

August 9, 2021

Dear Honorable Senators and Representatives:

Thank you for your letter dated July 27, 2021, regarding the inadvertent drilling fluid releases that have occurred along the Line 3 Replacement Pipeline project. This letter and the accompanying attachments provide responses to your July 27 letter.

Throughout the Line 3 permitting process, the Minnesota Pollution Control Agency (MPCA) was committed to ensuring the 401 Water Quality Certification provided robust and comprehensive protections to Minnesota's waters and followed all permitting requirements under the law. As explained below and in Attachment A, the agency is closely monitoring Enbridge's work, and when violations occur or there are concerns that the company is not complying with the MPCA's permits, we are investigating and taking appropriate enforcement action.

I want to be clear that the MPCA's 401 Water Quality Certification does not authorize any release of drilling fluid to any wetland, river or other surface water. As a result, all inadvertent releases in surface waters are under active enforcement investigation.

As you may know, the horizontal directional drilling (HDD) crossing method is "trenchless," and does not require physical modification of a stream bed or banks, so is generally a less degrading stream crossing method. HDD uses pressurized drilling mud (potentially mixed with additives) to lubricate and cool the drill bit and return cuttings from the bore hole to the surface to clear the hole maintain drilling operations. "Inadvertent releases," where the drilling fluid escapes the bore hole and migrates through fractures in the soil/substrate to the surface, are a known risk associated with HDD activity.

For this reason, the MPCA (and DNR) required geotechnical analyses of all areas proposed for HDD crossing in order to ensure that the crossing method was appropriate for each proposed location. Even with such analyses, however, the risk of inadvertent release was not, and has never been represented as, zero. In fact, the Antidegradation Assessment submitted as part of the request for 401 Water Quality Certification stated,

"Specifically, the risk of inadvertent release is low (calculated factor of safety above 1.0) over the portion of the drill that underlies the waterbody. In some instances, the calculated factors of safety drop below 1.0, indicating a higher risk of inadvertent returns, for a portion of the drill beyond the banks of the waterbody, as the drill nears the exit point. Inadvertent drilling fluid returns near the exit point of HDDs are common and anticipated as the bit approaches the surface..."

The MPCA's 401 Water Quality Certification included numerous other safeguards at HDD crossings. It put restrictions on construction in sensitive waters and upstream from wild rice waters. All possible drilling mud additives for the project were identified and reviewed by water quality staff and compared against federal Maximum Contaminant Levels (MCLs) and state Health Risk Limits (HRLs)/Health Based Values (HBVs) to ensure expected levels would be below levels of concern for drinking water/groundwater.

Independent environmental monitors, who report directly to state agencies, are required to be onsite at all active HDD crossings, and are present at all release sites to oversee containment and cleanup response activities. State agencies receive daily reports and incident reports from the independent environmental monitors. In addition, state agencies, along with Enbridge, regularly meet to discuss safety concerns and possible environmental protection challenges. The independent environmental monitors confirm the use of additives before drilling commences at a water crossing.

Because of the known risk of inadvertent releases, the agencies also required that Enbridge prepare site-specific inadvertent release response plans (IRRP) for each stream crossing location, in order to ensure that if and when releases occurred, they could be promptly and effectively contained and recovered. These plans have been available on the MPCA's website since November 2020.

Throughout the construction of Line 3, the MPCA has placed additional requirements on Enbridge, including increasing the number of independent environmental monitors and requiring the installation of turbidity curtains at numerous river crossings as a preemptive barrier to help clean up any inadvertent drilling fluid releases.

As you may know, Minnesota Statute 13.39 (the Data Practices Act) classifies as nonpublic the data collected as part of an active investigation. The statute provides a pathway by which the agency may release some data associated with the investigation – if it is determined that access to data will “aid the law enforcement process, promote public health or safety, or dispel widespread rumor or unrest.

As misinformation about the HDD activity increased, the MPCA shared additional information on social media and with media in the interest of dispelling widespread rumor. The information provided in attachments to this letter may not provide complete response to your inquiries; however, we are committed to providing additional information as soon as we are able, compliant with the Data Practices Act.

Please note that the information attached describes inadvertent releases at twelve (12) locations, an increase from the nine previously announced by the MPCA. The additional release locations include sites where releases occurred exclusively outside of surface waters (in “uplands”); as a result, the MPCA did not receive immediate notification of these incidents.

Notification of releases to upland areas is not required by the 401 Water Quality Certification. In preparing response to your inquiry, we requested additional information from Enbridge and the independent environmental monitors, including for releases outside the authority of the 401 Certification. Please also note that the attached table may include multiple releases at individual crossing locations.

Name: MPCA Line 3 Response

Page 3

Date: August 9, 2021

Thank you again for reaching out. I look forward to continuing dialogue to address any further concerns.

Sincerely,

A handwritten signature in blue ink that reads "Peter Tester". The signature is written in a cursive, flowing style.

Peter Tester
Commissioner
Minnesota Pollution Control Agency

Attachment A

Included below and attached where appropriate are data responsive to the bolded information requests from your July 27, 2021, letter.

- **Dates and locations of each incident;**

- Between June 8 and August 5, there were 12 river crossings that had inadvertent releases of drilling fluid. Some of these river crossings had multiples releases, including East Savannah River and Willow River. One crossing had an inadvertent release into the river. There were 13 inadvertent releases into a wetland, which is not allowed under the MPCA's 401 Water Quality Certification. There were 14 additional inadvertent releases in non-surface water areas, although one of these releases flowed into a wetland.
- Please see Attachment B for additional detail.
"L3R_Consolidated_HDD_IR_Notification_Table"

- **Total amount of drilling fluid released;**

- Please see Attachment B "L3R_Consolidated_HDD_IR_Notification_Table"

- **Total amount of bentonite clay contained in each release;**

- The MPCA is uncertain whether this inquiry is different from the "total amount of drilling fluid released."

- **All materials, gases and substances designated as pollutants contained in each release;**

- Please see Attachment B "L3R_Consolidated_HDD_IR_Notification_Table." Drilling mud additives in use at each location are identified in this table and would be considered pollutants.
- Note also that the drilling mud itself (which can create turbid water/nuisance conditions) can be considered a pollutant if it enters surface waters.

- **How MPCA agency staff or Enbridge's environmental monitors became aware of each incident;**

- MPCA receives event notifications from independent environmental monitors on site, from Enbridge, and from the State Duty Officer. More detailed event notifications typically come via email, but earliest notifications may come in via phone or text.
- Please also see Attachment B "L3R_Consolidated_HDD_IR_Notification_Table" for information how Enbridge environmental staff became aware of each incident.

- **Estimated length of time between the start of each release, detection by the company or agency, and the start of cleanup and mitigation efforts;**

- Containment and cleanup typically begins as soon as a release is discovered. Please see Attachment B "L3R_Consolidated_HDD_IR_Notification_Table" which notes response immediately following detection.
- At the Willow River site, cleanup efforts began upon identification of the release; drilling was shut down during the response and clean up and did not resume until the MPCA, in consultation with Enbridge, had evaluated the circumstances of the release, discussed additional containment/cleanup requirements, and determined that the HDD could may resume in compliance with the 401 Certification. The response effort at Willow River informed MPCA's direction to Enbridge at other HDD locations including making sure proper equipment was operable and in place and that staff onsite were properly trained in

emergency response efforts. The MPCA has required additional containment and response equipment at active HDD sites, including preemptive deployment of turbidity curtains at most locations.

- **Distance between each release and the nearest waterway, wetland or marsh;**
 - Please see Attachment B “L3R_Consolidated_HDD_IR_Notification_Table”
- **How MPCA staff is monitoring the drilling activities throughout construction;**
 - The MPCA receives regular updates from the Independent Environmental Monitors (IEMs) required by Condition #6 of the 401 Water Quality Certification – this includes daily summary reports by construction spread, along with incident-specific reports and informal communications by phone and email, and weekly check-in meetings.
 - Since late May, as HDD activity was expected to begin and eventually ramp up, the MPCA has required an increase in IEMs to ensure that ongoing construction activities could be adequately monitored while also ensuring that IEMs were present during HDD activities; the number of IEMs had increased from 24 (prior to the start of HDD activity) to 41 (at the peak of HDD activity)
 - The MPCA did send its own inspector to the Willow River site to review the containment and cleanup of the in-river release.
 - The MPCA receives a status update daily from Enbridge on drilling activities.
- **The “detailed plans” referenced in the July 21 MPCA Facebook post that Enbridge has provided for cleanup and mitigation; and**
 - [Site Specific Inadvertent Release Response Plans](#) (IRRP)
 - General IRRP Supplement memo (attachment C)
 - Additionally, the MPCA requested preemptive deployment of turbidity curtains at active HDD sites, where feasible on July 15, 2021
- **Whether drilling has resumed at any of the sites that were deemed enforcement violations.**
 - Drilling has resumed (and in some cases, has been completed) at the sites;
 - MPCA has opened an investigation on the releases in anticipation of citing enforcement violations as part of a broader compliance and enforcement action; releases into wetlands or waterbodies should be considered – for now – alleged or potential violations.
 - Note that the [Environmental Protection Plan](#) and [IRRs](#) approved as part of the 401 Water Quality Certification describe the process for resuming drilling activities following an inadvertent release and have been available on the MPCA’s website (first in draft form, then in final form) since March 2020.
- **What number of IEMs have previously worked for Enbridge**
 - Of the 41 IEMs hired for the project, a total of 17 have had experience previously working on Enbridge projects.
 - Having previous experience inspecting/working on pipelines is desirable for environmental monitors. Excluding previous experience on Enbridge projects might risk hiring less qualified/experienced monitors. The IEMs on the Line 3 project are employed by ERM, an experienced consulting firm, and under the authority of the state agencies, not Enbridge.

ATTACHMENT B

<i>Date of IR Occurrence</i>	<i>HDD Name (MP)</i>	<i>County</i>	<i>Spread</i>	<i>Location Relative to Construction Workspace</i>	<i>Discovery Time</i>	<i>Duty Officer Notification Time</i>	<i>Start of Containment / Cleanup Time</i>	<i>Volume of Release</i>	<i>Bentonite / Additives Composition</i>	<i>Enbridge Notification Description</i>	<i>Distance to Nearest Surface Water</i>	<i>Distance to Waterbody</i>
6/8/2021	Snake River (MP 843.2)	Marshall	Mainline, Spread 1A	Within construction workspace	2:50PM	N/A*	2:50PM	20 gallons	Barakade Bentonite	HDD Contractor discovered IR and notified IEM and EI	560 feet from wetland (w-155n46w12-b; W-176.0)	560 feet from Snake River
6/16/2021	Straight River (MP 974.2)	Hubbard	Mainline, Spread 3	Continuous flow occurred within the construction workspace in front of HDD entry	2:00PM	N/A*	2:00PM	Not estimated; flowed back into the drilling mud pit	Barakade Bentonite	HDD Contractor discovered IR and notified IEM and EI	1,850 feet from Straight River	1,850 feet from Straight River
6/25/2021	Mississippi River HDD (MP 1069.7)	Aitkin	Mainline, Spread 4	Outside of construction workspace	1:30PM	3:15PM	1:30PM	6,000-9,000 gallons	Barakade Bentonite	HDD Contractor discovered IR and notified IEM and EI	Occurred within wetland (w-51n24w27-d; W-1540.0)	1,350 feet from Mississippi River
6/25/2021	Red River HDD (MP 801.8)	Kittson	Mainline, Spread 1A	Along drill path adjacent to mat lane	10:30PM	8:27AM 6/26/21	10:30PM	50 gallons	Barakade Bentonite, Power Pac-L	HDD Contractor discovered IR and notified IEM and EI	Occurred within wetland (w-160n50w9-a; W-39.0)	1,100 feet from Red River
6/28/2021	Red River HDD (MP 801.8)	Kittson	Mainline, Spread 1A	Outside of construction workspace	1:30PM	4:27PM	1:30PM	400 gallons	Barakade Bentonite, Power Pac-L	Utility Inspector discovered IR and notified IEM and EI	Occurred within wetland (w-160n50w9-a; W-39.0)	70 feet from Red River
7/6/2021	Willow River HDD (MP 1066.5)	Aitkin	Mainline, Spread 4	Outside of construction workspace	1:35AM	5:00AM	1:35AM	80 gallons	Barakade Bentonite, Sandmaster	HDD Contractor discovered IR and notified IEM; LIEM notified EI	Occurred on western bank of Willow River (s-51n24w31-b; S-265.0)	Occurred on western bank of Willow River (s-51n24w31-b; S-265.0)
7/15/2021	East Savanna River HDD (MP 1085.9)	St. Louis	Mainline, Spread 5	Occurred within construction workspace 50 feet from drill entry pit	4:30PM	4:37PM / 6:10PM	4:30PM	15-25 gallons	Barakade Bentonite	HDD Contractor discovered IR and notified IEM and EI	Occurred within wetland (w-51n21w20-a; W-1751.0)	670 feet from East Savanna River
7/16/2021	Middle River (MP 836.0)	Marshall	Mainline, Spread 1A	Within construction workspace	4:00AM	N/A*	4:00AM	15 gallons	Barakade Bentonite	HDD Contractor discovered IR and notified IEM and EI	150 feet from wetland (w-156n46w7-c; W-124.0)	550 feet from Middle River
7/16/2021	Middle River (MP 836.0)	Marshall	Mainline, Spread 1A	Within construction workspace	5:00AM	N/A*	5:00AM	50 gallons	Barakade Bentonite	HDD Contractor discovered IR and notified IEM and EI	100 feet from wetland (w-156n46w7-c; W-124.0)	500 feet from Middle River

7/16/2021	Red Lake River HDD (MP 864.3)	Pennington	Mainline, Spread 1B	Within construction workspace 10 feet from drill rig	10:45AM	N/A*	10:45AM	80 gallons	Barakade Bentonite	HDD Contractor discovered IR and notified IEM and EI	375 feet from wetland (w-153n43w32-aa; W-305.0)	630 feet from Red Lake River
7/17/2021	Willow River HDD (MP 1066.5)	Aitkin	Mainline, Spread 4	Within construction workspace approximately 30 feet from mud pit	4:30AM	N/A*	4:30AM	40 gallons	Barakade Bentonite, Sandmaster and Power Soda Ash	HDD Contractor discovered IR and notified IEM and EI	250 feet from wetland (w-51n24w31-a; W-1527.0)	850 feet from Willow River
7/17/2021	East Savanna River HDD (MP 1085.9)	St. Louis	Mainline, Spread 5	Occurred within construction workspace	3:03PM	3:04PM	3:04PM	10-15 gallons	Barakade Bentonite	HDD Contractor discovered IR and notified IEM and EI	Occurred within wetland (w-51n21w20-a; W-1751.0)	670 feet from East Savanna River
7/18/2021	Clearwater River HDD (MP 875.4)	Red Lake	Mainline, Spread 1B	Occurred within construction workspace	1:15AM	N/A*	1:15AM	20 gallons	Barakade Bentonite	Utility Inspector discovered IR and notified IEM and EI	400 feet from wetland (w-151n42w4-a; W-355.0)	430 feet from Clearwater River
7/18/2021	Clearwater River HDD (MP 875.4)	Red Lake	Mainline, Spread 1B	Occurred 60 feet from intended pilot hole exit in workspace	3:40PM	N/A*	3:40PM	20-30 gallons	Barakade Bentonite	Utility Inspector discovered IR and notified IEM and EI	150 feet from wetland (w-151n42w9-e; W-359.0)	2,100 feet from Clearwater River
7/19/2021	Red Lake River HDD (MP 864.3)	Pennington	Mainline, Spread 1B	Partially within construction workspace	7:26PM	8:10PM	7:26PM	1,200 gallons	Barakade Bentonite	IEM and Utility Inspector discovered IR and notified EI	Approximately 5-10 feet from wetland (W-153n43w29-j; W-298.0); release migrated into this wetland	220 feet from Red Lake River
7/19/2021	Pine River HDD (MP 1017.4)	Cass	Mainline, Spread 3	Occurred within construction workspace approximately 50 feet in front of entry hole	9:00AM	N/A*	9:00AM	60-100 gallons	Barakade Bentonite, Power Pac-L, Power Soda Ash	HDD Contractor discovered IR and notified IEM and EI	Approximately 620 feet from wetland (CA064bW; W-1047.0)	650 feet from Pine River
7/20/2021	Mississippi River HDD (MP 941.0)	Clearwater	Mainline, Spread 2	Within construction workspace	5:20AM	6:00AM	5:20AM	10 gallons	Barakade Bentonite, Power Pac-L	HDD Contractor discovered IR and notified IEM and EI	Occurred within wetland (CLC5098a1W; W-687.0)	880 feet from the Mississippi River
7/20/2021	Mississippi River HDD (MP 941.0)	Clearwater	Mainline, Spread 2	Outside of construction workspace	3:40PM	3:50PM	3:50PM	100 gallons	Barakade Bentonite, Power Pac-L	HDD Contractor discovered IR and notified IEM and EI	Occurred within wetland (CLC5098a1W; W-687.0)	880 feet from the Mississippi River

7/20/2021	Middle River (MP 836.0)	Marshall	Mainline, Spread 1A	Partially within construction workspace	7:45AM	N/A*	7:45AM	200 gallons	Barakade Bentonite	HDD Contractor discovered IR and notified IEM and EI	550 feet from Middle River	550 feet from Middle River
7/20/2021	Middle River (MP 836.0)	Marshall	Mainline, Spread 1A	Within construction workspace	10:22PM	N/A*	10:22PM	50 gallons	Barakade Bentonite	HDD Contractor discovered IR and notified IEM and EI	550 feet from Middle River	550 feet from Middle River
7/21/2021	Willow River HDD (MP 1066.5)	Aitkin	Mainline, Spread 4	Within construction workspace under mats	3:00AM	3:40AM	3:00AM	50 gallons	Barakade Bentonite, Sandmaster additive	HDD Contractor discovered IR and notified IEM and EI	Occurred within wetland (w-51n24w31-a; W-1527.0)	250 feet from Willow River
7/26/2021	East Savanna River HDD (MP 1085.9)	St. Louis	Mainline, Spread 5	Along drill path under mat lane	3:45PM	4:07PM	3:45PM	10 gallons	Barakade Bentonite	EI discovered IR and notified IEM	Occurred within wetland (w-51n21w22-a; W-1755.0)	170 feet from East Savanna River
7/28/2021	Clearwater River (MP 922.2)	Clearwater	Mainline, Spread 2	Occurred within construction workspace	2:30AM	N/A*	2:30AM	20 gallons	Barakade Bentonite	HDD Contractor discovered IR and notified IEM and EI	550 feet from wetland (CLC5040_000RRa1W; W-579.0)	1,700 feet from Clearwater River
7/28/2021	Clearwater River (MP 922.2)	Clearwater	Mainline, Spread 2	Occurred within construction workspace	11:50AM	N/A*	11:50AM	15 gallons	Barakade Bentonite	HDD Contractor discovered IR and notified IEM and EI	550 feet from wetland (CLC5040_000RRa1W; W-579.0)	1,700 feet from Clearwater River
7/30/2021	Mississippi River (MP 941)	Clearwater	Mainline, Spread 2	Occurred within construction workspace	4:15PM	4:15PM	4:15PM	50 gallons	Barakade Bentonite	HDD Contractor discovered IR and notified IEM and EI	Occurred within wetland (CLC5098a1W; W-687.0)	555 feet from Mississippi River
7/31/2021	East Savanna River HDD (MP 1085.9)	St. Louis	Mainline, Spread 5	Along drill path under mat lane 130 feet from exit point	8:45PM	8:45PM	8:45PM	480 gallons	Barakade Bentonite, Power Soda Ash, Sandmaster, EZ Mud Gold	HDD Contractor discovered IR and notified IEM and EI	Occurred within wetland (w-51n21w22-a; W-1755.0)	470 feet from East Savanna River
8/5/2021	East Savanna River HDD (MP 1085.9)	St. Louis	Mainline, Spread 5	Along drill path under mat lane 35-40 feet from exit point	3:25AM	3:25AM	3:25AM	50 gallons	Barakade Bentonite, Power Soda Ash, Sandmaster, EZ Mud Gold	IEM discovered IR and notified EI	Occurred within wetland (w-51n21w22-a; W-1755.0)	585 feet from East Savanna River
8/5/2021	East Savanna River HDD (MP 1085.9)	St. Louis	Mainline, Spread 5	Along drill path under mat lane 130 feet from exit point	1:30AM	1:30AM	1:30AM**	900 gallons	Barakade Bentonite, Power Soda Ash, Sandmaster, EZ Mud Gold	IEM discovered IR and notified EI	Occurred within wetland (w-51n21w22-a; W-1755.0)	470 feet from East Savanna River

*Condition 16 of the 401 Water Quality Certification does not require Duty Officer notification for releases in upland areas

**Release occurred within the existing containment area from the 7/31 release - no new containment was needed

ATTACHMENT C



MEMO

Date:

July 14, 2021

To:

Melissa Kuskie, Minnesota Pollution Control Agency

Kevin Molloy, Minnesota Pollution Control Agency

From:

Bobby Hahn, Enbridge Energy, Limited Partnership

Subject:

Line 3 Replacement Project Horizontal Directional Drill Monitoring and Inadvertent Release Response Plans – Additional Commitments

This memorandum provides additional information requested by the Minnesota Pollution Control Agency (“MPCA”) on May 10, 2021 and July 13, 2021 concerning Enbridge Energy, Limited Partnership’s (“Enbridge’s”) proposed horizontal directional drill (“HDD”) schedule, roles and responsibilities of construction and environmental staff during HDD execution, and additional commitments related to inadvertent release prevention, monitoring, and notification for Enbridge’s Line 3 Replacement Project (“L3R” or “Project”).

Section 11.0 of Enbridge’s Environmental Protection Plan (“EPP”), and Section 7.1.1.5 and Attachment M of Enbridge’s Antidegradation Assessment describe the procedures and best management practices (“BMPs”) that will be implemented during execution of the HDDs. This includes but is not limited to the following measures.

Site Visits and Installation of Pre-Emptive BMPS

In Section 7.4.4.4 of the Antidegradation Assessment and Sections 11.2 and 11.3 of the EPP, Enbridge committed to conducting site visits two weeks prior to the initiation of an HDD to determine if any additional materials or equipment prescribed in the Inadvertent Release Response Plans (“IRRP”; Attachment M of the Antidegradation Assessment) are needed. The initial IRRP site visits were coordinated by Enbridge with the Independent Environmental Monitors (“IEMs”), and Enbridge provided notification to MPCA staff of the site visit at least 72 hours prior to the visit, in case any MPCA staff wanted to attend. Enbridge has completed IRRP site visits at all HDDs to date. However, Enbridge will coordinate an additional site visit for the remaining HDDs prior to the start of work to confirm that the following additional materials are on-site:

- 70 straw bales and staking materials (sufficient to install 100 feet up and downstream of each waterbody edge, with redundancy);
- 800 sandbags (sufficient to install 100 feet up and downstream of each waterbody edge approximately 4 feet high, with redundancy);
- 200 feet of turbidity curtain;
- 300 feet of silt fence (sufficient to install 100 feet up and downstream of each waterbody edge, with redundancy);
- Plastic sheeting and/or geotextile fabric to cover an area equal to the width of the waterbody crossing by 200 feet (sufficient to install 100 feet up and downstream of the crossing);
- Shovels, brooms, buckets, and appropriate hand tools (at least 2 of each);

- Pumps and sufficient hose (two 150-foot-long hoses, plus an extension hose);
- One fluid storage tank with 22,000 gallon storage capacity;
- Vacuum truck (to be confirmed as operational daily before each shift change);
- One small boat; and
- Light plant/generator sufficient to illuminate the drill path on both sides of the waterbody.

The Enbridge Environmental Inspectors (“EIs”) and IEMs have also reviewed each HDD site during the IRRP site visits to determine the best type and location to pre-emptively install erosion and sediment control BMPs to prevent a potential inadvertent release on land from migrating into the waterbody. The type and location of the BMP selected has been recorded in the Environmental Plan Sheets (“EPS”) associated with Enbridge’s Stormwater Pollution Prevention Plan (“SWPPP”). The BMPs minimally extend across the 50-foot-wide permanent easement along the HDD drill path; Enbridge will have to request landowner permissions for the installation of BMPs beyond the negotiated easement. Any additional changes required to the IRRP as a result of these site visits (e.g., changes to materials, equipment, staging locations) will be communicated to Enbridge and submitted to the MPCA for review and approval. The EIs and IEMs will confirm that all IRRP-required equipment and material are on-site and appropriately staged before the HDD can be initiated. The EIs and IEMs will also confirm that the vacuum truck is operable prior to the start of the HDD, and subsequently on a daily basis prior to each shift. EIs and IEMs will continue to monitor weather and flow conditions and will require that additional response material be brought on-site if conditions warrant.

Enbridge Inspection and Monitoring Activities

At least one full-time personnel either from the HDD contractor’s team or an Enbridge staff member will continuously monitor the drill path by inspecting land surfaces and waterbodies for surface migration of drilling fluids during drilling, reaming, and pipe installation procedures. The Enbridge Utility Inspector will also walk the drill path to monitor for surface seepage, sinkholes, and settlement periodically throughout each shift. In addition, all flowing streams will be monitored both upstream and downstream of the drill path. The Enbridge Utility Inspector will also regularly check the exterior of security fencing where black-out/privacy materials have been installed along the HDD pads and/or the construction workspace. If the HDD contractor or the Utility Inspector notices inadvertent return conditions, shutdown will occur immediately. Enbridge will provide adequate lighting of the drill path to allow for monitoring during 24-hour continuous operations.

Enbridge’s Utility Inspector will also periodically inspect the site for any signs of the potential for an inadvertent release, in addition to reviewing and monitoring the readings provided by the HDD contractor with regard to annular pressure and drilling fluid circulation.

Enbridge’s Construction Manager, Chief Inspector, and/or Assistant Chief Inspector will also periodically check-in at the HDD site to review progress, monitoring reports, and inspect the site for any signs of the potential for an inadvertent release.

Enbridge will maintain staff experienced and well-trained in inadvertent release response available at all HDD sites at all times during drilling and during any step of the process when drilling mud is used (e.g., pilot hole, reaming, swabbing, and pipe pull-back), and also for one full day following completion of any such activities.

Enbridge’s Environmental Monitor Control Plan (“EMCP”) provides a description of the roles and responsibilities associated with Enbridge’s EI Team. Currently, Enbridge has assigned four EIs and one Lead EI per spread. In addition, one Apprentice EI has been assigned to Spreads 2 and

3. An additional EI from Enbridge's Environment Team will also be checking in multiple times per day at each HDD site to inspect for compliance with Enbridge environmental plans, permits, authorizations, and certifications. This will include confirming drilling fluid additives used have been approved by the MPCA, that the HDD contractor is monitoring and documenting annular pressure and drilling fluid properties/circulation, and any other site-specific requirements. Enbridge's EI will also regularly check the exterior of security fencing where black-out/privacy materials have been installed along the HDD pads and/or the construction workspace.

Independent Environmental Monitoring Activities

Enbridge's EMCP provides a description of the roles and responsibilities associated with the IEM Team. Additional details on the roles and responsibilities of the IEM Team are also provided in the IEM Staffing Plan. Per the IEM Staffing Plan, the IEMs will be responsible for monitoring all activities associated with HDD crossings to ensure that required procedures and plans are being followed and to monitor for inadvertent drilling mud releases. Further, the IEMs must confirm that only MPCA-approved drilling muds are being used. Based on this expectation, Enbridge anticipates that the IEMs will also be checking in multiple times per day at each HDD site to monitor for compliance with Enbridge environmental plans, permits, authorizations, and certifications. The IEM will be permitted to access the HDD contractor's trailer to confirm that annular pressure readings during the pilot hole are being monitored and recorded, and as needed throughout the process. The HDD contractor will also provide the drilling additive labels to the IEM for review prior to use to confirm the additive has been approved according to Attachment L of the Antidegradation Assessment. The IEM will also regularly check the exterior of security fencing where black-out/privacy materials have been installed along the HDD pads and/or the construction workspace.

Agency Notification Process in the Event of an Inadvertent Release

As required in Section 11.1 of the EPP, in the event of an inadvertent release, the HDD contractor will stop the drill immediately and will contact the Utility Inspector. The Utility Inspector will contact the Enbridge EI Team, who will in turn contact the IEM Team. Both the EI and the IEM are expected to immediately respond to an inadvertent release. Once the nature of the inadvertent release is understood (e.g., on land, in a wetland or waterbody, having the potential to migrate to a surface water) the appropriate agencies will be contacted, including the Minnesota Duty Officer.

Prior to the initiation of any remaining HDDs, Enbridge will conduct additional Project trainings with both the contractor and inspection staff to review notification requirements, and ensure on-site staff are experienced in inadvertent release response. This training will be held with both contractor day and night shift crews (where double shifts are to be used) and will include the EI, Enbridge on-site inspectors, and IEMs and will cover the roles, expectations, and decision-making process involved with a potential inadvertent release, including notifications. This training will include the assignment and identification of the responsible party(ies) for determining containment and cleanup measures, deploying containment measures (e.g., turbidity curtains, sand bags), boat launching, employing cleanup measures (e.g., vacuum truck). The training will also involve practicing the communication and notification protocol, including testing the communication devices on-site to ensure functionality (e.g., cell phone, radio). Individuals will be assigned the responsibility to notify the necessary parties so as to provide appropriation and prompt notification to the Duty Officer and agency staff.

Based on the current schedule, 13 of the 14 remaining HDDs are planned to run 24 hours per day. Therefore, Enbridge will plan for a second shift of EIs to visit operating HDDs on his/her spread throughout the evening shift. For an inadvertent release that occurs after 5:00PM during the week or on the weekend, Enbridge's Environment Team will contact the IEM Coordinators

directly. Enbridge will provide advance notice to the MPCA and IEMs of any future changes to the planned number of shifts.

Enbridge will continue to consult with the appropriate regulatory agencies to evaluate the circumstances of any release, discuss additional containment or cleanup requirements, and determine whether and under what conditions the HDD may proceed.