TO: Ohio Power Siting Board
FROM: NiSource
DATE: 9/2/25
RE: Inadvertent Return (IR) Plan Submission for Big Walnut Creek HDD – OPSB CN Application

Dear OPSB Review Team,

As part of the Construction Notice (CN) application for the Big Walnut Creek Horizontal Directional Drill (HDD) crossing, NiSource is submitting the attached project-specific Inadvertent Return (IR) Plan prepared by the drilling contractor. This plan outlines the preventative procedures, monitoring protocols, and response actions tailored to the geotechnical and environmental conditions of the Big Walnut Creek crossing.

The IR plan includes detailed provisions for:

- Continuous monitoring of drilling fluid pressures and returns
- Immediate response protocols for inadvertent returns in upland and aquatic environments
- Coordination with NiSource's Natural Resources Permitting (NRP) team for containment and regulatory notifications
- Clean-up procedures that prioritize environmental protection and regulatory compliance
- Spill response protocols for hydraulic fluid and fuel releases from equipment

Additionally, the resume of the Lead Environmental Inspector (EI) for this project is included in this submission. The EI is a certified CESSWI inspector with extensive experience in HDD oversight and environmental compliance. The inspector will be available on-call within a 30-minute response radius during all 24-hour HDD operations. This model ensures rapid response to any IR events and satisfies NiSource's internal environmental oversight requirements.

We appreciate your review of this submission and remain available to provide any additional documentation required to support the CN application.

Sincerely,
NiSource

Preliminary IR Plan

North Country Directional Drilling
Drilling with Experience, Commitment, and Integrity!!

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Fluid Control Plan

The horizontal directional drill (HDD) technique is an established trenchless technology that is commonly used to install pipelines and other buried utilities with minimum environmental and construction related impacts. The purpose of this Fluid Controls Plan is to establish preventative procedures to address potential impacts associated with the inadvertent return of drilling fluid during the HDD process and hydraulic spills from equipment. SDS sheets are available upon request for reference. Site specific objectives towards a holistic plan are:

a. Minimize potential for inadvertent returns associated with the drilling operation

b. Provide for the detection of inadvertent returns

c. Protect environmentally sensitive areas

d. Pre-planning an organized response to minimize potential impact

e. Ensure appropriate notifications are made in the event of an inadvertent return

1.0 Site Specific Conditions

The Nisource HDD Replacement Project includes one (1) horizontal directional drill (HDD). The subject crossing (Big Walnut Creek) for this drill plan is located in Franklin County, Ohio and extends out in length (+/-) 1,339' of 24" steel pipeline. NCDD will take all precautions to protect the environment in this area and follow the GC's and Owner Company's direction.

2.0 Response Equipment and Secondary Containment

North Country Directional Drilling (NCDD) understands the environmental sensitivity of this project and will maintain a readily available, sufficiently maintained supply of hay bales, silt fence, shovels, brooms, small and large capacity pumps, sandbags and a vac truck onsite to respond immediately to any potential environmental concerns. Heavy equipment, such as backhoes, can be utilized for control and clean up. Furthermore, NCDD will temporarily stop all drilling activity in the event of surface seepage.

The following additional materials and equipment may be maintained at a nearby location in sufficient quantities to ensure containment of any inadvertent returns of drilling fluid:

a. Light tower(s) will be available if necessary, so that cleanup work can continue after dark

b. Flexible plastic piping will be available for potential mitigation where small creeks or drainages are involved

Additionally, NCDD will have on site an adequate supply of large and small spill kits for oil and fuel should they be inadvertently released from equipment. All large stationary equipment that is equipped with an engine will be placed in secondary containment. This will include the use of thick Mil plastic (Visqueen) placed on the ground with a containment wall built on the perimeter of the equipment utilizing hay bales or a suitable substitute.

3.0 Designated Contacts

NCDD Office Management			
NAME	**JOB TITLE**	**CELL #**	**EMAIL**
Josh Ugrich	President	218.256.3835	josh@northcountrydrilling.com
Neal Roberts	SVP - Project Management	218.2459144	neal@northcountrydrilling.com
NCDD Field Management			
NAME	**JOB TITLE**	**CELL #**	**EMAIL**
Derek Vogel	SVP - Operations	218.259.6131	derek@northcountrydrilling.com
Christian Nolette	Superintendent	218.259.2624	buddy@northcountrydrilling.com
Randy Tilley	Superintendent	870.719.0923	randy@northcountrydrilling.com
NCDD Safety Management			
NAME	**JOB TITLE**	**CELL #**	**EMAIL**
Eddie Ramos	SVP - Treasurer & Safety	218.398.8967	eddie@northcountrydrilling.com
Casey Erickson	Safety Manager	320.515.9850	casey@northcountrydrilling.com

4.0 Notification

The drill crew will be responsible for immediately notifying Client's Operations Coordinator (or Project Manager if the Operation Coordinator is unavailable) if seepage should occur. The drill supervisor and Client will immediately assess the situation. During the assessment of the seepage, Client and the drill supervisor will estimate the quantity of drilling fluid that has seeped and the square footage of the area that has been impacted. In the event of a seepage that may impact land use, public property, water quality, or aquatic organisms, etc.

5.0 Inadvertent Returns

The HDD method has the potential for loss or seepage of drilling mud into the geologic formation through which the drill passes. In some cases, the drilling fluid may be forced to the surface resulting in an inadvertent return. In some cases, an inadvertent return of drilling fluid can be caused by existing conditions in the geologic materials (e.g., fractures or very soft sands) even if the down hole pressures are low. Should inadvertent returns occur, NCDD will halt all drilling operations and allow the on-site reps to discuss the plan moving forward, be open to any suggestions, or follow any regulations that may be in place. NCDD expects the approval or request for revision of the HDD plan to be provided back within no longer than one (1) shift or less. When approved to do so and the IR is fully managed, contained and plans in place, NCDD will continue with the HDD crossing activities.

6.0 Prevention/Mitigation

Prior to construction, the following procedures shall be followed:

a. Ensure adequate overburden (25-30 feet in competent soils) during the final profile design phase (facilities Engineering and NCDD).
b. Final HDD profile geometry should allow for smooth, gradual angular change with minimal horizontal curvature in order to minimize pressure build-up.

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c. Maintain necessary response equipment on-site and ensure it is in working order.

d. Upon NCDD's selection of the preferred drilling fluid base material and prior to construction, NCDD will provide the manufacturer's safety data sheet (SDS) for review by Client. If the material is deemed unacceptable in its ability to pose little or no threat to the surrounding environment if seepage should occur, NCDD will notify Client and a new material will be selected. All subsequent drilling fluid materials are subject to identical review and approval by Client.

- The drilling fluid selected for use by NCDD will be formulated in a manner that does not present an imminent threat to water quality or the aquatic environment. Selection of appropriate materials that will compose the drilling fluid will be done in a manner that protects ecological resources.

e. Install a filter fabric fence between the boring pit and the adjacent stream or wetland

7.0 In-stream Return

If seepage occurs in a water body, there may be a visible plume. Minor seepage may be difficult to detect due to the natural turbidity of the water body and the high specific gravity of bentonite clay-based drilling fluid, which causes it to remain low in the water column. Once seepage is detected and drilling fluid pumps are stopped, there will be minimal disturbance to water body sediment. There will be very little pressure to disturb surface sediment because of the distance that the drilling fluid must travel to reach the water body bottom. The composition of the drilling fluid is primarily water and bentonite clay. If a small amount is released a water body, a rivers' current usually can quickly dissipate it. In order to have early detection of possible seepages within the Project, the contractor will closely monitor the drill operation as the bore progresses.

8.0 Detection, Monitoring, and Field Activities

NCDD will monitor drill pressures down hole by many means, for example instruments/tools used in the industry for monitoring drill pressures such as but not limited to "drill cab/drill counsel gauges as well as an annular pressure monitoring tool during the Pilot Phase. Should a spike or major pressure decrease take place, NCDD will analyze and take corrective actions. NCDD will also keep visual notes of the return flow coming into the receiving pits of the bore hole. NCDD will also visually inspect the center line of the bore path a minimum of twice per day or as required and pay close attention to the cleaning tanks fluid levels found in the mud recycling system.

Detection of drilling fluid seepage includes identifying those conditions that may indicate a loss of pressure containment within the drill hole. It will also be based on visible signs that surface seepage has occurred.

Horizontal directional drilling is a technically advanced process. The detection of drilling fluid seepage prior to it occurring is highly dependent upon the skills and experience of the drilling crew. Each drilling situation is unique in that the behavior of the subsurface material is highly variable and can be difficult to predict. There is no in-hole monitoring equipment that can detect drilling fluid seepage; therefore, a combination of factors such as those listed below must be properly interpreted to assess conditions that may have the potential of causing drilling fluid seepage.

A seep occurs when there is a failure to maintain pressure in the hole. The most obvious signs of drilling fluid seepage are surface seepage or loss of circulation of the drilling fluid. One of the functions of drilling fluid is to seal the hole to maintain the down hole pressure. The loss of returning drilling fluid is a sign that pressure is not being maintained in the drill hole and seepage is possibly occurring. If there is a reduction in the quantity of drilling fluid returning to the drill site (loss of circulation), this could be a warning sign. However, some loss of drilling fluid is also normal in the drilling process. During the drilling process, a loose sand or gravel layer may be encountered which would require additional drilling fluids to fill in the voids in the substrate. Consequently, drilling fluid loss itself is not an indication of a potential seepage condition. It is the loss of drilling fluid in combination with other factors that may

indicate a potential seepage condition. For example, if there is a loss of drilling fluid and the return cuttings do not show a large quantity of gravel, then this could indicate a loss of containment pressure within the borehole.

Once surface seepage of drilling fluid is detected, the drilling crew will take immediate corrective action. The primary factor causing the surface seepage to occur is pressure from the drilling fluid pumps. Therefore, the most direct corrective action is to stop the rig pumps. By stopping the pumps, the pressure in the hole will quickly bleed off. With no pressure in the hole, the surface seepage will stop. Stopping the pumps will be done as soon as surface seepage is detected or if such seepage is suspected.
There is a greater potential for drilling fluid seepage at the entry and exit locations of the crossing. In the contingency planning for the pipeline crossing, drilling fluid seepage at the entry and exit locations has been considered, and preventative actions have been developed. The entry and exit locations have dry land segments where drilling fluid seepage can be easily detected and contained. To isolate and contain potential drilling fluid seepage at the drill site, a berm can be constructed between the drilling site area and the Project. Straw bales or silt fence can also be part of the berm on the waterside of the drilling area. To contain and control drilling fluid seepage on land, there will be earth moving equipment, portable pumps, sandbags, and straw bales available on site. Any drilling fluid seepage will first be contained and isolated using dirt berms, straw bales, or silt fencing. It will then be immediately cleaned up for the area and hauled to the closest drilling site. In the event of seepage on land, it may only be necessary to reduce the down hole pressure to ensure containment of the fluid. Upon containment and establishment of controls to contain further seepage, down hole pressure may be increased to original levels at the discretion of Southeast and the drill crew. The location of the seepage will be monitored for any significant condition changes.

After the drilling fluid seepage has been contained, NCDD will make every effort to determine why the seepage occurred. Once NCDD and the drill crew have determined the cause of the seepage, measures will be developed to control the factors causing the seepage and to minimize the chance of recurrence. Developing the corrective measure will be a joint effort of the drilling crew and will be site and problem specific.

In some cases, the corrective measure may involve a determination that the existing borehole encountered a void that could be bypassed with a slight change in the profile. In other cases, it may be determined that the existing hole encountered a zone of unsatisfactory soil material, and the hole would then have to be abandoned. If the hole is abandoned, it can be filled with drilling slurry (bentonite).

9.0 Hydraulic Spills

The following actions will be taken to reduce the potential for the severity of spills from the stationary equipment on site.

1. Assure routine maintenance of the diesel equipment and associated equipment is performed in accordance with the manufacturer's recommendations.
2. Do not perform maintenance work on the diesel equipment or in the immediate area of the diesel equipment during fuel deliveries.
3. Perform visual inspections (weekly for temporary units; monthly for backup units) of the diesel equipment and associated equipment and document the findings and corrective actions (if needed).
4. Perform visual inspections of all diesel equipment and associated equipment daily.
5. A spill response kit shall be available on the fuel delivery truck and/or in the immediate vicinity of any diesel equipment.

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The following actions shall occur when a fuel delivery is made:

1. Determine fuel level in the tank and calculate the volume required to be delivered prior to dispensing fuel.
2. Prior to initiating fuel transfer, the fuel vendor will confirm that sufficient space is available in the receiving storage tank to receive the contents of the tank truck.
3. The tank truck unloading will be done during daylight hours except under emergency conditions and will be scheduled in advance whenever possible.
4. The tank truck must be operated by a trained fuel transfer operator, who will ensure that locked valves and fill caps are unlocked and that spill response materials (absorbent pads, booms, and absorbent material) are in adequate supply.
5. Tank trailer brakes shall be set, and the driver shall always remain with the wet end of the delivery hose. Ensure proper methods are used for hose connection, tank filling, and hose disconnection and precautions are taken to avoid unnecessary dripping and/or releases from hoses and connection equipment. Ensure that the storage tank is vented prior to connecting unlading line.
6. The tank truck operator will be supplied one person to assist in the event of a spill.
7. Prior to filling (and again prior to departure of tank truck), the lowermost drain and all outlets of the vehicle must be examined for leakage and if necessary tightened, adjusted or replaced to prevent leakage while off-loading (or while in transit).
8. Once unloading has ceased; the hose shall be handled in a way as to keep the hose from dripping. Any small dripping material shall be contained for removal.
9. If any spill occurs during the filling process, fuel flow must be stopped immediately and spoil-reporting procedures initiated immediately.

10.0 Spill Response

In most cases, releases occur during fuel delivery when the driver has access to a spill response kit. However, in case the driver does not have the appropriate response equipment, the site will have a spill kit located adjacent to the diesel equipment. In addition, if a spill occurs from the equipment, the site should be capable of controlling a small to moderate spill and cleaning up a small spill with the on-site spill kit. This spill kit will be checked twice yearly to ensure that the kit has not been depleted of its materials. In the event of a spill, the following table lists actions to be performed.

ACTIONS REQUIRED	RESPONSIBLE PARTY
Contact site superintendent to notify them that a release/spill has occurred	Person who found spill/person responsible for spill
The site superintendent will take control of the situation and act as the on-scene coordinator	Site Superintendent
Stop the source of the release if it can be done safely	All personnel
Notify the ES&H Representative/Project Environmental Lead that a spill has occurred	Site Superintendent
Stop all work activities near the release and evacuate personnel if there is a potential for risk	All personnel
Prevent the spill from moving into areas where the spill cannot be controlled (e.g., storm water drains, off site, public streets, wetland). Use the spill kit to "contain" the spill	All personnel
Extremely dangerous and/or serious releases require that 911 be called and the fire department responds	All personnel/site Superintendent
Moderate sized releases will be cleaned up by an emergency response subcontractor after initial containment of the spill	Project management/site Superintendent
Owner's representative will be notified of the spill at the earliest time, regardless of volume	Site Superintendent
If necessary, Owner will be contacted to provide technical assistance or guidance during the spill	Project management/site Superintendent
Scene management will be implemented to prevent further release or to prevent people from entering the controlled area	All personnel

Siri Anderson Resume

Siri Anderson

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NiSource:	**Lead Environmental Inspector** July 17, 2023 - current
Keramida, Inc.:	**Environmental Compliance Specialist** March 20, 2017 - July 17, 2023
Reedy Creek Improvement District:	**Environmental Compliance Specialist & Mosquito Program Coordinator** March 1990-April 2002
University of Central Florida:	**B.S. Biology, 1989** **M.S. Biology, 1997**
Language Skills:	**Norwegian:** Fluent Danish & Swedish: Intermediate

Certifications: **2022 EPA General Construction Permit Site Inspector Training**

EPA

2/18/2025, expires May 17, 2027

CESSWI

Certified Erosion, Sediment and Stormwater Inspector

EnviroCert

9/19/2017 –

OSHA 10

10-Hour Construction Safety and Health

OSHA

10/26/2022 – no expiration

Stormwater Management Inspector

Florida Department of Environmental Protection

4/2002 – no expiration