



Northern Natural Gas Company
P.O. Box 3330
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402 398-7200

August 6, 2025

Via eFiling

Ms. Debbie-Anne Reese, Secretary
Federal Energy Regulatory Commission
888 First Street, N.E.
Washington, D.C. 20426

Re: Northern Natural Gas Company
Northern Lights 2025
Docket No. CP24-60-000
Biweekly Status Report No. 12

Dear Ms. Reese:

Pursuant to Condition 8 of the Order Issuing Certificate and Approving Abandonment issued by the Federal Energy Regulatory Commission February 19, 2025, Northern Natural Gas (Northern) hereby submits for filing in the above-referenced docket its biweekly environmental inspector report for the period ending August 3, 2025.

Any questions regarding the filing should be directed at the undersigned at (402) 398-7138.

Respectfully submitted,

/s/ Donna Martens

Donna Martens
Senior Regulatory Analyst

Northern Natural Gas Company
Northern Lights 2025 (CP24-60-000)
Biweekly Status Report No. 12
Period Ending August 3, 2025

PROJECT DESCRIPTION

Northern Natural Gas (Northern) will construct and operate the Project, which will consist of (1) a 3.00-mile extension of its 36-inch-diameter Lake Mills to Albert Lea E-line; (2) a 2.42-mile extension of its 30-inch-diameter Elk River 3rd branch line; (3) a non-contiguous 1.90-mile extension of its 30-inch-diameter Farmington to Hugo C-line¹; (4) a 1.28-mile extension of its 8-inch-diameter Tomah branch line loop; (5) minor modifications to its existing La Crescent compressor station; and (6) aboveground facilities including a launcher, receiver and tie-in valve settings. All Project components are located in various counties in Minnesota and Wisconsin.

FEDERAL AUTHORIZATION STATUS

Northern has received all federal and state permits required under federal law for the Project.

Lake Mills to Albert Lea E-line

Northern will construct and operate an approximately 3.00-mile extension of its 36-inch-diameter MNM80105 Lake Mills to Albert Lea E-line in Freeborn County, Minnesota. Northern will remove the existing aboveground valve setting located in Section 16, Township 101 North, Range 22 West (Section 16, T101N, R22W), Freeborn County, Minnesota. Northern will construct and operate an aboveground valve setting at the terminus of the new extension on the north side of 165th Street in Section 33, T102N, R22W, Freeborn County, Minnesota.

Environmental Training

One contractor will construct the Lake Mills to Albert Lea E-line and associated aboveground facilities. The environmental training totals listed below reflect all training conducted to date for this component.

On-site Contractor: K & K, Inc. (K&K)

Overall Construction Start Date: Commenced April 21, 2025

Environmental Training Conducted: This reporting period: 3 Total to date: 40

Construction Status: BJD Farms, LLC. (BJD), subcontractor for K&K, continued filling the lake tank north of 165th Street. K&K continued welding 36-inch-diameter mainline pipe north of 140th Street. K&K continued sandblasting and coating mainline pipe south of 165th Street. K&K completed installation of 560 feet of silt fence south of 165th Street from milepost (MP) 33.56 to MP 33.65. K&K commenced trenching north of 140th Street. K&K continued lowering-in 36-inch-diameter mainline pipe north of 140th Street from MP 31.9 to MP 32.1. K&K completed backfill of the trench north of 140th Street from MP 31.9 to MP 32.1. K&K commenced trenching south of 140th Street. K&K completed the mainline trench tie-in at MP 33.5 north of County Road 80/154th Street. K&K completed mechanical excavation for County Road 80/154th

¹ The total pipeline length of the Farmington to Hugo C-line extension was reduced from 1.91 miles to 1.90 miles as described in Northern's implementation plan and response to the conditions of the order (condition 5) filed with the Federal Energy Regulatory Commission (FERC) March 6, 2025.

Northern Natural Gas Company
Northern Lights 2025 Expansion

Street and 140th Street crossings. K&K completed lowering-in 36-inch-diameter mainline pipe for County Road 80/154th Street and 140th Street crossings. Jensen Excavation & Trucking, LLC. (Jensen), subcontractor for K&K, completed mechanical excavation and backfill compaction of the 8:1 slope required by Freeborn County and Nunda Township for County Road 80/154th Street and 140th Street crossings.

Construction Modifications:

No construction modifications occurred during this reporting period.

Stream Crossings and Environmentally Sensitive Areas

No stream crossings or other environmentally sensitive areas were impacted during this reporting period.

Rain Events

Three rain events of 0.50 inch or greater occurred during this reporting period. One rain event of 4.15 inches occurred July 24, 2025. One rain event of 0.57 inch occurred July 29, 2025. One rain event of 0.60 inch occurred July 30, 2025. To date, the project has received 26.28 inches of precipitation.

Lake Mills to Albert Lea E-line Construction Progress			
Activity	Start Date	Completed	Notes
Survey	4/16/2025	99%	Survey is ongoing
Clearing	N/A	N/A	N/A
Grading	4/21/2025	5/30/2025	Grading is complete
Stringing	5/5/2025	5/19/2025	Stringing is complete
Welding	5/16/2025	96%	Welding is ongoing
Ditching	6/6/2025	56%	Trenching is ongoing
Lower-in	6/6/2025	47%	Lowering-in is ongoing
Backfill	6/6/2025	32%	Backfill is ongoing
Topsoil Restoration			
Removal of existing E-line tie-over valve setting	5/15/2025	15%	K & K completed excavation
New Lake Mills tie-in valve setting	6/15/2025	15%	K & K completed excavation
Clean-up			
Seeding	6/17/2025	20%	Seeding is ongoing
*Completed totals include either percentage completed or date all completed. All totals are approximate.			

Two-Week Projection

1. Continue welding line pipe
2. Continue sandblasting and coating
3. Continue trenching
4. Continue lowering-in
5. Continue backfill
6. Continue restoration

Lake Mills to Albert Lea E-line Related Spill

No spills occurred during this reporting period.

Elk River 3rd Branch Line

Northern will construct and operate an approximately 2.42-mile extension of its 30-inch-diameter MNB87703 Elk River 3rd branch line in Washington County, Minnesota. The new extension will be tied in below ground approximately 260 feet north of the current terminus in Section 36, T32N, R21W, Washington County, Minnesota; the existing aboveground valve setting located on the east side of July Avenue in Section 36, T32N, R21W, Washington County, Minnesota, will be removed. The downstream tie-in to both Northern's 20-inch-diameter MNB87701 Elk River branch line and 20-inch-diameter MNB87702 Elk River loop will be completed with a new valve setting at the west side of Henna Avenue North in Section 3, T31N, R21W, Washington County, Minnesota.

Environmental Training

One contractor will construct the Elk River 3rd branch line extension. The environmental training totals listed below reflect all training conducted to date for this component.

On-site Contractor: Otis Minnesota Services, LLC (Otis)

Overall Construction Start Date: Commenced April 24, 2025

Environmental Training Conducted²: This reporting period: 2 Total to date: 86

Construction Status:

Otis continued welding and coating the line pipe. Otis continued welding bore pipe on horizontal directional drill (HDD) P4-1. Otis completed the removal of a short segment of the existing line pipe near MP 1.0 to accommodate HDD activities and completed backfill of the ditch line. Mears Group Inc. (Mears), a third-party HDD sub-contractor of Otis, continued the pilot pass of HDD P4-5 and continued the 30-inch-diameter ream pass of HDD P4-2. Mears had a 2,237-gallon inadvertent release of drilling fluids on HDD P4-2 in wetland ERT-W-14 July 22 through July 24, 2025. The inadvertent release was contained with turbidity curtains and a smaller containment was attempted with a section of culvert. While trying to reset the culvert, settlement occurred along the pipeline July 25, 2025. Mears and Otis issued a safety stand-down to address the issue. Northern is working on a variance request to be filed with FERC to allow matting through the wetland to safely address inadvertent returns, as noted in agency correspondence below. The HDD noise report is attached. All sound levels are recorded as dBA.

Construction Modifications: There were no construction modifications during this reporting period.

Stream Crossings and Environmentally Sensitive Areas

Wetland feature ERT-W34 crossed by HDD June 29, 2025.

Wetland feature ERT-W14 crossed by HDD July 30, 2025.

Rain Events

One rain event of 0.50 inch or greater occurred during this reporting period. One rain event of 1.25 inches occurred July 29, 2025. To date the project has received 14.33 inches of precipitation.

² The same contractor and crews are constructing the Elk River 3rd branch line and Farmington-to-Hugo C-Line extension projects. The numbers reflect the training provided to the one contractor and any subcontractors; however, are double counted between the two projects.

Northern Natural Gas Company
Northern Lights 2025 Expansion

Elk River 3rd Branch Line Construction Progress			
Activity	Start Date	Completed	Notes
Survey	4/10/2025	5/2/2025	Primary survey is complete
Clearing	4/28/2025	5/10/2025	Clearing is complete
Grading	5/6/2025	6/7/2025	Grading is complete
Stringing	5/15/2025	6/21/2025	Stringing is complete
Welding	5/16/2025	67%	Welding is ongoing
Ditching	7/9/2025	34%	Otis continued ditching
HDD ERT P4-1			
HDD ERT P4-2	7/15/2025	41%	Mears continued the ream pass
HDD ERT P4-3	5/22/2025	6/14/2025	Mears completed the HDD
HDD ERT P4-4			
HDD ERT P4-5	6/20/2025	30%	Mears continued the pilot pass
HDD ERT P4-6	6/20/2025	6/25/2025	Mears completed the HDD
HDD ERT P4-7	7/01/2025	7/3/2025	Mears completed the HDD
Lower-in	7/9/2025	33%	Otis continued lowering-in
Backfill	7/9/2025	27%	Otis continued backfill
Topsoil Restoration	7/28/2025	10%	Otis commenced restoration
Existing Elk River tie-over valve setting to be removed			
New Elk River tie-in valve setting			
Clean-up			
Seeding			
*Completed totals include either percentage completed or date all completed. All totals are approximate.			

Two-Week Projection

1. Continue welding, sandblasting and coating
2. Complete HDD P4-5 pilot pass
3. Complete HDD P4-2
4. Commence HDD P4-4
5. Continue stopple bypass at MP 1.0
6. Continue ditching, lowering-in and backfill
7. Continue restoration

Elk River 3rd Branch Line Related Spill

No spills occurred during this reporting period.

Farmington to Hugo C-Line Extension

Northern will construct and operate a non-contiguous 1.90-mile extension of its 30-inch-diameter Farmington to Hugo C-line in Washington County, Minnesota. The new extension will be tied in below ground within Northern's existing Hugo compressor station in Section 6, T31N, R20W, Washington County, Minnesota. The downstream tie-in to Northern's 24-inch-diameter MNM86501 B-line will be completed at a new below-ground³ valve setting in Section 7, T31N, R20W, Washington County, Minnesota.

³ As described in Northern's implementation plan and response to the conditions of the order (condition 5) filed with FERC March 6, 2025, the new downstream valve setting for the Farmington to Hugo C-line extension will be below ground in accordance with the landowner's request rather than aboveground as originally proposed.

Environmental Training

One contractor will construct the Farmington to Hugo C-line extension and associated aboveground facilities. The environmental training totals listed below reflect all training conducted to date for this component.

On-site Contractor: Otis Minnesota Services, LLC (Otis)

Overall Construction Start Date: May 3, 2025

Environmental Training Conducted²: This reporting period: 0 Total to date: 84

Construction Status:

Otis continued hydro-vacuum excavation within the Hugo compressor station. Otis continued topsoil segregation on the Farmington-Hugo C-Line extension. Otis completed seeding and mulching all stored stockpiles. Otis continued stringing and welding line pipe. Otis continued stringing the bore pipe. Otis continued sandblasting line and bore pipe. Otis completed installation of the valve for the Farmington tie-over valve setting. Otis continued setting up the sound wall for HDD P4-1. Otis commenced ditching, lowering-in and backfill on the south side of the Minnesota Department of Natural Resources (MDNR) property. Otis commenced the topsoil restoration.

The young eagles have started to fly but have yet to exhibit hunting behavior.

Construction Modifications: There were no construction modifications during this reporting period.

Stream Crossings and Environmentally Sensitive Areas

No stream crossings or other environmentally sensitive areas were impacted during this reporting period.

Rain Events

Two rain events of 0.50 inch or greater occurred during this reporting period. One rain event of 1.05 inches occurred July 24, 2025. One rain event of 1.30 inches occurred July 29, 2025. To date the project has received 15.07 inches of precipitation.

Farmington to Hugo C-Line Construction Progress			
Activity	Start Date	Completed	Notes
Survey	4/26/2025	5/5/2025	Survey is complete
Clearing	5/3/2025	5/9/2025	Clearing is complete
Grading	6/9/2025	80%	Grading is ongoing
Stringing	6/18/2025	80%	Stringing is ongoing
Welding	6/20/2025	80%	Welding is ongoing
Ditching	7/24/2025	5%	Otis commenced ditching
HDD FAR P4-1			
HDD FAR P4-2			
Lower-in	7/24/2025	5%	Otis commenced lowering-in
Backfill	7/28/2025	5%	Otis commenced backfill
Topsoil Restoration	7/1/2025	5%	Otis commenced topsoil restoration
Hugo compressor station launcher and valves	5/22/2025	50%	Otis continued hydro-vacuum activities and completed concrete forms
Farmington tie-over valve setting	6/17/2025	50%	Otis completed installation of the valve.
Clean-up			
Seeding			

*Completed totals include either percentage completed or date all completed. All totals are approximate.
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Two-Week Projection

1. Continue hydro-vacuum excavation and launcher installation in the Hugo compressor station
2. Continue topsoiling
3. Continue stringing
4. Continue welding
5. Continue sandblasting and coating
6. Commence HDD P4-1
7. Continue ditching
8. Continue lowering-in
9. Continue backfill
10. Continue restoration

Farmington to Hugo C-line Related Spill Totals

No spills occurred during this reporting period.

Tomah Branch Line Loop

Northern will construct and operate an approximately 1.28-mile extension of its 8-inch-diameter WIB11902 Tomah branch line loop in Monroe County, Wisconsin. The new extension will be tied in below ground to the current terminus of the Tomah branch line loop in Section 1, T17N, R4W, Monroe County, Wisconsin, and the existing tie-in valve setting and receiver facility at this location will be removed. The down-stream tie-in to Northern's 6-inch-diameter WIB11901 branch line is located in Section 6, T17N, R3W, Monroe County, Wisconsin.

Environmental Training

One contractor will construct the Tomah branch line loop. The environmental training totals listed below reflect all training conducted to date for this component.

On-site Contractor: K & K, Inc. (K&K)

Overall Construction Start Date: Commenced May 12, 2025

Environmental Training Conducted: This reporting period: 2 Total to date: 43

Construction Status: K&K continued ditching from MP 3.22 to MP 3.43. K&K completed ditching and lowering-in from MP 2.95 to MP 3.16. K&K continued sandblasting and coating branch line pipe welds. K&K commenced tie-ins. K&K installed a trench breaker near MP 3.16. Xcel continued x-raying welds. K&K commenced weed control in the agriculture fields. K&K completed topsoil segregation. K&K completed the tie-in on the east side of Gardner Avenue for HDD P4-1. American Hydrovac commenced installing story poles for Tomah tie-over valve setting removal.

Construction Modifications: There were no construction modifications during this reporting period.

Stream Crossings and Environmentally Sensitive Areas

No stream crossings or other environmentally sensitive areas were impacted during this reporting period.

Northern Natural Gas Company
Northern Lights 2025 Expansion

Rain Events

During this reporting period the project received 0.00 inches of precipitation. To date, the project has received 19.85 inches of precipitation.

Tomah Branch Line Loop Construction Progress			
Activity	Start Date	Completed	Notes
Survey	4/22/2025	98%	Survey is ongoing
Clearing	5/14/2025	5/23/2025	Clearing is complete
Grading	5/16/2025	8/2/2025	Grading is complete
Stringing	6/2/2025	7/9/2025	Stringing is complete
Welding	6/3/2025	85%	Welding is ongoing
Ditching	7/9/2025	90%	Ditching is ongoing
HDD TBL P4-1	7/15/2025	7/16/2025	P4-1 is complete
HDD TBL P4-2	7/7/2025	7/12/2025	P4-2 is complete
Lower-in	7/10/2025	85%	Lowering-in is ongoing
Backfill	7/14/2025	75%	Backfill is ongoing
Topsoil Restoration			
Remove Tomah branch line loop receiver facility and tie-over valve setting	6/11/2025	15%	K & K completed excavation
Tomah Tie-over valve setting	6/12/2025	15%	K & K completed excavation
Clean-up			
Seeding			
*Completed totals include either percentage completed or date all completed. All totals are approximate.			

Two-Week Projection

1. Complete tie-ins
2. Complete welding
3. Complete sandblasting and coating
4. Complete ditching
5. Complete lowering-in
6. Complete backfill
7. Commence cleanup and restoration
8. Complete pressure test

Tomah Branch Line Loop Related Spill Totals

No spills occurred during this reporting period.

La Crescent Compressor Station

Northern will complete minor aboveground facility modifications within its existing La Crescent compressor station facility. The site is located in Section 16, T104N, R5W, Houston County, Minnesota. The facility modifications will consist of replacing the current blind flanges with compressor cylinder end caps; Northern will not complete any ground disturbance at this site and all work will be completed inside the compressor building. There will be no change to the horsepower or emissions at the facility as a result of the Project.

Environmental Training

Archrock Services LP (Archrock) will make the modifications at the La Crescent compressor station. The environmental training totals listed below reflect all training conducted to date for this component.

On-site Contractor: Archrock

Overall Construction Start Date: July 22, 2025

Environmental Training Conducted: This reporting period: 2 Total to date: 2

Construction Status: Archrock commenced removal of compressor heads July 22, 2025. The existing vibration supports were unable to connect to the new compressor heads so Archrock reinstalled the original compressor heads until modifications to the vibration supports are complete. Northern anticipates the vibration supports to be modified and returned to the station August 20, 2025.

Construction Modifications: There were no construction modifications during this reporting period.

Stream Crossings and Environmentally Sensitive Areas

No stream crossings or other environmentally sensitive areas were impacted during this reporting period.

Rain Events

No rain event of 0.50 inch or greater occurred during this reporting period.

La Crescent Compressor Station Modifications Construction Progress			
Activity	Start Date	Completed	Notes
Compressor modifications	7/22/2025	10%	Compressor modifications are ongoing
*Completed totals include either percentage completed or date all completed. All totals are approximate.			

Two-Week Projection

1. Modify the existing supports.
2. Complete modifications

La Crescent Compressor Station Related Spill Totals

No spills occurred during this reporting period.

PROJECT-WIDE AGENCY COMMUNICATIONS AND SITE VISITS

On July 29, 2025, Clay Roesler, third-party FERC inspector from Tetra Tech, conducted an environmental compliance inspection of the pipeline segments.

Lake Mills to Albert Lea E-line: On July 31, 2025, Northern submitted a request to the MDNR and received approval to temporarily increase the dewatering rate to 1,520 gallons per minute at MPs 31.4, 32.1 and 33.0 to remove accumulated stormwater on the Lake Mills to Albert Lea E-line extension.

Elk River 3rd Branch Line: On July 28, 2025, Stantec Consulting Services Inc. (Stantec), Northern's third party environmental consultant, confirmed via phone call with the U.S. Army Corps of Engineers that additional matting through wetland ERT-W14 to address inadvertent releases of HDD P4-2 did not require further permitting. Stantec also informed Rice Creek Watershed District of the proposed additional matting July 29, 2025. Stantec submitted a request for concurrence with a no effect on cultural resources

Northern Natural Gas Company
Northern Lights 2025 Expansion

determination to the Minnesota State Historic Preservation Office (SHPO) August 1, 2025, for additional workspace to install the matting. Once concurrence from SHPO is received, Northern will be filing a variance request with FERC requesting additional workspace to install timber mats from MP 1.45 to 1.55.

PROJECT-WIDE LANDOWNER CONCERNS

No project-wide landowner concerns were raised during this reporting period.

PROJECT-WIDE NON-COMPLIANCE CONCERNS

There were no non-compliance concerns during this reporting period.

PHOTOS

Lake Mills to Albert Lea E-line



Facing north at MP 34.2, BJD filling lake tank



Facing northwest at MP 33.55, K&K sandblasting and coating mainline pipe south of 165th Street

Northern Natural Gas Company
Northern Lights 2025 Expansion



Facing north at MP 31.75, K&K trenching south of 140th Street



Facing northwest at MP 32.65, K&K welding mainline pipe north of 140th Street

Northern Natural Gas Company
Northern Lights 2025 Expansion



Facing south at MP 33.65, ECDs installed south of 165th Street



Facing north at MP 32.0, K&K lowering in mainline pipe north of County Road 80/154th Street

Northern Natural Gas Company
Northern Lights 2025 Expansion



Facing west at MP 33.19, K&K mechanically excavating County Road 80/154th Street crossing



Facing southwest at MP 33.18, K&K lowering-in and tie-in at the County Road 80/154th Street crossing



Facing west at MP 33.19; Jensen backfilling and compacting the County Road 80/154th Street crossing

Elk River 3rd Branch Line



HDD P4-5, continued the pilot pass



Facing east near MP 3.3, restoration commenced



Facing west near MP 1.35, welding bore pipe ongoing



Facing south near MP 1.0, removal of short segment of existing pipe to accommodate HDD activities and backfill completed

Farmington-Hugo C-Line Extension



Facing west, view of the Bald Eagle near MP 1.6



Facing north, Otis commenced ditching near MP 1.58



Facing south, valve installed at the Farmington tie-over valve setting near MP 1.9

Northern Natural Gas Company
Northern Lights 2025 Expansion



Facing north, sound wall installed at HDD P4-1 near MP 0.55



Facing north, Otis lowering-in the line pipe near MP 1.6



Facing north, Otis backfilling the ditch near MP 1.6



Facing west, Otis commenced topsoil restoration near MP 1.68



Facing north, topsoil restoration stabilized near MP 1.8

Tomah Branch Line Loop



Facing southeast near MP 2.55, contractor completing tie-in



Facing west near MP 3.5, contractor performing weed control



Facing east near MP 3.2, contractor welding pipe



Facing east near MP 3.4, contractor backfilling ditch line



Facing east near MP 3.35, contractor digging ditch



Facing east near MP 3.3, contractor lowering-in pipe

LaCrescent Compressor Station



Facing west, Archrock removing compressor head

Northern Natural Gas Company
Northern Lights 2025 Expansion



Facing south, Archrock installing new support



Facing west, Archrock installing new compressor head



PCB wipe of removed compressor head



Environmental Procedure
Appendix M: Horizontal Directional Drill Daily Report

380.203m
1 of 1

Project:		NL25 Elk River 3rd BL Extension												WO:		1146979	
Drill:	P4-2	Date:	7/21/25	Footage:	0	Depth:	0	Phase:	First ream								
Drilling Fluids:	MAXGEL													Approved by DES	Yes		
	Water													Approved by DES	Yes		
	Soda Ash Right Turn Supply, Drill-Plex HDD, Platinum Pac UL, Clay Crusher, Seal Force, Magma Fiber													Approved by DES	Yes		
Person Walking Drill Path		Austin Cleveland			Role	EI		Frequency	Hourly		IR Detected	No					
		Richard Benike				Contractor			Continuously								
						Contractor			Hourly								
NSA#	Time	1:00	3:00	5:00	7:00	9:00	11:00	13:00	15:00	17:00	19:00	21:00	23:00	Daytime Average	Nighttime Average		
NSA-08				N/A		37.8	40.5	39.6	44.3	N/A	N/A	N/A		40.55			
NSA-11				N/A		38.1	41.3	42.8	38.1	N/A	N/A	N/A		40.08			
NSA-12				N/A		38.4	38.1	46.0	40.9	N/A	N/A	N/A		40.85			
NSA-13				N/A		35.8	37.2	41.3	37.8	N/A	N/A	N/A		38.03			
Notes: Contractor continued first reaming phase with 30-inch reamer. Contractor had to trip pipe back out and gained 0 feet total.																	



Environmental Procedure
Appendix M: Horizontal Directional Drill Daily Report

380.203m
1 of 1

Project: NL25 Elk River 3rd BL Extension				WO: 1146979											
Drill:	P4-2	Date:	7/22/25	Footage:	0	Depth:	0	Phase:	First ream						
Drilling Fluids:	MAXGEL							Approved by DES	Yes						
	Water							Approved by DES	Yes						
	Soda Ash Right Turn Supply, Drill-Plex HDD, Platinum Pac UL, Clay Crusher, Seal Force, Magma Fiber							Approved by DES	Yes						
Person Walking Drill Path		Austin Cleveland		Role	EI		Frequency	Hourly		IR Detected	Yes				
		Richard Benike			Contractor										
					Contractor										
NSA#	Time	1:00	3:00	5:00	7:00	9:00	11:00	13:00	15:00	17:00	19:00	21:00	23:00	Daytime Average	Nighttime Average
NSA-08				N/A		40.1	42.3	N/A	N/A	N/A	N/A	N/A		41.20	
NSA-11				N/A		42.1	44.0	N/A	N/A	N/A	N/A	N/A		43.05	
NSA-12				N/A		35.9	44.6	N/A	N/A	N/A	N/A	N/A		40.25	
NSA-13				N/A		37.6	36.8	N/A	N/A	N/A	N/A	N/A		37.20	
Notes: Contractor continued first reaming phase with 30-inch reamer. Contractor replaced the hole opener reamer, with the 30-inch fly cutter reamer.															



Environmental Procedure
Appendix M: Horizontal Directional Drill Daily Report

380.203m
1 of 1

Project:		NL25 Elk River 3rd BL Extension												WO:		1146979	
Drill:	P4-2	Date:	7/23/25	Footage:	0	Depth:	0	Phase:	First ream								
Drilling Fluids:	MAXGEL													Approved by DES	Yes		
	Water													Approved by DES	Yes		
	Soda Ash Right Turn Supply, Drill-Plex HDD, Platinum Pac UL, Clay Crusher, Seal Force, Magma Fiber													Approved by DES	Yes		
Person Walking Drill Path		Austin Cleveland			Role	EI		Frequency	Hourly		IR Detected	No					
		Richard Benike				Contractor			Continuously								
						Contractor			Hourly								
NSA#	Time	1:00	3:00	5:00	7:00	9:00	11:00	13:00	15:00	17:00	19:00	21:00	23:00	Daytime Average	Nighttime Average		
NSA-08					N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A					
NSA-11					N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A					
NSA-12					N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A					
NSA-13					N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A					
Notes: Contractor continued cleaning IR and is awaiting approval to continue reaming.																	



Environmental Procedure
Appendix M: Horizontal Directional Drill Daily Report

380.203m

1 of 1

Project: NL25 Elk River 3rd BL Extension

WO: 1146979

Drill:	P4-2	Date:	7/24/25	Footage:	0	Depth:	0	Phase:	First ream
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Drilling Fluids:	MAXGEL	Approved by DES	Yes
	Water	Approved by DES	Yes
	Soda Ash Right Turn Supply, Drill-Plex HDD, Platinum Pac UL, Clay Crusher, Seal Force, Magma Fiber	Approved by DES	Yes

Person Walking Drill Path	Austin Cleveland	Role	EI	Frequency	Hourly	IR Detected	No
	Richard Benike		Contractor		Continuously		
			Contractor		Hourly		

NSA#	Time	1:00	3:00	5:00	7:00	9:00	11:00	13:00	15:00	17:00	19:00	21:00	23:00	Daytime Average	Nighttime Average
NSA-08					N/A	N/A	38.1	37.5	N/A	N/A	N/A	N/A		37.80	
NSA-11					N/A	N/A	42.7	44.1	N/A	N/A	N/A	N/A		43.40	
NSA-12					N/A	N/A	46.3	44.3	N/A	N/A	N/A	N/A		45.30	
NSA-13					N/A	N/A	39.0	38.8	N/A	N/A	N/A	N/A		38.90	

Notes: Contractor completed IR cleaning, then push reamed. This resulted in a continuance in the IR. The contractor stopped all reaming and cleaned the continuance.



Environmental Procedure
Appendix M: Horizontal Directional Drill Daily Report

380.203m
1 of 1

Project: NL25 Elk River 3rd BL Extension				WO: 1146979											
Drill:	P4-2	Date:	7/25/25	Footage:	0	Depth:	0	Phase:	First ream						
Drilling Fluids:	MAXGEL							Approved by DES	Yes						
	Water							Approved by DES	Yes						
	Soda Ash Right Turn Supply, Drill-Plex HDD, Platinum Pac UL, Clay Crusher, Seal Force, Magma Fiber							Approved by DES	Yes						
Person Walking Drill Path		Austin Cleveland			Role	EI		Frequency	Hourly		IR Detected	Yes			
		Richard Benike				Contractor			Continuously						
						Contractor			Hourly						
NSA#	Time	1:00	3:00	5:00	7:00	9:00	11:00	13:00	15:00	17:00	19:00	21:00	23:00	Daytime Average	Nighttime Average
NSA-08					N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A			
NSA-11					N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A			
NSA-12					N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A			
NSA-13					N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A			
Notes: Contractor had a sinkhole near the original IR and by the sound wall within the workspace. This resulted in a safety stand down.															



Environmental Procedure
Appendix M: Horizontal Directional Drill Daily Report

380.203m
1 of 1

Project: NL25 Elk River 3rd BL Extension				WO: 1146979											
Drill:	P4-2	Date:	7/26/25	Footage:	0	Depth:	0	Phase:	First ream						
Drilling Fluids:	MAXGEL							Approved by DES	Yes						
	Water							Approved by DES	Yes						
	Soda Ash Right Turn Supply, Drill-Plex HDD, Platinum Pac UL, Clay Crusher, Seal Force, Magma Fiber							Approved by DES	Yes						
Person Walking Drill Path		Austin Cleveland		Role	EI		Frequency	Hourly		IR Detected	No				
		Richard Benike			Contractor										
					Contractor										
NSA#	Time	1:00	3:00	5:00	7:00	9:00	11:00	13:00	15:00	17:00	19:00	21:00	23:00	Daytime Average	Nighttime Average
NSA-08					N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A			
NSA-11					N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A			
NSA-12					N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A			
NSA-13					N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A			
Notes: Contractor awaiting approval to conduct further work.															



Environmental Procedure
Appendix M: Horizontal Directional Drill Daily Report

380.203m
1 of 1

Project: NL25 Elk River 3rd BL Extension				WO: 1146979											
Drill:	P4-2	Date:	7/28/25	Footage:	0	Depth:	0	Phase:	First ream						
Drilling Fluids:	MAXGEL							Approved by DES	Yes						
	Water							Approved by DES	Yes						
	Soda Ash Right Turn Supply, Drill-Plex HDD, Platinum Pac UL, Clay Crusher, Seal Force, Magma Fiber							Approved by DES	Yes						
Person Walking Drill Path	Austin Cleveland			Role	EI		Frequency	Hourly		IR Detected	No				
	Richard Benike				Contractor			Continuously							
					Contractor			Hourly							
NSA#	Time	1:00	3:00	5:00	7:00	9:00	11:00	13:00	15:00	17:00	19:00	21:00	23:00	Daytime Average	Nighttime Average
NSA-08					N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A			
NSA-11					N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A			
NSA-12					N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A			
NSA-13					N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A			
Notes: Contractor awaiting approval to lay timber mats along bore path.															



Environmental Procedure
Appendix M: Horizontal Directional Drill Daily Report

380.203m
1 of 1

Project: NL25 Elk River 3rd BL Extension				WO: 1146979											
Drill:	P4-2	Date:	7/29/25	Footage:	0	Depth:	0	Phase:	First ream						
Drilling Fluids:	MAXGEL							Approved by DES	Yes						
	Water							Approved by DES	Yes						
	Soda Ash Right Turn Supply, Drill-Plex HDD, Platinum Pac UL, Clay Crusher, Seal Force, Magma Fiber							Approved by DES	Yes						
Person Walking Drill Path		Austin Cleveland		Role	EI		Frequency	Hourly		IR Detected	No				
		Richard Benike			Contractor			Continuously							
					Contractor			Hourly							
NSA#	Time	1:00	3:00	5:00	7:00	9:00	11:00	13:00	15:00	17:00	19:00	21:00	23:00	Daytime Average	Nighttime Average
NSA-08				N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A			
NSA-11				N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A			
NSA-12				N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A			
NSA-13				N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A			
Notes: Contractor performed housekeeping on P4-2 drill site.															



Environmental Procedure
Appendix M: Horizontal Directional Drill Daily Report

380.203m
1 of 1

Project:		NL25 Elk River 3rd BL Extension												WO:		1146979	
Drill:	P4-2	Date:	7/30/25	Footage:	31.61-feet	Depth:	0	Phase:	First ream								
Drilling Fluids:	MAXGEL												Approved by DES	Yes			
	Water												Approved by DES	Yes			
	Soda Ash Right Turn Supply, Drill-Plex HDD, Platinum Pac UL, Clay Crusher, Seal Force, Magma Fiber												Approved by DES	Yes			
Person Walking Drill Path		Austin Cleveland				Role	EI		Frequency	Hourly		IR Detected	No				
		Richard Benike					Contractor			Continuously							
							Contractor			Hourly							
NSA#	Time	1:00	3:00	5:00	7:00	9:00	11:00	13:00	15:00	17:00	19:00	21:00	23:00	Daytime Average	Nighttime Average		
NSA-08					N/A	N/A	N/A	N/A	N/A	N/A	36.4				36.40		
NSA-11					N/A	N/A	N/A	N/A	N/A	N/A	33.9				33.90		
NSA-12					N/A	N/A	N/A	N/A	N/A	N/A	34.6				34.60		
NSA-13					N/A	N/A	N/A	N/A	N/A	N/A	32.3				32.30		
Notes: Contractor resumed pull ream with 30-inch tri-fly reamer.																	



Environmental Procedure
Appendix M: Horizontal Directional Drill Daily Report

380.203m
1 of 1

Project:		NL25 Elk River 3rd BL Extension												WO:		1146979	
Drill:	P4-2	Date:	7/31/25	Footage:	221.24-feet	Depth:	0	Phase:	First ream								
Drilling Fluids:	MAXGEL												Approved by DES	Yes			
	Water												Approved by DES	Yes			
	Soda Ash Right Turn Supply, Drill-Plex HDD, Platinum Pac UL, Clay Crusher, Seal Force, Magma Fiber												Approved by DES	Yes			
Person Walking Drill Path		Austin Cleveland				Role	EI		Frequency	Hourly		IR Detected	No				
		Richard Benike					Contractor			Continuously							
							Contractor			Hourly							
NSA#	Time	1:00	3:00	5:00	7:00	9:00	11:00	13:00	15:00	17:00	19:00	21:00	23:00	Daytime Average	Nighttime Average		
NSA-08					N/A	N/A	38.4	N/A	46.2	38.5				42.30			
NSA-11					N/A	N/A	41.2	N/A	38.9	37.1				40.05			
NSA-12					N/A	N/A	37.6	N/A	40.0	41.7				38.80			
NSA-13					N/A	N/A	44.0	N/A	35.4	39.8				39.70			
Notes: Contractor continued pull ream with 30-inch tri-fly reamer. Contractor ended the day with 668.85 feet reamed.																	



Environmental Procedure
 Appendix M: Horizontal Directional Drill Daily Report

380.203m
 1 of 1

Project: NL25 Elk River 3rd BL Extension				WO: 1146979			
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Drill:	P4-2	Date:	8/1/25	Footage:	284.45-feet	Depth:	0	Phase:	First ream
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Drilling Fluids:	MAXGEL	Approved by DES	Yes
	Water	Approved by DES	Yes
	Soda Ash Right Turn Supply, Drill-Plex HDD, Platinum Pac UL, Clay Crusher, Seal Force, Magma Fiber	Approved by DES	Yes

Person Walking Drill Path	Austin Cleveland	Role	EI	Frequency	Hourly	IR Detected	No
	Richard Benike		Contractor		Continuously		
			Contractor		Hourly		

NSA#	Time	1:00	3:00	5:00	7:00	9:00	11:00	13:00	15:00	17:00	19:00	21:00	23:00	Daytime Average	Nighttime Average
NSA-08				N/A		42.1	43.2	41.7	39.1	39.3				41.53	
NSA-11				N/A		39.9	44.6	39.6	46.0	41.5				42.53	
NSA-12				N/A		44.5	39.6	37.9	38.5	37.4				40.13	
NSA-13				N/A		41.0	38.4	42.4	42.6	38.6				41.10	

Notes: Contractor continued pull ream with 30-inch tri-fly reamer. Contractor ended the day with 980.3 feet reamed.



Environmental Procedure
Appendix M: Horizontal Directional Drill Daily Report

380.203m
1 of 1

Project: NL25 Elk River 3rd BL Extension

WO: 1146979

Drill:	P4-5	Date:	7/21/2025	Footage:	0	Depth:	0	Phase:	Pilot
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Drilling Fluids:	MAXGEL	Approved by DES	Yes
	Water	Approved by DES	Yes
	Soda Ash Right Turn Supply, Drill-Plex HDD, Platinum Pac UL, Clay Crusher, Seal Force, Magma Fiber	Approved by DES	Yes

Person Walking Drill Path	Nelson Casey	Role	EI	Frequency	Hourly	IR Detected	No
	John Odom		Contractor		Continuously		
			Contractor		Hourly		

NSA#	Time	1:00	3:00	5:00	7:00	9:00	11:00	13:00	15:00	17:00	19:00	21:00	23:00	Daytime Average	Nighttime Average
NSA-28				N/A	N/A	N/A	N/A	N/A	N/A	39.7	40.4	N/A		39.70	40.40
NSA-29				N/A	N/A	N/A	N/A	N/A	N/A	37.4	38.1	N/A		37.40	38.10
NSA-32				N/A	N/A	N/A	N/A	N/A	N/A	26.1	25.3	N/A		26.10	25.30
NSA-33				N/A	N/A	N/A	N/A	N/A	N/A	27.3	28.8	N/A		27.30	28.80

Notes: Drill P4-5 commenced drill operation at 1530 and stopped operating at 2030.



Environmental Procedure
Appendix M: Horizontal Directional Drill Daily Report

380.203m
1 of 1

Project: NL25 Elk River 3rd BL Extension

WO: 1146979

Drill:	P4-5	Date:	7/22/2025	Footage:	512	Depth:	100	Phase:	Pilot
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Drilling Fluids:	MAXGEL	Approved by DES	Yes
	Water	Approved by DES	Yes
	Soda Ash Right Turn Supply, Drill-Plex HDD, Platinum Pac UL, Clay Crusher, Seal Force, Magma Fiber	Approved by DES	Yes

Person Walking Drill Path	Nelson Casey	Role	El	Frequency	Hourly	IR Detected	No
	John Odom		Contractor		Continuously		
			Contractor		Hourly		

NSA#	Time	1:00	3:00	5:00	7:00	9:00	11:00	13:00	15:00	17:00	19:00	21:00	23:00	Daytime Average	Nighttime Average
NSA-28					N/A	N/A	40.7	40.1	38.6	40.3	N/A	N/A		39.93	
NSA-29					N/A	N/A	37.2	37.5	38.1	35.7	N/A	N/A		37.13	
NSA-32					N/A	N/A	35.2	33.9	34.7	32.4	N/A	N/A		34.05	
NSA-33					N/A	N/A	36.7	35.4	35.3	34.9	N/A	N/A		35.58	

Notes: Drill P4-5 commenced drill operation at 0930 and stopped operating at 1730.



Environmental Procedure
Appendix M: Horizontal Directional Drill Daily Report

380.203m
1 of 1

Project: NL25 Elk River 3rd BL Extension

WO: 1146979

Drill:	P4-5	Date:	7/23/2025	Footage:	596	Depth:	102	Phase:	Pilot
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Drilling Fluids:	MAXGEL	Approved by DES	Yes
	Water	Approved by DES	Yes
	Soda Ash Right Turn Supply, Drill-Plex HDD, Platinum Pac UL, Clay Crusher, Seal Force, Magma Fiber		Approved by DES

Person Walking Drill Path	Nelson Casey	Role	El	Frequency	Hourly	IR Detected	No
	John Odom		Contractor		Continuously		
			Contractor		Hourly		

NSA#	Time	1:00	3:00	5:00	7:00	9:00	11:00	13:00	15:00	17:00	19:00	21:00	23:00	Daytime Average	Nighttime Average
NSA-28					N/A	39.6	38.2	N/A	N/A	41.6	N/A	N/A		39.80	
NSA-29					N/A	36.3	38.4	N/A	N/A	37.4	N/A	N/A		37.37	
NSA-32					N/A	34.8	33.9	N/A	N/A	33.9	N/A	N/A		34.20	
NSA-33					N/A	35.1	31.2	N/A	N/A	34.5	N/A	N/A		33.60	

Notes: Drill P4-5 completed drill operations from 0800 to 1855 and from 1945 to 2035.



Environmental Procedure
Appendix M: Horizontal Directional Drill Daily Report

380.203m
1 of 1

Project: NL25 Elk River 3rd BL Extension

WO: 1146979

Drill:	P4-5	Date:	7/24/2025	Footage:	596	Depth:	102	Phase:	Pilot
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Drilling Fluids:	MAXGEL	Approved by DES	Yes
	Water	Approved by DES	Yes
	Soda Ash Right Turn Supply, Drill-Plex HDD, Platinum Pac UL, Clay Crusher, Seal Force, Magma Fiber		Approved by DES

Person Walking Drill Path	Nelson Casey	Role	El	Frequency	Hourly	IR Detected	No
	Zach Miller		Contractor		Continuously		
	John Odom		Contractor		Hourly		

NSA#	Time	1:00	3:00	5:00	7:00	9:00	11:00	13:00	15:00	17:00	19:00	21:00	23:00	Daytime Average	Nighttime Average
NSA-28					N/A	41.4	40.6	N/A	40.2	N/A	38.7	N/A		40.73	38.70
NSA-29					N/A	37.8	38.3	N/A	38.6	N/A	37.3	N/A		38.23	37.30
NSA-32					N/A	32.5	35.3	N/A	33.9	N/A	34.6	N/A		33.90	34.60
NSA-33					N/A	34.1	33.8	N/A	31.3	N/A	35.1	N/A		33.07	35.10

Notes: Drill P4-5 completed drill operations from 0800 to 1855 and from 1945 to 2035.



Environmental Procedure
Appendix M: Horizontal Directional Drill Daily Report

380.203m
1 of 1

Project: NL25 Elk River 3rd BL Extension

WO: 1146979

Drill:	P4-5	Date:	7/25/2025	Footage:	607	Depth:	110	Phase:	Pilot
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Drilling Fluids:	MAXGEL	Approved by DES	Yes
	Water	Approved by DES	Yes
	Soda Ash Right Turn Supply, Drill-Plex HDD, Platinum Pac UL, Clay Crusher, Seal Force, Magma Fiber		Approved by DES

Person Walking Drill Path	Nelson Casey	Role	El	Frequency	Hourly	IR Detected	No
	Zach Miller		Contractor		Continuously		
	John Odom		Contractor		Hourly		

NSA#	Time	1:00	3:00	5:00	7:00	9:00	11:00	13:00	15:00	17:00	19:00	21:00	23:00	Daytime Average	Nighttime Average
NSA-28					N/A	N/A	41.2	40.3	41.4	38.8	40.6	N/A		40.43	40.60
NSA-29					N/A	N/A	38.5	37.4	37.4	38.3	36.9	N/A		37.90	36.90
NSA-32					N/A	N/A	34.7	35.1	35.6	34.2	33.7	N/A		34.90	33.70
NSA-33					N/A	N/A	32.3	33.7	33.5	34.8	31.4	N/A		33.58	31.40

Notes: Drill P4-5 completed drill operations from 0730 to 0815 and from 0945 to 2035.



Environmental Procedure
Appendix M: Horizontal Directional Drill Daily Report

380.203m
1 of 1

Project: NL25 Elk River 3rd BL Extension

WO: 1146979

Drill:	P4-5	Date:	7/26/2025	Footage:	607	Depth:	110	Phase:	Pilot
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Drilling Fluids:	MAXGEL	Approved by DES	Yes
	Water	Approved by DES	Yes
	Soda Ash Right Turn Supply, Drill-Plex HDD, Platinum Pac UL, Clay Crusher, Seal Force, Magma Fiber		Approved by DES

Person Walking Drill Path	Nelson Casey	Role	El	Frequency	Hourly	IR Detected	No
	Zach Miller		Contractor		Continuously		
	John Odom		Contractor		Hourly		

NSA#	Time	1:00	3:00	5:00	7:00	9:00	11:00	13:00	15:00	17:00	19:00	21:00	23:00	Daytime Average	Nighttime Average
NSA-28					N/A	39.4	39.4	N/A	40.1	N/A	41.5	N/A		39.63	41.50
NSA-29					N/A	36.7	38.5	N/A	37.3	N/A	36.4	N/A		37.50	36.40
NSA-32					N/A	33.1	35.2	N/A	31.8	N/A	33.5	N/A		33.37	33.50
NSA-33					N/A	32.2	35.6	N/A	34.1	N/A	32.8	N/A		33.97	32.80

Notes: Drill P4-5 completed drill operations from 0730 to 1215, from 1430 to 1610 and from 1850 to 2035.



Environmental Procedure
Appendix M: Horizontal Directional Drill Daily Report

380.203m
1 of 1

Project: NL25 Elk River 3rd BL Extension

WO: 1146979

Drill:	P4-5	Date:	7/28/2025	Footage:	890	Depth:	136.7	Phase:	Pilot
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Drilling Fluids:	MAXGEL	Approved by DES	Yes
	Water	Approved by DES	Yes
	Soda Ash Right Turn Supply, Drill-Plex HDD, Platinum Pac UL, Clay Crusher, Seal Force, Magma Fiber		Approved by DES

Person Walking Drill Path	Nelson Casey	Role	El	Frequency	Hourly	IR Detected	No
	Zach Miller		Contractor		Continuously		
	John Odom		Contractor		Hourly		

NSA#	Time	1:00	3:00	5:00	7:00	9:00	11:00	13:00	15:00	17:00	19:00	21:00	23:00	Daytime Average	Nighttime Average
NSA-28					N/A	40.3	38.9	41.1	40.8	40.3	39.6	N/A		40.28	39.60
NSA-29					N/A	37.6	36.4	38.3	37.3	39.1	36.9	N/A		37.74	36.90
NSA-32					N/A	34.2	34.2	33.7	35.7	32.4	33.5	N/A		34.04	33.50
NSA-33					N/A	35.6	33.5	34.1	32.6	35.2	34.8	N/A		34.20	34.80

Notes: Drill P4-5 commenced drill operation at 0730 and stopped operating drill at 2035.



Environmental Procedure
Appendix M: Horizontal Directional Drill Daily Report

380.203m
1 of 1

Project: NL25 Elk River 3rd BL Extension

WO: 1146979

Drill:	P4-5	Date:	7/29/2025	Footage:	890	Depth:	136.7	Phase:	Pilot
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Drilling Fluids:	MAXGEL	Approved by DES	Yes
	Water	Approved by DES	Yes
	Soda Ash Right Turn Supply, Drill-Plex HDD, Platinum Pac UL, Clay Crusher, Seal Force, Magma Fiber		Approved by DES

Person Walking Drill Path	Nelson Casey	Role	El	Frequency	Hourly	IR Detected	No
	Zach Miller		Contractor		Continuously		
	John Odom		Contractor		Hourly		

NSA#	Time	1:00	3:00	5:00	7:00	9:00	11:00	13:00	15:00	17:00	19:00	21:00	23:00	Daytime Average	Nighttime Average
NSA-28					N/A	N/A	N/A	N/A	40.1	41.5	38.3	N/A		40.80	38.30
NSA-29					N/A	N/A	N/A	N/A	38.9	36.7	38.1	N/A		37.80	38.10
NSA-32					N/A	N/A	N/A	N/A	34.5	31.2	35.7	N/A		32.85	35.70
NSA-33					N/A	N/A	N/A	N/A	33.0	34.6	31.9	N/A		33.80	31.90

Notes: Drill P4-5 commenced drill operation at 1350 and stopped operating drill at 2010.



Environmental Procedure
Appendix M: Horizontal Directional Drill Daily Report

380.203m
1 of 1

Project: NL25 Elk River 3rd BL Extension

WO: 1146979

Drill:	P4-5	Date:	7/30/2025	Footage:	698	Depth:	116	Phase:	Pilot
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Drilling Fluids:	MAXGEL	Approved by DES	Yes
	Water	Approved by DES	Yes
	Soda Ash Right Turn Supply, Drill-Plex HDD, Platinum Pac UL, Clay Crusher, Seal Force, Magma Fiber		Approved by DES

Person Walking Drill Path	Nelson Casey	Role	El	Frequency	Hourly	IR Detected	No
	Zach Miller		Contractor		Continuously		
	John Odom		Contractor		Hourly		

NSA#	Time	1:00	3:00	5:00	7:00	9:00	11:00	13:00	15:00	17:00	19:00	21:00	23:00	Daytime Average	Nighttime Average
NSA-28					N/A	40.3	39.7	41.3	38.4	40.6	40.6	N/A		40.06	40.60
NSA-29					N/A	38.3	36.2	36.7	37.1	38.7	35.8	N/A		37.40	35.80
NSA-32					N/A	33.6	32.1	34.3	33.7	35.3	32.4	N/A		33.80	32.40
NSA-33					N/A	31.2	34.5	33.3	32.9	34.1	33.7	N/A		33.20	33.70

Notes: Drill P4-5 commenced drill operation at 1350 and stopped operating drill at 2010.



Environmental Procedure
Appendix M: Horizontal Directional Drill Daily Report

380.203m
1 of 1

Project: NL25 Elk River 3rd BL Extension

WO: 1146979

Drill:	P4-5	Date:	7/31/2025	Footage:	887	Depth:	122	Phase:	Pilot
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Drilling Fluids:	MAXGEL	Approved by DES	Yes
	Water	Approved by DES	Yes
	Soda Ash Right Turn Supply, Drill-Plex HDD, Platinum Pac UL, Clay Crusher, Seal Force, Magma Fiber		Approved by DES

Person Walking Drill Path	Nelson Casey	Role	El	Frequency	Hourly	IR Detected	No
	Zach Miller		Contractor		Continuously		
	John Odom		Contractor		Hourly		

NSA#	Time	1:00	3:00	5:00	7:00	9:00	11:00	13:00	15:00	17:00	19:00	21:00	23:00	Daytime Average	Nighttime Average
NSA-28					N/A	35.6	38.1	40.0	39.3	N/A	N/A	N/A		38.25	
NSA-29					N/A	37.3	35.1	38.4	36.7	N/A	N/A	N/A		36.88	
NSA-32					N/A	34.3	36.2	33.9	34.1	N/A	N/A	N/A		34.63	
NSA-33					N/A	35.7	33.7	35.2	32.6	N/A	N/A	N/A		34.30	

Notes: Drill P4-5 completed drill operations from 0735 to 1540 and from 1955 to 2030.



Environmental Procedure
Appendix M: Horizontal Directional Drill Daily Report

380.203m
1 of 1

Project: NL25 Elk River 3rd BL Extension

WO: 1146979

Drill:	P4-5	Date:	8/1/2025	Footage:	887	Depth:	122	Phase:	Pilot
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Drilling Fluids:	MAXGEL	Approved by DES	Yes
	Water	Approved by DES	Yes
	Soda Ash Right Turn Supply, Drill-Plex HDD, Platinum Pac UL, Clay Crusher, Seal Force, Magma Fiber	Approved by DES	Yes

Person Walking Drill Path	Nelson Casey	Role	El	Frequency	Hourly	IR Detected	No
	Zach Miller		Contractor		Continuously		
	John Odom		Contractor		Hourly		

NSA#	Time	1:00	3:00	5:00	7:00	9:00	11:00	13:00	15:00	17:00	19:00	21:00	23:00	Daytime Average	Nighttime Average
NSA-28					N/A	37.9	N/A	N/A	39.2	N/A	N/A	N/A		38.55	
NSA-29					N/A	36.3	N/A	N/A	38.4	N/A	N/A	N/A		37.35	
NSA-32					N/A	33.2	N/A	N/A	35.6	N/A	N/A	N/A		34.40	
NSA-33					N/A	31.2	N/A	N/A	33.1	N/A	N/A	N/A		32.15	

Notes: Drill P4-5 completed drill operations from 0735 to 1050 and from 1335 to 1640.



Environmental Procedure
Appendix M: Horizontal Directional Drill Daily Report

380.203m
1 of 1

Project: NL25 Elk River 3rd BL Extension

WO: 1146979

Drill:	P4-5	Date:	8/2/2025	Footage:	918	Depth:	124	Phase:	Pilot
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Drilling Fluids:	MAXGEL	Approved by DES	Yes
	Water	Approved by DES	Yes
	Soda Ash Right Turn Supply, Drill-Plex HDD, Platinum Pac UL, Clay Crusher, Seal Force, Magma Fiber		Approved by DES

Person Walking Drill Path	Nelson Casey	Role	El	Frequency	Hourly	IR Detected	No
	Zach Miller		Contractor		Continuously		
	John Odom		Contractor		Hourly		

NSA#	Time	1:00	3:00	5:00	7:00	9:00	11:00	13:00	15:00	17:00	19:00	21:00	23:00	Daytime Average	Nighttime Average
NSA-28					N/A	40.3	37.9	41.2	41.2	N/A	N/A	N/A		40.15	
NSA-29					N/A	37.4	38.6	38.6	36.3	N/A	N/A	N/A		37.73	
NSA-32					N/A	34.7	32.3	35.1	33.7	N/A	N/A	N/A		33.95	
NSA-33					N/A	33.5	33.2	35.7	31.1	N/A	N/A	N/A		33.38	

Notes: Drill P4-5 commenced drill operation at 0800 and stopped operating drill at 1630.