveloped section lines.” PSC Order #12 for the Project states: “Company understands and agrees that all topsoil, up to 12 inches, or topsoil to the depth of cultivation, whichever is greater, over and along trench areas where cuts will be made, must be stripped and segregated from the subsoil. Any area on which excavated subsoil will be placed must also be stripped of topsoil. After backfilling is completed, any excess subsoil must be placed over the excavation area, blending the grade in existing topography. Topsoil must be replaced over areas from which it was stripped only after the subsoil is replaced.”

KLJ’s scope of work was to perform and document on-site inspections during the topsoil removal phase of the project, to verify that topsoil was properly removed and kept





segregated from subsoil until replacement occurred, and verify that the pipeline has been installed with the depth of cover as required by the commissions orders.

The number of on-site inspections were to be based on KLJ's determination that equipment operators demonstrated proficiency concerning topsoil and subsoil removal and segregation in compliance with the Commission's Order. This report includes, but is not limited to, documentation of site visit observations and a summary of findings and issues that should be addressed for the Project to be considered complete and in full compliance.

Background

During pipeline installation and excavation work in general, it is very important to separate the topsoil and subsoil. Topsoil has biological, physical and chemical properties that are critical to recovery of a site. Topsoil, also known as the A horizon, should be stripped to the correct depth according to natural variations in the depth of the top layer of soil. Distinguishing the horizon boundaries can be difficult as they vary in distinctiveness and topography. Most boundaries are zones of transitions rather than sharp lines of division. Boundary distinctiveness is the vertical distance over which one horizon transitions into another which shape of the contact between the horizons which can be smooth, wavy, irregular or broken.

Mixing subsoil in with the topsoil is usually detrimental to the reclamation and re-vegetation of a site. Subsoil material has lower organic matter content than topsoil, making it typically lighter in color. It may also have a different texture than the topsoil. The most visible impact of pipeline constructions on agricultural land is the mixing of organic and nutrient rich topsoil with less fertile, mineral subsoil, which can bring up toxic elements such as sodium that restricts plant growth.



FINDINGS OF SITE INSPECTION

Methods

Arnie Siverson, KLJ lead inspector, visited the Project site on 10 August 2016. The purpose of the visit contributed to the contractor's request to start removing topsoil within right of way. A representative from Precision Pipeline, LLC, project manager, Mike Conway accompanied Arnie Siverson, KLJ, during the topsoil inspection site visit. Dakota Access Pipeline, the construction manager, Billy Lambeth, and Mike Conway, project manager for Precision Pipeline, LLC, were present during KLJ's site visit, during the start of stripping topsoil from right of way.

The site was inspected visually by everyone in attendance, by driving to access points and walking or driving on project Right of Way. The inspection began at south side of Highway 1804, Williams County, and headed northeast. Contract equipment operators were observed on the easement Right of Way, stripping the top soil across the Right of Way. After the removal of vegetation, contractor used two dozer cats and graders were used to clear topsoil within Right of Way. During the topsoil removal phase, as the topsoil was removed, it was piled along edge of Right of Way and kept segregated from the subsoil, and the operators stayed well within the Right of Way. It was noted from inspection, that the depth of topsoil removed was mostly around 12 inches deep. Digital photographs were taken from Nikon Power Shot COOLPIX 3.6X, 14 megapixels, showing topsoil project infrastructure and documenting areas (**Appendix C, 1st Set of Photos #1-#16**) Start of project, begun at MP81.5 Station 0+00, beginning point, which is located on south side of Highway 1804. (**Appendix A, and Field Observation Points - Appendix A & D**).

Arnie Siverson, KLJ lead inspector, visited the Project site on 31 August 2016, for second inspection. The purpose of the second inspection was to visualize the completed topsoil removal within right of way, in accordance with the Commission's Selection Criteria. The second inspection begun at station 98+00 located on the north side of Highway 1804 in Williams County. No pipeline contractors or inspectors accompanied KLJ during topsoil inspection. Most areas of topsoil deposited along right of way edge, appeared properly removed, piled and kept segregated from subsoil within right of way. However, some locations looked as if both top and sub-soils were mixed and piled to close together, as noted by photos taken during inspection. Digital photographs (Nikon Power Shot COOLPIX 3.6X, 14 megapixels) were taken showing typical project infrastructure and documenting problem areas. (**Appendix C, 2nd Set of Photos #1 thru #14**). Geographic coordinated were recorded at observation points or potential problem areas using a handheld Global Positioning System (GPS) (Garmin GPSMAP Oregon 450; <10m accuracy; NAD83 datum) (**Appendix A, and Field Observation Points - Appendix A & D**).

Arnie Siverson, KLJ lead inspector, visited the site for a third Right of Way topsoil inspection 9 November, 2016. The stripping of topsoil was completed. Pipeline had been installed and backfilled. Pipeline contractor had verified depth of trench was installed to PSC requirements. No seeding of Right of Way started, but was about to begin seeding by contractor.

On-Site Inspection Observations and Findings

Construction for the Project began 10 August 2016. At the time of the first inspection, by KLJ, topsoil removal procedures were discussed, with contractor. (**Appendix B, from inspection**





report #1). Equipment operators started by stripping the topsoil using a grader, which went to a depth of approximately 4 inches though out the pipeline right of way. After this procedure was completed, equipment operators, using two dozer cats started ripping the topsoil well within right of way easement, further down to the appropriate depth. This depth consisted averaging around 8 to 12 inches deep. (Appendix A, Appendix B, Inspection #1 and 1st Set Photos taken 8-10-16, Appendix C). The pipeline contractor employed a combination of dozers and graders depending on the equipment available, depth of topsoil, land use and procedure being used to remove topsoil.

The second Right of Way topsoil inspection conducted by KLJ, was done on 31 August, 2016. The stripping of topsoil was complete. Pipeline work had been completed or under way towards completion. Field measurements were taken for appropriate depth, with the average measurements showing 8 to 12 inches deep along right of way. (Appendix C-Second set Photos taken 9-31-16).

The third Right of Way topsoil inspection conducted by KLJ, was done on 9 November, 2016. Stripping of topsoil complete with pipeline work complete except for minor cleanout. Right of Way had been leveled and regraded to existing conditions. Reseeding of Right of Way easement had not been done, but is ready to begin and conducted within PSC guidelines.

The contractors/equipment operators seemed competent during the topsoil stripping operation. Contractors removed topsoil according to the color change in the soil rather than to fixed 12-inch depth throughout the pipeline right of way. This was appropriate for the site conditions, since topsoil thickness did not reach 12 inches in depth along most of right of way. Some areas had very little topsoil left on the stripped right of way, while other areas had small amounts of subsoil scraped up with the topsoil. Overall the contractor has done a good job of separating the soil types, which consisted a minor volume of mixing both together. Where there were areas of topsoil and subsoil types close together, the contractor was notified to separate soil types further apart for no touching would occur.

As required by contract requirements, the pipeline must be buried 48 inches deep in range land and 48 inches deep at the bottom of ditch for road crossings. The route application specified minimum of 4 feet soil cover. KLJ did visually confirm the depth of the pipeline, and noted depths were found at requirements from PSC specifications.

For the majority of the project, the topsoil pile was placed on the opposite side on right of way, from the subsoil pile, except where two-toning/side sloping and bore pit bell holes were located. Two-toning or side sloping refers to a construction technique where the uphill side of the construction side of the construction right of way provides a safe and level surface from which heavy equipment can operate. It usually requires extra workspace to accommodate the additional volumes of material generated by using this construction technique. A bell hole for bore pits is a widening of the trench over a given distance, to provide space for installing pipe tie-ins, valves, fittings, etc.; in this area more subsoil is removed creating a bell-shaped trench.

At locations along Right of Way, where subsoil piles were observed touching the topsoil piles placed along Right of Way edge, contractor was notified about soil piles touching. Work was completed by separating topsoil and subsoil piles further apart, so no touching could occur. Most of the topsoil was noted to be piled on the opposite side of the Right of Way. The contractor was notified of any conditions and soil portion types that has to be separated and





moved further apart, so no touching would occur. Two-toning areas appeared to be in good condition for topsoil segregation, trench spoil (subsoil) piles in the two-toning areas were observed by contractor along with KLJ inspection, and noted soil types were not an issue environmentally.



ISSUES TO RESOLVE AND RECOMMENDATIONS

Project Specifications Needing Written Verification

Several components of the project were asserted in the application of construction and need to be verified in writing and filed with the PSC where applicable and necessary. KLJ does not consider any of these items to be critical for project compliance. However, KLJ suggests they are on file with the PSC to confirm compliance, and recommends the PSC request from Plains Pipeline, LP necessary GIS files, documentation of their ten-year plan, and participated in North Dakota One-Call.

Topsoil/Subsoil Segregation Areas

When the topsoil inspections were conducted along right of way, minor issues were noted along right of way, lighter subsoil was deposited up against, or close too top soil, mixing both together. KLJ advises contractor/equipment operators need to take special care along right of way soil deposit areas, not to mix both topsoil and sub soils together. KLJ recommends that the PSC require monitoring and documentation from Plains Pipeline, LP on these areas after reclamation has been completed and re-vegetation has been established.

Pipeline Depths

KLJ suggests that the PSC request written verification from Plains Pipeline, LP that all as-built depths are indeed 48 inches deep for cultivated land, 48 inches deep at the bottom of the ditch for road crossings and 72 inches deep across undeveloped section lines.

Revegetation and Crop Production

When the post construction inspection of the project was conducted, no reseeding of the project had been started. Contractor was in process to start reseeding Right of Way to PSC standards. KLJ recommends the PSC request monitoring and documentation from contractor, to ensure the vegetation reseeding is established and has been completed throughout the project. This includes replanting trees and shrubs as noted from the mitigation plan.



CONCLUSIONS

Overall, the Project appeared to have been constructed as designed, with minimal impacts to the surrounding natural or human environment. The pipeline project was completed as stated in Plains Pipeline, LP's application and in compliance with the PSC guidelines. The project site was well-maintained and in satisfactory condition. There were a few minor issues that included subsoil piles could have touched or mixed up against top soil locations along Right of Way. The contractor corrected these issues by moving sub and topsoil types further away to avoid soil contact. As required by contract requirements, the pipeline must be buried 48 inches deep in range land and 48 inches deep at bottom of ditch for road crossings. The route application specified a minimum of 4 feet soil cover. Contractor verified that the pipeline was buried to at least the specified depth and deeper where bored under roads. KLJ suggests that the PSC request written verification from Plains Pipeline, LP that all as-built depths are indeed 48 inches deep for cultivated lands, 48 inches deep at bottom of the ditch for road crossings and 72 inches deep across undeveloped section lines.

All required Right of Way work, including topsoil removal, was done by the contractor, who stayed within Plains Pipeline, LP's easement. All access on and off Right of Way was completed at access points specifically used on easement.

It does appear that there are several remaining items that Plains Pipeline, LP needs to follow up with before the project can be considered in full compliance. Items noted as not complete are reseeding of the project had not been started, which will be done by contractor as soon as possible in fall of 2016. KLJ recommends PSC to continually monitor and check with Plains Pipeline, LP that the reclamation of reseeding Right of Way is complete and revegetation has been established and maintained in satisfactory condition after reclamation. It is suggested the PSC requests Plains Pipeline, LP to submit all fully executed permits for their records as well as all other supporting documentation. It is also recommended the PSC require written verification that any settlement areas will be repaired and the remaining trees and shrubs will be replanted per the mitigation plan.



REFERENCES

North Dakota Public Service Commission (ND PSC). 2015. Online Case Search. Available from: http://www.psc.nd.gov/database/company_case_list.php. Accessed November 2015-December 2015

Lambeth, Billy. 2016. Dakota Access Pipeline Project, Construction Inspector. Personal Communication: Discussions during site visits on August 10, and August 31, 2016.

Conway, Mike. 2016. Precision Pipeline, Project Manager. Personal Communication; Discussions during site visit on August 10, August 31 and November 9, 2016.

Soil Survey Division Staff. 1993. Soil survey manual. Soil Conservation Service, U.S. Department of Agriculture Handbook.



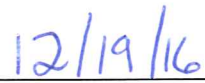
SIGNATURES

The services performed by KLJ staff for this project have been conducted in a manner consistent with the degree of care and technical skill appropriately exercised by professionals currently practicing in this area under similar time and budget constraints. Recommendations and findings contained in this report represent our professional judgement and are based upon available information and technically accepted practices at the present time and location. Other than this, no warranty is implied or expressed.

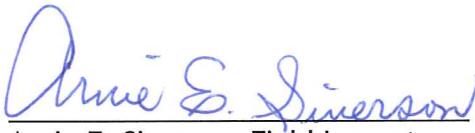
Lead Project Manager, Paul Lee, and Environmental Field Inspector, Arnie E. Siverson,




Paul Lee, PLS, Project Manager



Date



Arnie E. Siverson, Field Inspector

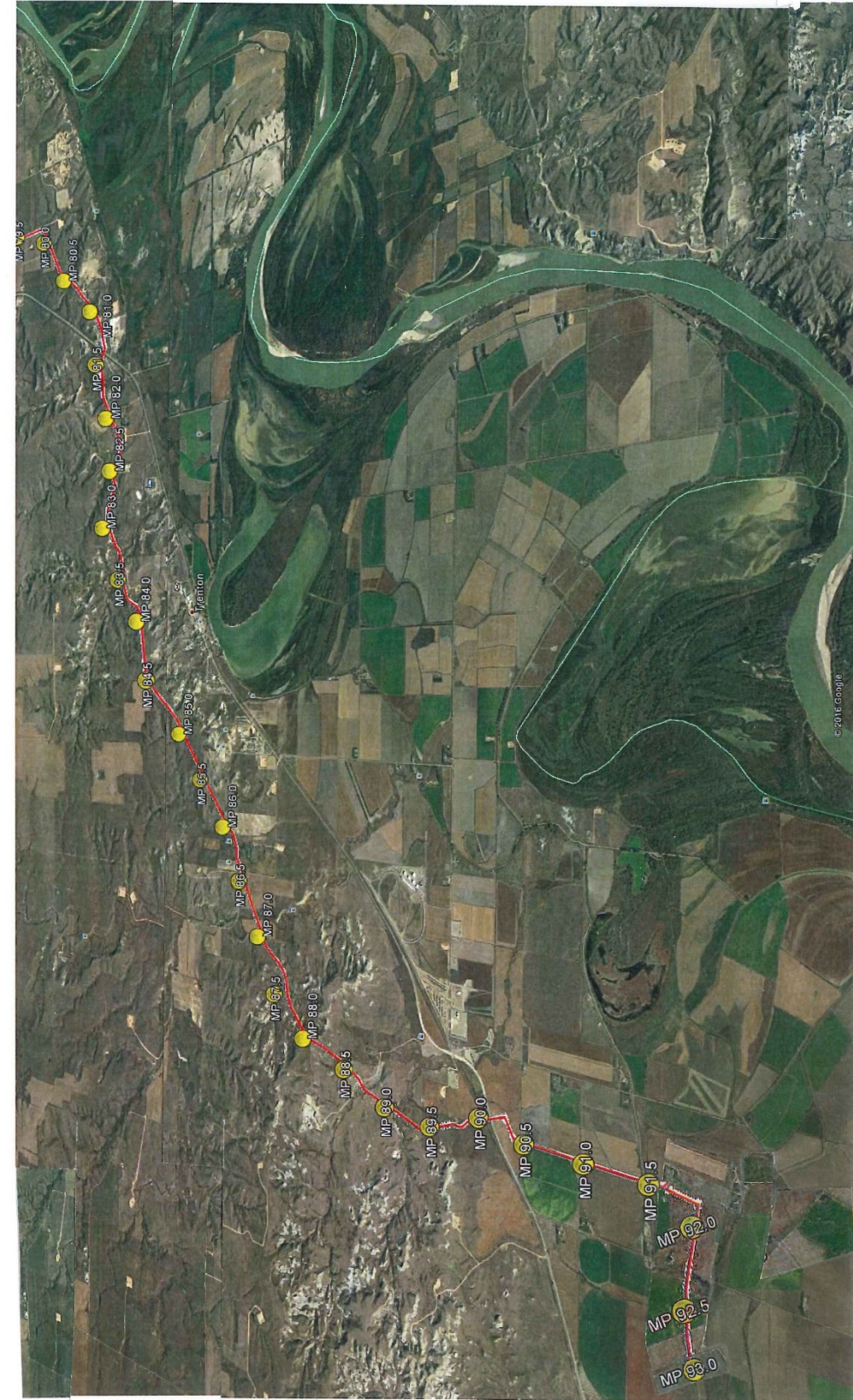


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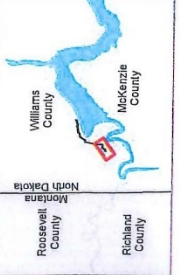


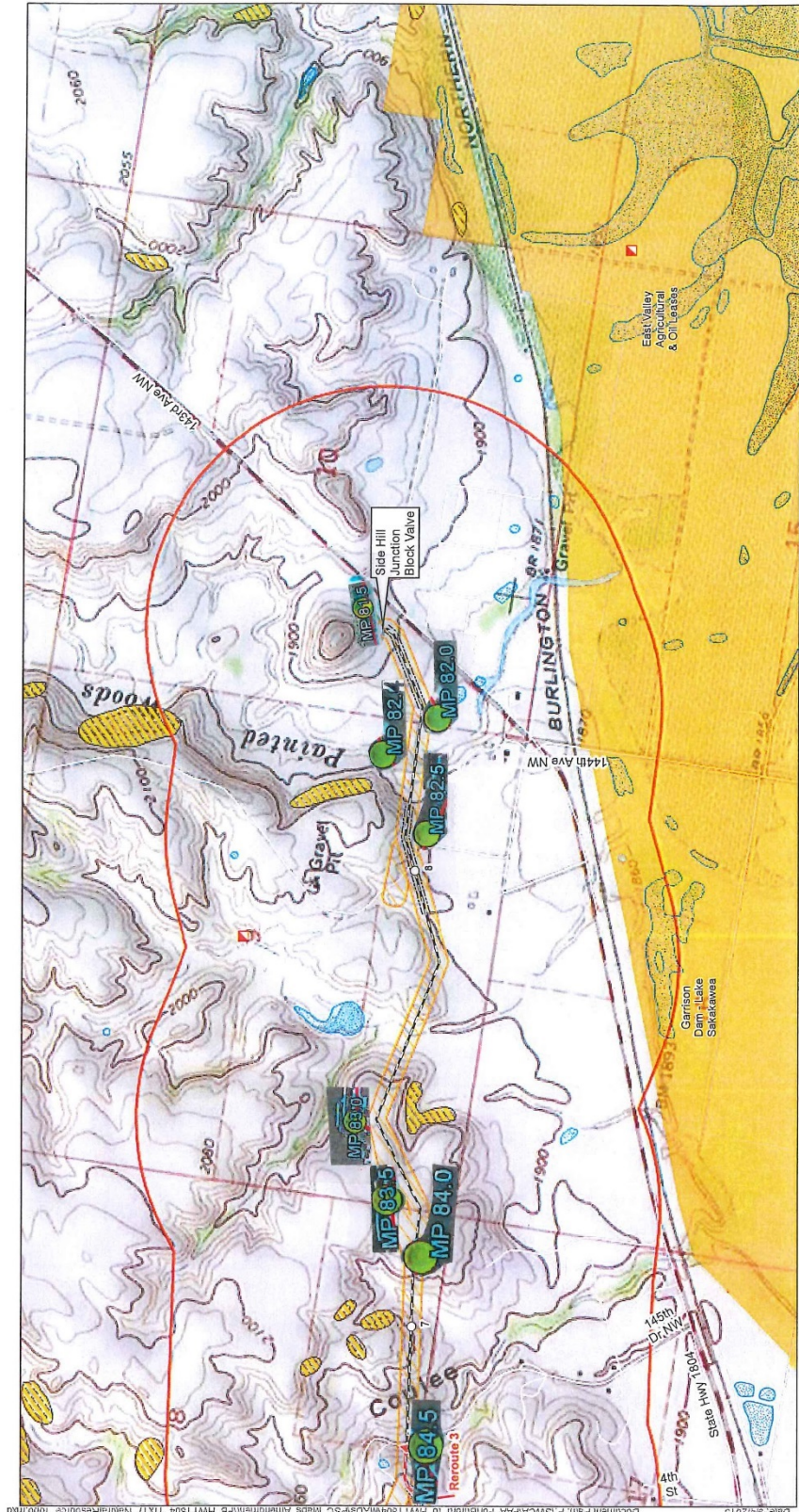
APPENDIX A:

Project Overview Map-Figure 3.A.1 and Observation Point Maps, Pages 1-4



Plains Pipeline, L.P.
 Highway 1804 Re-route North
 Project Overview Map
FIGURE 3.A.1
 Williams County, North Dakota





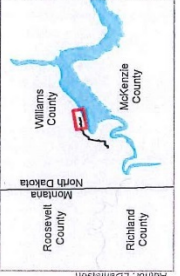
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Plains Pipeline, L.P.
 Highway 1804 Re-route North
 Photos Taken 8-10-16 Topo Map
 Page 1 of 4
 Williams County, North Dakota



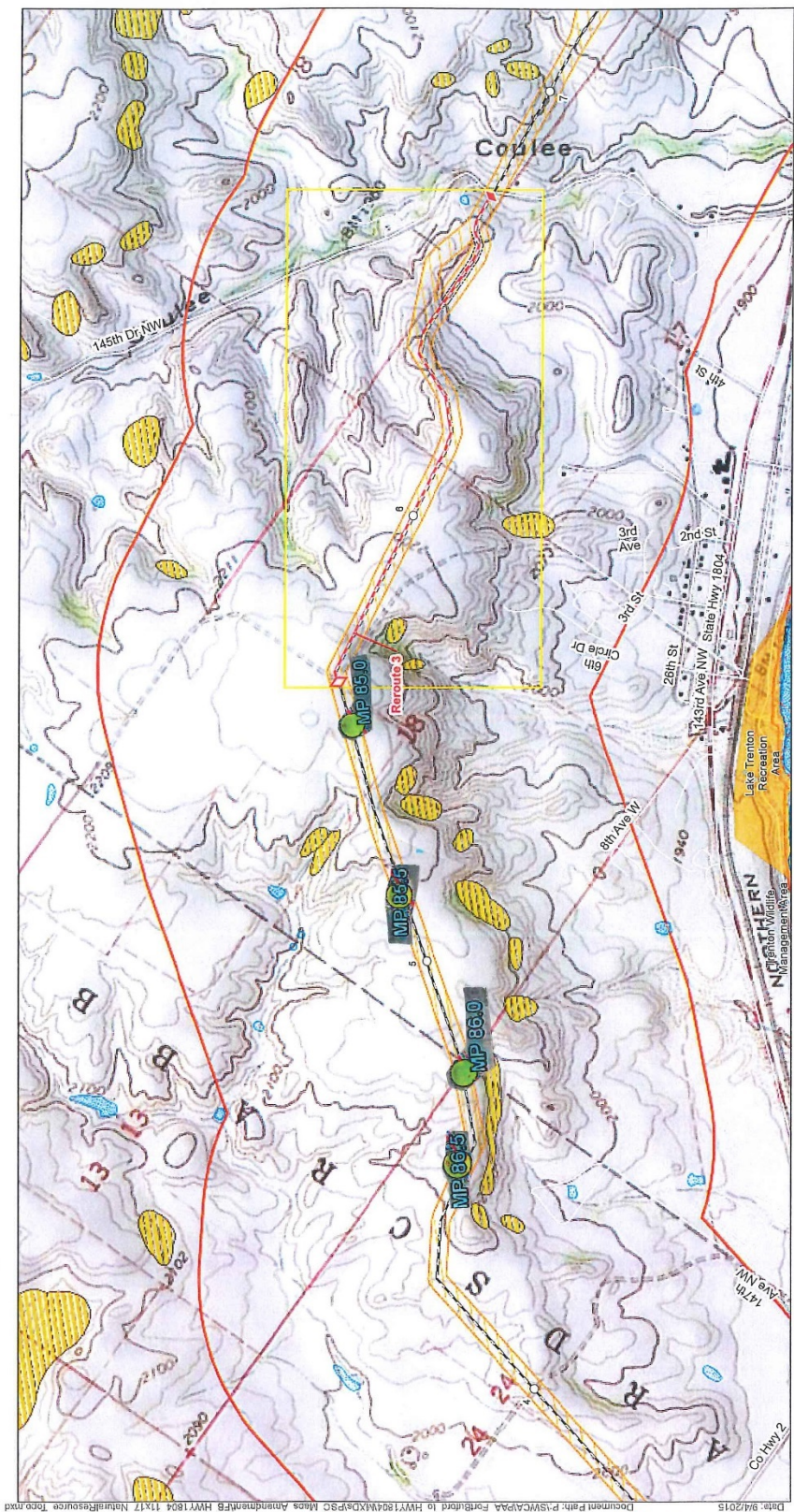
KLJ

	Milepost		Federal Land
	Retouted Alignment		ND Mineral Trust Land
	Proposed Alignment		NDGS Landslide Deposit
	Abandoned Alignment		NR Survey Corridor
	Co-located Alignment		NHD Waterway
	Corridor (1 mile)		NWI Wetland
			NHD Waterbody
			Criteria Data
			Abandoned Mine



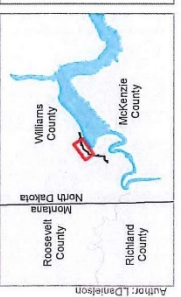
Observation Inspection Blue Point Locations





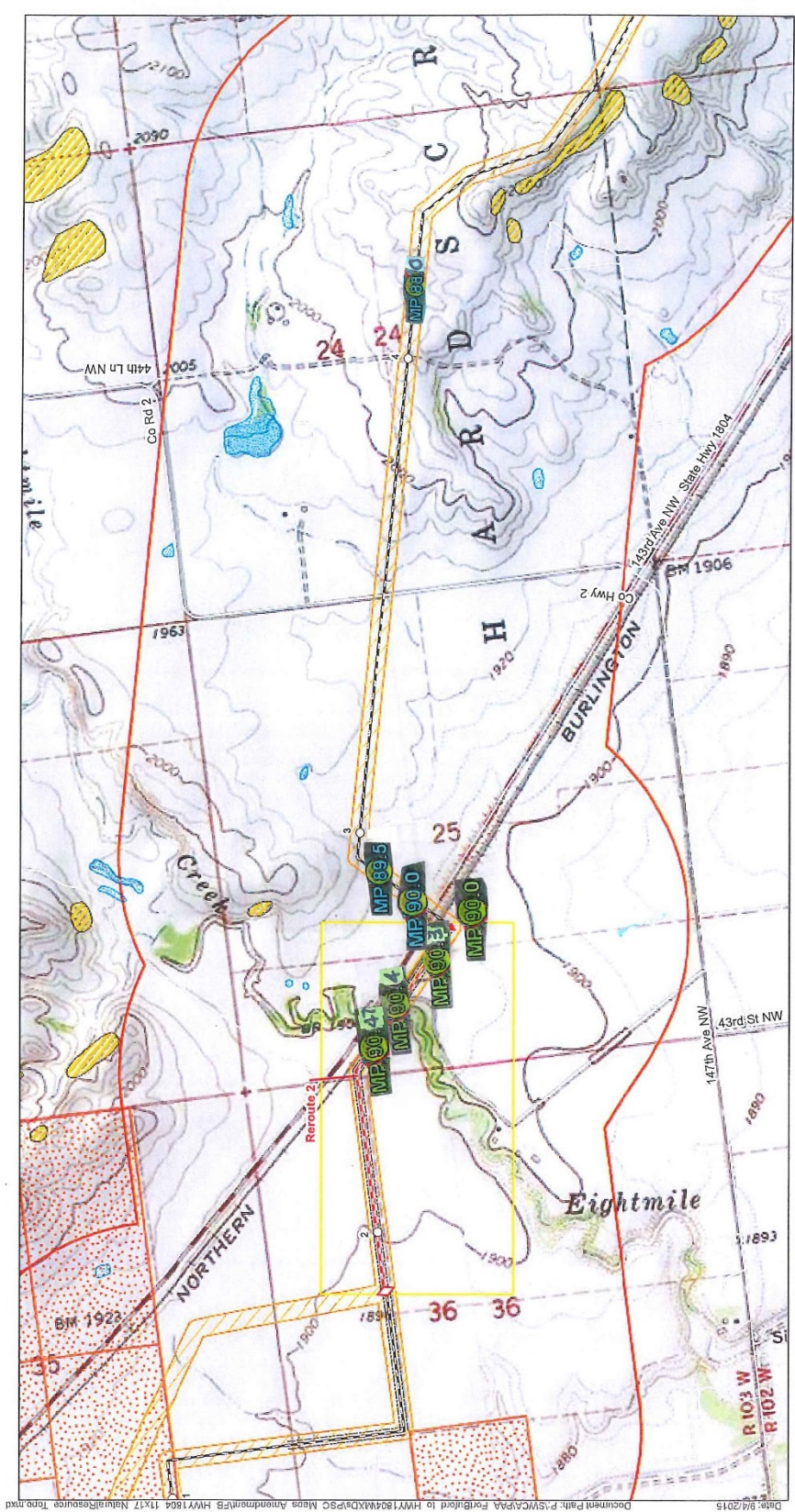
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 Author: Lantelison

Plains Pipeline, L.P.
 Highway 1804 Re-route North
 Photos Taken 8-10-16 Topo Map
 Page 2 of 4
 Williams County, North Dakota



Observation Inspection Blue Point Locations





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Plains Pipeline, L.P.
 Highway 1804 Re-route North
 Photos Taken 8-10-16
 & 8-31-16 Topo Map
 Page 3 of 4
 Williams County, North Dakota

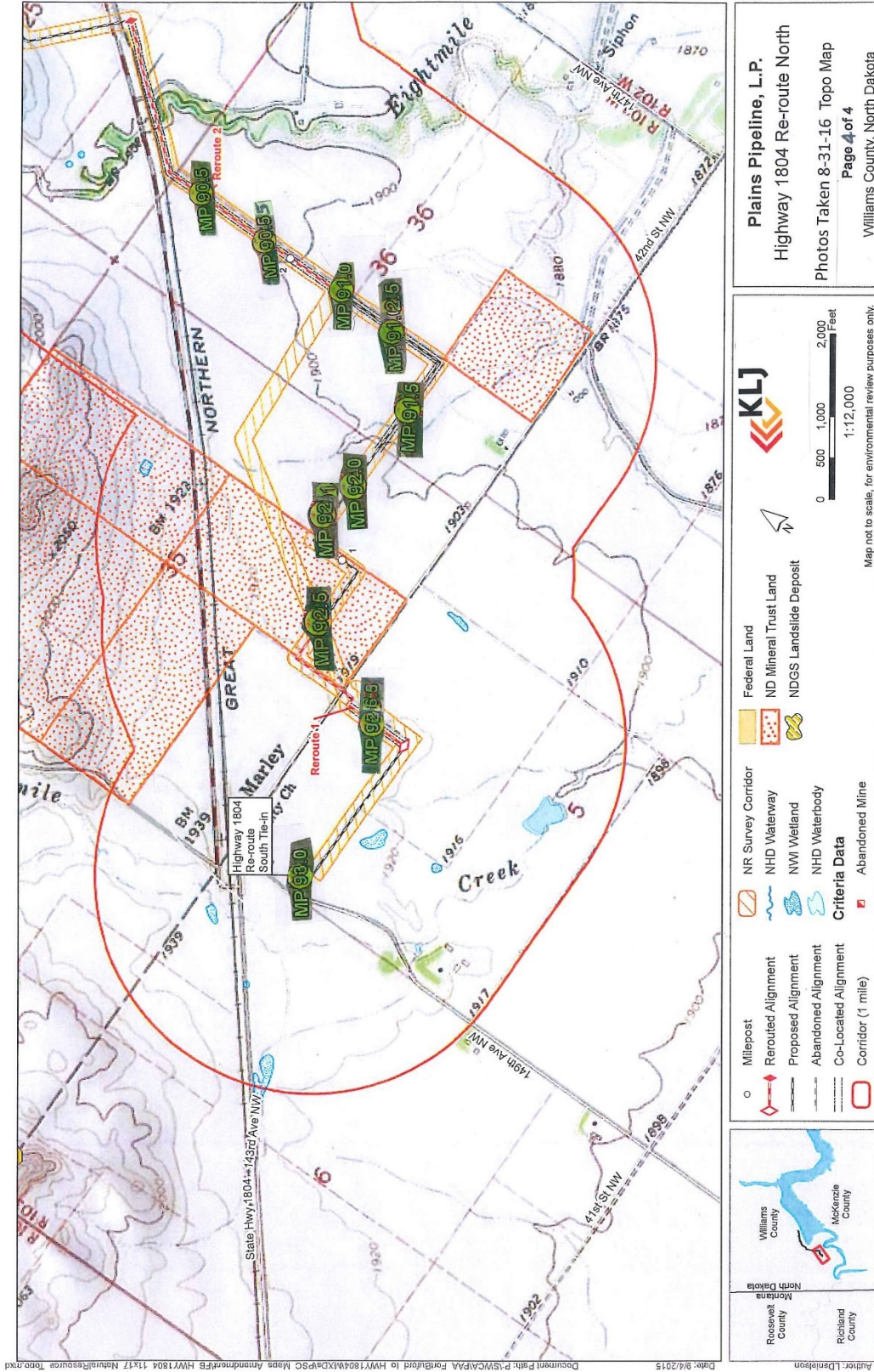


- Federal Land
- ND Mineral Trust Land
- NDGS Landslide Deposit
- NR Survey Corridor
- NHD Waterway
- NW Wetland
- NHD Waterbody
- Abandoned Mine
- Criteria Data
- Milepost
- Rerouted Alignment
- Proposed Alignment
- Abandoned Alignment
- Co-Located Alignment
- Corridor (1 mile)



Observation Inspection Blue Point Locations on North Side 1804
 Observation Inspection Green Point Locations on South Side 1804





Observation Inspection Green Point Locations on South Side 1804






APPENDIX B:


Inspection Reports 1, 2 and 3



Daily Construction Progress Report				
	Client:	N. Dak. Public Service Commission	Report Number:	1
	Project:	Plains Pipeline Company L.P.	Date:	8/10/2016
	KL&J Project Number:	1216104 & PSC Case No PU-15-614	Pages:	1 and 2
Project Contact Information				
Title	Name	Company	Office Phone	Cell Phone
Client Contact	Julie Prescott	ND Public Service Commission	701-328-4188	N/A
KLJ Project Manager	Paul Lee	KLJ	701-250-3501	701-351-5551
Field Inspector	Arnie Siverson	KLJ	701-355-8786	701-425-5414
Construction Manager	Billy Lambeth	Dakota Access Pipeline	936-327-5136	936-328-0167
Contractor Project Manager	Mike Conway	Precision Pipeline	715-874-4511	520-891-3985
Daily Construction Conditions				
Weather Conditions:	Sunny and Clear, Hot with no wind			
Temp (High/Low):	High 73, Low 52			
Tailgate Meeting (Yes/No):	No			
Daily Construction Activity				
Construction Activity	Footage Installed Today	Total % To-Date	Comments/Description	
ROW Clearing	Work just starting	10		
Topsoil Removal	Work just starting	10		
Level/Grade ROW	Work just starting	15		
HDD Boring	0	0		
Ditch	0	0		
Pipe Hauling/Stringing	0	15		
Bending	0	0		
Pipe Lower/Pull-in	0	0		
Backfill/Compaction	0	0		
Welding	0	0		
Coating	0	0		
Clean Up	0	0		
Topsoil Replace/Final Grade	0	0		
Final Reclamation & Reseeding	0	0		
Installed Quantities				
Material	Quantity Installed Today	Total Quantity To-Date	Comments/Description	
Mainline Block Valve Setting	0	0		
Pig Launcher	0	0		
Pig Receiver	0	0		
Fence Crossings	0	0		
Gates in Fence	0	0		
Silt Fence	0	0		
Waddles	0	0		
Erosion Blankets	0	0		
Straw Bales	0	0		
Sand Bag Trench Breakers	0	0		
Swamp Mats	0	0		
Trench Breakers	0	0		
	0	0		
	0	0		





Daily Construction Progress Report				
	Client:	N. Dak. Public Service Commission	Report Number:	2
	Project:	Plains Pipeline Company L.P.	Date:	8/31/2016
	KL&J Project Number:	1216104 & PSC Case No PU-15-614	Pages:	1 and 2
Project Contact Information				
Title	Name	Company	Office Phone	Cell Phone
Client Contact	Julie Prescott	ND Public Service Commission	701-328-4188	N/A
KLJ Project Manager	Paul Lee	KLJ	701-250-3501	701-351-5551
Field Inspector	Arnie Siverson	KLJ	701-355-8786	701-425-5414
Construction Manager	Billy Lambeth	Dakota Access Pipeline Project	936-327-5136	936-328-0167
Contractor Project Manager	Mike Conway	Precision Pipeline LLC.	715-874-4510	520-891-3985
Daily Construction Conditions				
Weather Conditions:	Clear skies, Sunny & Hot, Breezy 15MPH			
Temp (High/Low):	High 79, Low 65			
Tailgate Meeting (Yes/No):	No			
Daily Construction Activity				
Construction Activity	Footage Installed Today	Total % To Date	Comments/Description	
ROW Clearing	N/A	100		
Topsoil Removal	N/A	100		
Level/Grade ROW	N/A	100		
HDD Boring	N/A	80		
Ditch	N/A	100		
Pipe Hauling/Stringing	N/A	100		
Bending	N/A	95		
Pipe Lower/Pull-in	N/A	100		
Backfill/Compaction	N/A	100		
Welding	N/A	100		
Coating	N/A	100		
Clean Up	N/A	65		
Topsoil Replace/Final grade	N/A	0		
Final Reclamation & Reseeding	N/A	0		
Installed Quantities				
Material	Quantity Installed Today	Total Quantity To-Date	Comments/Description	
Mainline Block Valve Setting	N/A	N/A		
Pig Launcher	N/A	N/A		
Pig Receiver	N/A	N/A		
Fence Crossings	0	0		
Gates in Fence	50	0		
Silt Fence	N/A	N/A		
Waddles	N/A	N/A		
Erosion Blankets	0	0		
Straw Bales	0	0		
Sand Bag Trench Breakers	N/A	N/A		
Swamp Mats	N/A	N/A		
Water Bars	N/A	N/A		






Photos	
Page 2	
<p>15 photos were taken on # 2 inspection, dated 8-31-2016, showing depth and amount of top soil stripped and moved to opposite side on right of way easement. Top and Sub soils piles were kept segregated and separated from touching. Photos were taken showing pipeline contractor doing numerous pipeline work tasks on right of way. Discription of work is shown on each photo, as listed on second set of photos taken 8-31-16 in Appendix C along with this report.</p>	
Sub Contractors On-Site	
No Sub-contractors on site during inspection #2 for observation on stripping and removal location of top soil on construction right of way easement.	
Disposition/Comments:	
Amie Siverson, KLJ project inspector, arrived on job site right of way easement on 8-31-16 for second inspection at 2:00 PM. The purpose of the second inspection was to drive right of way and visualize the completed topsoil removal within right of way easement. Pipe had been installed in trench and back filled.	
The second inspection started at Station MP 89.5, located on north side of highway 1804, in Williams County. Most areas of topsoil deposited along right of way edge, appeared properly removed, piled and kept segregated from subsoil within right of way. Contractor was notified where some locations appeared to have both topsoil & subsoil mixed and piled to close together. Contractor had started seperating the piles further apart along right of way. GPS latitude and longitude readings were taken and are included in Appendix D, along with this report. Work can be noted from the 15 photos enclosed within Appendix C along with this report. After taking photos and observing work on right of way was being completed with PSC guidelines, KLJ inspector left job site. Clean up on right of way has to been underway on right of way and appears to be over three quarters complete.	
Inspectors Name:	Amie Siverson
Inspectors Time (hrs.):	3
Date:	8/31/2016





Daily Construction Progress Report				
	Client:	N. Dak. Public Service Commission	Report Number:	3
	Project:	Highway 1804 Re-route North	Date:	11/9/2016
	KL&J Project Number:	1216104 & PSC Case No PU-15-614	Pages:	1 and 2
Project Contact Information				
Title	Name	Company	Office Phone	Cell Phone
Client Contact	Julie Prescott	ND Public Service Commission	701-328-4188	N/A
KLJ Project Manager	Paul Lee	KLJ	701-250-3501	701-351-5551
Field Inspector	Arnie Siverson	KLJ	701-355-8786	701-425-5414
Construction Manager	Billy Lambeth	Dakota Access Pipeline	936-327-5136	936-328-0167
Contractor Project Manager	Mike Conway	Precision Pipeline	715-874-4511	520-891-3985
Daily Construction Conditions				
Weather Conditions:	Partly Cloudy, warm and breezy 15MPH			
Temp (High/Low):	High 72 Low 67			
Tailgate Meeting (Yes/No):	No			
Daily Construction Activity				
Construction Activity	Footage Installed Today	Total % To Date	Comments/Description	
ROW Clearing	N/A	100		
Topsoil Removal	N/A	100		
Level/Grade ROW	N/A	100		
HDD Boring	N/A	97		
Ditch	N/A	100		
Pipe Hauling/Stringing	N/A	100		
Bending	N/A	100		
Pipe Lower/Pull-in	N/A	100		
Backfill/Compaction	N/A	100		
Welding	N/A	100		
Coating	N/A	100		
Clean Up	N/A	95		
Topsoil Replace/Final grade	N/A	100		
Final Reclamation & Reseeding	N/A	50 with reseeding to start soon		
Installed Quantities				
Material	Quantity Installed Today	Total Quantity To-Date	Comments/Description	
Mainline Block Valve Setting	N/A	N/A		
Pig Launcher	N/A	N/A		
Pig Receiver	N/A	N/A		
Fence Crossings	100	100		
Gates in Fence	100	100		
Silt Fence	N/A	N/A		
Waddles	N/A	N/A		
Erosion Blankets	0	N/A		
Straw Bales	0	0		
Sand Bag Trench Breakers	N/A	N/A		
Swamp Mats	N/A	N/A		
Water Bars	N/A	N/A		





APPENDIX C: PHOTOGRAPHS

First Set Photos

Taken August 10, 2016



Photo 1: Located at station 0+00, showing Side Hill Junction Block Valve tie-in at end of line for Highway 1804 Re-Route North Right of Way Pipeline Project.



Photo 2: Located at station 6+00, Photo looking west showing Right of Way graded with topsoil pushed off on edge of Right of Way. Construction workers working on pit for Block Valve tie-in valve.



Photo 3: Located at station 15+00, photo looking west at Right of Way located on north side of Highway 1804. Right of Way has been graded with topsoil and subsoil piles separated and not touching along Right of Way edge. Photo shows BMP's, silt fences and straw wattles across Right of Way creek bed so sediment is contained on Right of Way.



Photo 4: Located at station 18+00, showing BMP straw wattle placed along edge of Right of Way to prevent sediment runoff leaving Right of Way.



Photo 5: Located at station 21+00, photo showing Right of Way on north side of Highway 1804. Contractor working on Right of Way placing topsoil and subsoil piles along edge of Right of Way. Both soil types are separated and not touching.



Photo 6: Located at station 24+00, looking west with topsoil stripped across Right of Way. Workers stringing pipe and welding pipe together.



Photo 7: Located at station 27+00, photo looking west showing contractor starting to clear topsoil across Right of Way.



Photo 8: Located at station 30+00, photo showing graded Right of Way on north side of Highway 1804 showing depth of topsoil cut, at approximately 12 inches deep and topsoil pushed off on edge of Right of Way. Wood skids placed on Right of Way ready to string out piping.



Photo 9: Located at station 33+00, Photo looking west across lease road showing graded Right of Way with topsoil piled along edge of Right of Way.



Photo 10: Located at station 36+00, photo looking south showing contractor grading Right of Way with topsoil placed along edge of Right of Way.



Photo 11: Located at station 40+00, looking west. Contractor ripping and stripping topsoil across Right of Way. Topsoil and subsoil are being placed at south side on Right of Way. Both topsoil and subsoil are placed far enough apart so no touching of soil types can occur.



Photo 12: Located at station 48+00, photo showing depth of topsoil removal cut on Right of Way.



Photo 13: Located at station 52+00, looking north, showing Right of Way graded with topsoil and subsoil piles separated and placed along edges of Right of Way.



Photo 14: Located at station 72+00, photo showing graded Right of Way with topsoil pile pushed off Right of Way and piled along edge as shown.



Photo 15: Located at station 91+00, showing contractor grading Right of Way looking south. Contractor pushing topsoil off Right of Way towards easement edge, located at right side of photo.



Photo 16: Taken at approximate station 98+00, Piping contractor on Right of Way starting to remove topsoil.



APPENDIX C: PHOTOGRAPHS

Second Set Photos

Taken August 31, 2016



Photo 1: Located at station 98+00, looking north, photo showing workers grading Right of Way. Topsoil pile located on left side edge of Right of Way. Workers starting to bore Highway 1804 and railroad tracks, heading from south side Highway 1804.



Photo 2: Located at station 102+00, looking south, photo showing graded Right of Way with topsoil pile placed on edge of Right of Way. Wood skids placed on Right of Way ready to support piping.



Photo 3: Located at station 105+00, looking south, photo showing Right of Way graded with topsoil pushed off on edge on Right of Way.



Photo 4: Located at station 108+00, photo showing depth of topsoil removal cut on Right of Way edge.



Photo 5: Located at station 110+00, looking south with graded Right of Way. Photo shows depth of topsoil cut at approximately 12 inches deep on left side along Right of Way. Topsoil pile shown on edge of Right of Way at top of photo.



Photo 6: Located at station 113+00, looking south, showing Right of Way graded with topsoil pushed off on right side along Right of Way. Wooden skids placed on Right of Way ready for supporting piping.



Photo 7: Located at station 115+00, photo showing graded Right of Way with topsoil pile pushed off edge of Right of Way, located on right side.



Photo 8: Located at station 118+00, photo looking south at Right of Way with contractor using a dozer to push topsoil off Right of Way. Contractor in process of cutting topsoil approximately 12 inches deep and placing on edge of Right of Way.





Photo 9: Located at station 122+00, photo looking south showing graded Right of Way topsoil cut approximately 12 inches deep.



Photo 10: Located at station 126+00, looking south of graded Right of Way. Photo showing matts placed over Right of Way for access along easement. Topsoil pile has been pushed off edge of Right of Way as noted.



Photo 11: Located at station 127+00, looking north showing graded Right of Way with topsoil cut approximately 12 inches deep.



Photo 12: Located at station 130+00, looking south showing contractor grading Right of Way to PSC standards.



Photo 13: Located at station 134+00, photo looking west showing graded Right of Way and approximately 12" deep topsoil cut along left edge Right of Way. Topsoil placed along right side edge of Right of Way. Silt fence BMP in place along Right of Way.



Photo 14: Located at station 140+00, showing graded Right of Way located at re-route south tie-in bench valve location. Right of Way is graded with topsoil push off on edge of Right of Way, as noted from photo. Silt fence BMP installed along Right of Way as required.



APPENDIX D:

Field Photo Observation Points



POINT	STATION	NAME	LATITUDE	LONGITUDE	DATE
MP 81.5	0+00	Block Valve Tie-in Location	N48.0514	W103.4743	8/10/2016
MP 81.5	6+00	Topsoil Stripped with top and subsoils separated. Workers working on valve	N48.0515	W103.4744	8/10/2016
MP 82.0	15+00	Topsoil Stripped with top and subsoils separated. BMP's installed	N48.0501	W103.4844	8/10/2016
MP 82.4	18+00	BMP straw wattle installed	N48.0501	W103.4843	8/10/2016
MP 82.5	21+00	Topsoil Stripped, Two Tone area, with top and subsoil piles separated	N48.0504	W103.4854	8/10/2016
MP 83.0	24+00	Topsoil Stripped. Workers stringing and welding pipe	N48.0509	W103.4929	8/10/2016
MP 83.5	27+00	Piping Contractor starting to strip topsoil across right of way	N48.0458	W103.5003	8/10/2016
MP 84.0	30+00	Topsoil stripped with topsoil placed on right of way edge, with pipe skids	N48.0481	W103.5031	8/10/2016
MP 84.5	33+00	Right of way graded with topsoil stripped and placed on right of way edge	N48.3725	W103.5107	8/10/2016
MP 85.0	36+00	Right of way graded with topsoil stripped and placed on right of way edge	N48.0419	W103.5136	8/10/2016
MP 85.5	40+00	Right of way being graded with topsoil stripped and removed	N48.0166	W103.5204	8/10/2016
MP 86.0	48+00	Topsoil stripped, and showing depth of cut	N48.0346	W103.5236	8/10/2016
MP 86.5	52+00	Bore pit located southwest side County Road #2	N48.0334	W103.5310	8/10/2016
MP 88.0	72+00	Topsoil Stripped, Top and Subsoil piles separated	N480247	W103.5438	8/10/2016
MP 89.5	91+00	Right of way being stripped with top and subsoil piles on right of way edge	N48.0134	W103.5506	8/10/2016
MP 90.0	98+00	Contractor ready to start stripping right of way, south side highway 1804	N48.0109	W103.5262	8/10/2016
MP 90.0	98+00	Right of way graded, getting ready to bore highway 1804 & railroad tracks	N48.0109	W103.5262	8/31/2016
MP 90.3	102+00	Right of way graded, topsoil stripped, wood skids on right of way for piping	N48.0100	W103.5449	8/31/2016
MP 90.4	105+00	topsoil stripped, top and subsoil piles separated	N48.0055	W103.5458	8/31/2016
MP 90.47	108+00	Topsoil stripped, showing depth of cut	N48.0056	W103.5501	8/31/2016
MP 90.5	110+00	Topsoil stripped, showing depth of cut and topsoil pile	N48.0051	W103.5449	8/31/2016
MP 90.55	113+00	Topsoil stripped, top and subsoil piles separated, with skids ready for piping	N48.0040	W103.5459	8/31/2016
MP 91.0	115+00	Topsoil stripped, top and subsoil piles separated on edge of right of way	N48.0025	W103.5500	8/31/2016
MP 91.25	118+00	Right of way topsoil being stripped	N48.0015	W103.5458	8/31/2016
MP 91.50	122+00	Topsoil stripped showing depth of cut	N47.5959	W103.5457	8/31/2016
MP 92.0	126+00	Topsoil stripped, top and subsoil piles separated with mats and wood skids	N47.5937	W103.5463	8/31/2016
MP 92.1	127+00	Topsoil stripped, showing depth of cut	N47.5937	W103.5463	8/31/2016
MP 92.5	130+00	Contractor grading right of way and stripping topsoil	N47.5911	W103.5451	8/31/2016
M 92.65	134+00	Right of way topsoil stripped, BMP installed and showing depth of cut	N47.5901	W103.5452	8/31/2016
MP-93.0	140+00	Topsoil stripped off right of way located at Re-rout sout tie-in block valve	N47.5846	W103.5442	8/31/2016





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