

APPENDIX D

Modifications to FERC's Plan and Procedures

APPENDIX D: MODIFICATIONS TO FERC’S PLAN AND PROCEDURES

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TABLE D-1

AGDC's Modifications to FERC's Plan Deemed Acceptable ^{a,b}

Section	Original FERC Language	AGDC's Proposed Modification	AGDC's Justification
II.B.6	Ensuring that the design of slope breakers will not cause erosion or direct water into sensitive environmental resource areas, including cultural resource sites, wetlands, waterbodies, and sensitive species habitats;...	Ensuring that the design of slope breakers will not cause erosion or direct water into sensitive environmental resource areas, including cultural resource sites, wetlands, waterbodies, and sensitive species habitats. Ensure water entering wetlands from slope breakers will be first directed into energy dissipating devices;...	Discharging into wetlands is unavoidable due to the extensive occurrence of wetlands within the proposed Project footprint. This modification clarifies that water discharged to wetlands will first pass through an energy dissipating device to minimize the potential for erosion and discharging water with sediments into a wetland.
II.B.6	Ensuring that the design of slope breakers will not cause erosion or direct water into sensitive environmental resource areas, including cultural resource sites, wetlands, waterbodies, and sensitive species habitats;...	Ensuring that the design of slope breakers will not cause erosion or direct water into sensitive environmental resource areas, including cultural resource sites, wetlands, waterbodies, and sensitive species habitats. Ensure water entering wetlands from slope breakers will be first directed into energy dissipating devices;...	Discharging into wetlands is unavoidable due to the extensive occurrence of wetlands within the proposed Project footprint. This modification clarifies that water discharged to wetlands will first pass through an energy dissipating device to minimize the potential for erosion and discharging water with sediments into a wetland.
III.I	If construction is planned to occur during winter weather conditions, project sponsors shall develop and file a project-specific winter construction plan with the FERC application. This filing requirement does not apply to projects constructed under the automatic authorization provisions of the FERC's regulations.	If construction is planned to occur during winter weather conditions, project sponsors shall develop and file a project-specific winter construction plan with the FERC application. This filing requirement does not apply to projects constructed under the automatic authorization provisions of the FERC's regulations. The Project shall develop and file a project-specific Winter and Permafrost Construction Plan with the FERC application.	Minor text addition noting that Alaska LNG will develop a project-specific Winter Construction Plan.
III.I.1	Winter construction procedures (e.g., snow handling and removal, access road construction and maintenance, soil handling under saturated or frozen conditions, topsoil stripping);...	Winter construction procedures (e.g., snow handling and removal, access road construction and maintenance, soil handling under saturated or frozen conditions, topsoil stripping) and for permafrost terrain during winter and summer periods;...	Addition required to address permafrost terrain and management of permafrost to ensure long-term right-of-way stability.

TABLE D-1 (cont'd)

AGDC's Modifications to FERC's Plan Deemed Acceptable ^{a,b}

Section	Original FERC Language	AGDC's Proposed Modification	AGDC's Justification
IV.F	Install temporary erosion controls immediately after initial disturbance of the soil.	Install temporary erosion controls immediately after initial disturbance of the soil. The Project will install temporary erosion controls prior to the onset of conditions that could cause erosion (e.g., spring thaw), or when those conditions exist immediately after initial disturbance of the soil.	The use of temporary erosion controls is applicable when terrain, topography, climactic, and environmental conditions are present that allow erosion to begin and sediment transport to occur. Erosion does not occur when the ground surface is frozen or snow covered, and temporary erosion controls are not needed in these conditions. Erosion controls would be installed before spring thaw as rain or snow melt can induce erosion and sediment transport.
IV.F.1.d	Position the outfall of each temporary slope breaker to prevent sediment discharge into wetlands, waterbodies, or other sensitive environmental resource areas.	Position the outfall of each temporary slope breaker to prevent sediment discharge into wetlands, waterbodies, or other sensitive environmental resource areas. Where temporary slope breakers are installed in wetlands, an energy dissipating discharge structure at the end of the breaker will be installed.	<p>Energy dissipating devices would be used in uplands, but may also be used in wetlands, cultural resource sites, and endangered species habitat, to reduce water velocity while discharging into these sensitive resources areas. Energy dissipating devices would ensure that surface water entering any of these resource areas from the construction ROW would be slowed sufficiently to allow sediment to settle out of the water.</p> <p>In addition to surface energy dissipating structures, buried pipeline ditch plugs would be employed on sloped upland and water interfaces along the pipeline. Ditch plugs would be used in sloped terrain to impede subsurface water flow and erosion of the backfill along the pipe. The use of ditch plugs would ensure that shallow ground water does not flow down gradient and create a French drain effect along the pipe. Ditch plugs would also be installed on each side of waterbody crossings at streams and ponds to prevent migration of water into the backfill. This practice would be particularly important in permafrost soils to prevent thermal disturbance of the surrounding ground prior to start-up of the pipeline.</p> <p>All energy dissipating structures would be maintained until final restoration measures are in place per the requirements of the SWPPP and the Restoration Plan. Restoration would restore some open cuts to a stable angle of repose complete with all required permanent energy dissipating measures. Open cuts not restored to original contours would be protected by ground stabilization methods, revegetation, and typical erosion control devices and/or energy dissipating structures per the SWPPP and Restoration Plan.</p>

TABLE D-1 (cont'd)

AGDC's Modifications to FERC's Plan Deemed Acceptable ^{a,b}

Section	Original FERC Language	AGDC's Proposed Modification	AGDC's Justification
V.B.1.d	At a minimum, install a trench breaker at the base of slopes greater than 5 percent where the base of the slope is less than 50 feet from a waterbody or wetland and where needed to avoid draining a waterbody or wetland. Install trench breakers at wetland boundaries, as specified in the Procedures. Do not install trench breakers within a wetland. Do not install trench breakers within a wetland.	At a minimum, install a permanent trench breaker at the base of slopes greater than 5 percent where the base of the slope is less than 50 feet from a waterbody or wetland and where needed to avoid draining a waterbody or wetland. Install permanent trench breakers at wetland boundaries, as specified in the Procedures. Do not install trench breakers within a wetland.	None provided. The revisions were not marked as changes by AGDC. The deletion of "trench breaker" in wetland sentence is consistent with edits made in other sections regarding slope breakers.
V.D.1.b	Restore all turf, ornamental shrubs, and specialized landscaping in accordance with the landowner's request, or compensate the landowner. Restoration work must be performed by personnel familiar with local horticultural and turf establishment practices.	Restore all turf, ornamental shrubs, and specialized landscaping in accordance with the landowner's request, or compensate the landowner. Restoration work must be performed by personnel familiar with local horticultural and turf establishment practices appropriately qualified personnel.	Minor text change.
V.D.3.a	None – new text.	Seed bed preparation, soil amendments, and seed mixtures will be customized to Arctic and sub-Arctic climactic zones, ecological regions and soil characteristics.	AGDC would adopt portions of the ASAP Project Revegetation Plan, specific to timing and application of fertilizer, seeding, and maintenance standards. The ASAP Plan was developed by the ADNR's Plant Materials Center, Alaska experts in revegetation, stabilization, and restoration. Seeding would follow methods described in ADNR's Interior Alaska & Erosion Control Guide and Alaska Coastal Revegetation & Erosion Control Guide specific to regional information and requirements.
^a	Minor wording changes to FERC's Plan that we (FERC Staff) have deemed acceptable were not included in this appendix and should be incorporated as modified by AGDC into the updated Project Plan.		
^b	We have determined that requirements are acceptable as modified by AGDC (see italicized bold and struck-out text in the "AGDC's Proposed Modification" column) and should be incorporated into a revised version of the Project Plan.		

TABLE D-2

AGDC's Modifications to FERC's Procedures Deemed Acceptable ^{a,b}

Section	Original FERC Language	AGDC's Proposed Modification	AGDC's Justification
II.A.2	...site-specific justifications for the use of a construction right-of-way greater than 75-feet-wide in wetlands.	...site-specific justifications for the use of a construction right-of-way greater than 75- 110 -feet-wide in wetlands.	Refer to justifications provided in Section 2.6.1, <i>Construction ROW Width Greater than 75 feet in Wetlands</i> . Site-specific justifications for the wider ROW were provided for each area based on the conditions that would be crossed (e.g., passage of equipment, leapfrogging equipment, oversize ditch in bedrock or permafrost soils where blasting is required, access on the ROW avoids use of existing road infrastructure like Dalton Highway, safe working space in steep terrain). See tables 2.6.1-1 and 2.6.1-2.
II.B.2	a schedule identifying when trenching or blasting will occur within each waterbody greater than 10 feet wide, within any designated coldwater fishery, and within any waterbody identified as habitat for federally-listed threatened or endangered species. The project sponsor will revise the schedule as necessary to provide FERC staff at least 14 days advance notice. Changes within this last 14-day period must provide for at least 48 hours advance notice;...	a schedule identifying when trenching or blasting will occur within each waterbody greater than 10 feet wide, within any designated coldwater fishery that are subject to Alaska Department of Fish and Game (ADF&G) Title 16 fish passage requirements , and within any waterbody identified as habitat for federally-listed threatened or endangered species. The project sponsor Project will revise the schedule as necessary to provide FERC staff at least 14 days advance notice. Changes within this last 14-day period must provide for at least 48 hours advance notice;...	"Coldwater fisheries" is a term used in parts of the U.S. to differentiate between fisheries dominated by two distinct types of fish (i.e., those that reside in warm water or cold water). In Alaska, there are anadromous fish streams, resident fish streams, and non-bearing fish streams. All anadromous and resident fish streams in Alaska are coldwater fisheries. Alaska Statute 16.05.841 (Title 16) ensures that fish passage is maintained in all fish-bearing streams.
IV.A.1.c	fuel trucks transporting fuel to on-site equipment travel only on approved access roads;...	fuel trucks transporting fuel to on-site equipment travel only on approved access roads, construction right-of-way, Additional Temporary Work Space (ATWS) ;...	None provided.
IV.A.1.d	...all equipment is parked overnight and/or fueled at least 100 feet from a waterbody or in an upland area at least 100 feet from a wetland boundary. These activities can occur closer only if the Environmental Inspector determines that there is no reasonable alternative, and the project sponsor and its contractors have taken appropriate steps (including secondary containment structures) to prevent spills and provide for prompt cleanup in the event of a spill;...	...all equipment is parked overnight and/or fueled at least 100 feet from a waterbody or in an upland area at least 100 feet from a wetland boundary. These activities can occur closer only if the Environmental Inspector determines, in advance , that there is no reasonable alternative, and the project sponsor Project and its contractors have taken appropriate steps (including secondary containment structures) to prevent spills and provide for prompt cleanup in the event of a spill;...	AGDC believes there is sufficient information to make an advance determination during the preconstruction planning stage and spread work scheduling prior to Environmental Inspector review.

TABLE D-2 (cont'd)

AGDC's Modifications to FERC's Procedures Deemed Acceptable ^{a,b}

Section	Original FERC Language	AGDC's Proposed Modification	AGDC's Justification
V.B.1.b	Unless expressly permitted or further restricted by the appropriate federal or state agency in writing on a site-specific basis, instream work, except that required to install or remove equipment bridges, must occur during the following time windows: a. Coldwater fisheries - June 1 through September 30; and b. Coolwater and warmwater fisheries - June 1 through November 30.	Unless expressly permitted or further restricted by the appropriate federal or state agency in writing on a site-specific basis, instream work, except that required to install or remove equipment bridges, must occur during the following time windows: a. Coldwater fisheries - June 1 through September 30; and or b. Coolwater and warmwater fisheries - June 1 through November 30 in accordance with AS 16.05.871(d).	None provided.
V.B.2.a	Locate all extra work areas (such as staging areas and additional spoil storage areas) at least 50 feet away from water's edge, except where the adjacent upland consists of cultivated or rotated cropland or other disturbed land.	Locate all extra work areas ATWS (such as staging areas and additional spoil storage areas) at least 50 feet away from water's edge, except where the adjacent upland consists of cultivated or rotated cropland or other disturbed land. <i>In areas where it is determined that no reasonable alternative exists, additional temporary work space may be located in or within 50 feet of a waterbody.</i>	Site-specific justifications for the ATWS located in or within 50 feet of waterbodies and wetlands include: space needed at waterbody crossings (dry-ditch, buried trenchless, Cook Inlet); pipeline drag and pull back sections at waterbody and road crossings; road crossings; railroad crossings; foreign pipeline and utility crossings; fault crossings; spread breaks; timber decking storage; turnaround areas; horizontal bends; spoil storage at sloped sections; special design areas (Atigun and Denali); and ice roads and pads.
V.B.5.f	If there will be more than 1 month between final cleanup and the beginning of permanent seeding and reasonable alternative access to the right-of-way is available, remove temporary equipment bridges as soon as practicable after final cleanup.	If there will be more than 1 month between final cleanup and the beginning of permanent seeding site stabilization and reasonable alternative access to the right-of-way is available, remove temporary equipment bridges as soon as practicable after final cleanup.	None provided.
V.B.6.a	Unless approved otherwise by the appropriate federal or state agency, install the pipeline using one of the dry-ditch methods outlined below for crossings of waterbodies up to 30 feet wide (at the water's edge at the time of construction) that are state-designated as either coldwater or significant coolwater or warmwater fisheries, or federally-designated as critical habitat.	Unless approved otherwise by the appropriate federal or state agency, install the pipeline using one of the dry-ditch methods outlined below for crossings of waterbodies up to 30 feet wide (at the water's edge at the time of construction) that are state-designated as either coldwater or significant coolwater or warmwater fisheries subject to ADF&G Title 16 fish passage requirements , or federally-designated as critical habitat.	None provided.

TABLE D-2 (cont'd)

AGDC's Modifications to FERC's Procedures Deemed Acceptable ^{a,b}

Section	Original FERC Language	AGDC's Proposed Modification	AGDC's Justification
V.B.6.d V.B.7	<p>Horizontal Directional Drill</p> <p>For each waterbody or wetland that would be crossed using the HDD method, file with the Secretary for the review and written approval by the Director, a plan that includes:</p> <p>...</p> <p>(e) a contingency plan for crossing the waterbody or wetland in the event the HDD is unsuccessful and how the abandoned drill hole would be sealed, if necessary.</p> <p>The requirement to file HDD plans does not apply to projects constructed under the automatic authorization provisions in the FERC's regulations.</p>	<p>Horizontal Directional Drill</p> <p>Buried Trenchless</p> <p>For each waterbody or wetland that would be crossed using the a Buried Trenchless method (i.e., HDD or Direct Pipe) method, file with the Secretary for the review and written approval by the Director, a plan that includes:</p> <p>...</p> <p>(e) a contingency plan for crossing the waterbody or wetland in the event the HDD Buried Trenchless method is unsuccessful and how the abandoned drill hole would be sealed, if necessary.</p> <p>(f) a description of site specific stabilization and restoration measures that would be implemented at the buried trenchless entry and exit locations if thaw sensitive permafrost was disturbed.</p> <p>The requirement to file HDD plans does not apply to projects constructed under the automatic authorization provisions in the FERC's regulations.</p>	<p>None provided.</p>
V.C.1	<p>Use clean gravel or native cobbles for the upper 1 foot of trench backfill in all waterbodies that contain coldwater fisheries.</p>	<p>Use clean gravel or native cobbles for the upper 1 foot of trench backfill in all waterbodies that contain Coldwater fisheries are subject to ADF&G Title 16 fish passage requirements.</p>	<p>"Coldwater fisheries" is a term used in parts of the United States to differentiate between fisheries dominated by two distinct types of fish (those that reside in warm water or cold water). In Alaska, there are anadromous fish streams, resident fish streams, and non-bearing fish streams. All anadromous and resident fish streams in Alaska are coldwater fisheries. Alaska Statute 16.05.841 (Title 16) ensures that fish passage is maintained in all fish-bearing streams. Therefore, backfill restoration measures, which include the use of clean gravel or native cobbles, would apply to all coldwater fisheries.</p>

TABLE D-2 (cont'd)

AGDC's Modifications to FERC's Procedures Deemed Acceptable ^{a,b}

Section	Original FERC Language	AGDC's Proposed Modification	AGDC's Justification
VI.A.3	Limit the width of the construction right-of-way to 75 feet or less. Prior written approval of the Director is required where topographic conditions or soil limitations require that the construction right-of-way width within the boundaries of a federally delineated wetland be expanded beyond 75 feet. Early in the planning process the project sponsor is encouraged to identify site-specific areas where excessively wide trenches could occur and/or where spoil piles could be difficult to maintain because existing soils lack adequate unconfined compressive strength.	Limit the width of the construction right-of-way to 75- 110 feet or less. Prior written approval of the Director is required where topographic conditions or soil limitations, safety, construction efficiency and/or logistics practicability require that the construction right-of-way width within the boundaries of a federally delineated wetland be expanded beyond 75 110 feet. Early in the planning process the project sponsor Project is encouraged to identify site-specific areas where excessively wide trenches could occur and/or where spoil piles could be difficult to maintain because existing soils lack adequate unconfined compressive strength.	Site-specific justifications for the wider ROW were provided for each area based on the conditions that would be crossed (e.g., passage of equipment, leapfrogging equipment, oversize ditch in bedrock or permafrost soils where blasting is required, access on the ROW avoids use of existing road infrastructure like Dalton Highway, safe working space in steep terrain).
VI.A.6	Do not locate aboveground facilities in any wetland, except where the location of such facilities outside of wetlands would prohibit compliance with U.S. Department of Transportation regulations.	Do not locate aboveground facilities in any wetland, except where the location of such facilities outside of wetlands would prohibit compliance with U.S. Department of Transportation regulations or as allowed by FERC Order.	None provided.
VI.B.1.a	Locate all extra work areas (such as staging areas and additional spoil storage areas) at least 50 feet away from wetland boundaries, except where the adjacent upland consists of cultivated or rotated cropland or other disturbed land.	Locate all extra work areas ATWS' (such as staging areas and additional spoil storage areas) at least 50 feet away from wetland boundaries, except where the adjacent upland consists of cultivated or rotated cropland or other disturbed land. In areas with long stretches of contiguous wetlands where it is determined that no reasonable alternative exists, additional temporary work space may be located in or within 50 feet of a wetland.	Site-specific justifications for the ATWS located in or within 50 feet of waterbodies and wetlands include: space needed at waterbody crossings (dry-ditch, buried trenchless, Cook Inlet); pipeline drag and pull back sections at waterbody and road crossings; road crossings; railroad crossings; foreign pipeline and utility crossings; fault crossings; spread breaks; timber decking storage; turnaround areas; horizontal bends; spoil storage at sloped sections; special design areas (Atigun and Denali); and ice roads and pads.

TABLE D-2 (cont'd)

AGDC's Modifications to FERC's Procedures Deemed Acceptable ^{a,b}

Section	Original FERC Language	AGDC's Proposed Modification	AGDC's Justification
VI.B.1.c	The construction right-of-way may be used for access when the wetland soil is firm enough to avoid rutting or the construction right-of-way has been appropriately stabilized to avoid rutting (e.g., with timber riprap, prefabricated equipment mats, or terra mats). In wetlands that cannot be appropriately stabilized, all construction equipment other than that needed to install the wetland crossing shall use access roads located in upland areas. Where access roads in upland areas do not provide reasonable access, limit all other construction equipment to one pass through the wetland using the construction right-of-way.	The construction right-of-way may be used for access when the wetland soil is firm enough to avoid rutting or the construction right-of-way has been appropriately stabilized to avoid rutting (e.g., with timber riprap, prefabricated equipment mats, or terra mats or frost packing). In wetlands that cannot be appropriately stabilized, all construction equipment other than that needed to install the wetland crossing shall use access roads located in wetland soils that are stable (i.e., can support equipment without soil mixing) or upland areas. Where access roads in stable wetlands or upland areas do not provide reasonable access, limit all other construction equipment to one pass through the wetland using the construction right-of-way, where practical .	Revised wording provided to reflect logistical and operational constraints of working in a predominantly wetland environment.
VI.B.2.a	Comply with COE, or its delegated agency, permit terms and conditions.	Comply with COE, or its delegated agency, permit terms and conditions. Off-road access on the North Slope coastal and foothill zones will comply with the tundra travel criteria as specified by the Alaska Department of Natural Resources (ADNR) and North Slope Borough (NSB).	None provided.
VI.B.2.b	Assemble the pipeline in an upland area unless the wetland is dry enough to adequately support skids and pipe.	Assemble the pipeline in an upland area unless the wetland is dry firm enough to adequately support skids and pipe.	Due to the presence of underlying permafrost, about 75 percent of the affected wetlands are unlikely to be "dry." Surface water in these areas cannot drain into the subsurface soils because of the presence of permafrost. However, the extended winter seasons result in frozen wetlands which, when frozen, are "firm enough" for pipeline assembly.
VI.B.2.d	Minimize the length of time that topsoil is segregated and the trench is open. Do not trench the wetland until the pipeline is assembled and ready for lowering in.	Minimize the length of time that topsoil organic material is segregated and the trench is open. Do not trench the wetland until the pipeline is assembled and ready for lowering in.	Changed reference from topsoil to organic material to reflect the varying depth of topsoil throughout the Project area
VI.B.2.e	Limit construction equipment operating in wetland areas to that needed to clear the construction right-of-way, dig the trench, fabricate and install the pipeline, backfill the trench, and restore the construction right-of-way.	Limit construction equipment operating in wetland areas that will be crossed using ROW construction mode 3 (summer matted wetlands) to that needed to clear the construction right-of-way, dig the trench, fabricate and install the pipeline, backfill the trench, and restore the construction right-of-way.	Given the pervasiveness of wetlands of differing type along the Project route in Alaska, additional clarity is provided to describe the basis for limiting equipment operation in areas of saturated soils or standing water.

TABLE D-2 (cont'd)

AGDC's Modifications to FERC's Procedures Deemed Acceptable ^{a,b}

Section	Original FERC Language	AGDC's Proposed Modification	AGDC's Justification
VI.B.2.f	Cut vegetation just above ground level, leaving existing root systems in place, and remove it from the wetland for disposal. The project sponsor can burn woody debris in wetlands, if approved by the COE and in accordance with state and local regulations, ensuring that all remaining woody debris is removed for disposal.	Cut vegetation just above ground level, grind stumps to achieve a trafficable working surface , leaving existing root systems in place, and remove it from the wetland for disposal. The Project can burn woody debris in wetlands, if approved by the COE and in accordance with state and local regulations, ensuring that all remaining woody debris is removed for disposal.	Improves clarity on construction procedures that would allow for safe use of a work surface by equipment and vehicles.
VI.B.2.g	Limit pulling of tree stumps and grading activities to directly over the trenchline...	Limit pulling of tree stumps and grading activities to directly over the trenchline and the spoil side where grading is performed...	Wetlands with cross slopes require grading to build a flat, working surface that provides safe access by equipment and vehicles.
VI.D.2 (new)	None – new text.	Where it is necessary for helicopters to land, an area up to 170 feet wide and 300 feet long may be cleared of all vegetation greater than 8 inches high.	None provided.
VII.A.2	Apply for National Pollutant Discharge Elimination System (NPDES) or state-issued discharge permits, as required.	Apply for National Alaska Pollutant Discharge Elimination System (NAPDES) or state-issued discharge permits, as required.	None provided.
VII.B.1	Perform 100 percent radiographic inspection of all pipeline section welds or hydrotest the pipeline sections, before installation under waterbodies or wetlands.	Perform 100 percent radiographic inspection non-destructive testing of all pipeline section welds or hydrotest the pipeline sections, before installation under waterbodies in accordance with U.S. Department of Transportation requirements.	None provided.
^a	Minor wording changes to FERC's Procedures that we (FERC Staff) have deemed acceptable were not included in this appendix and should be incorporated as modified by AGDC into the updated Project Procedures.		
^b	We have determined that requirements are acceptable as modified by AGDC (see italicized bold and struck-out text in the "AGDC's Proposed Modification" column) and should be incorporated into a revised version of the Project Procedures.		

TABLE D-3

AGDC's Modifications to FERC's Plan with Revisions or Recommendations Needed ^a

Section	Original FERC Language	AGDC's Proposed Modification ^b	AGDC's Justification	FERC Conclusion ^c	Final Language
II.B.10	Ensuring restoration of contours and topsoil;...	Ensuring restoration of contours and topsoil Ensure the post-construction right-of-way is graded to stable contours with the surface soils in a suitable condition for restoration; ...	As discussed in the Winter and Permafrost Construction Plan and Restoration Plan, ^d ensuring a stable right-of-way is critical to the long-term success of any revegetation efforts and would be the primary measure implemented after construction is complete.	Deemed acceptable with revisions.	Ensure the post-construction right-of-way is graded to stable contours with the surface soils in a suitable condition for restoration <u>in accordance with the FERC-approved Project Revegetation Plan;</u> ...
IV.A.1	Project-related ground disturbance shall be limited to the construction right-of-way, extra work space areas, pipe storage yards, borrow and disposal areas, access roads, and other areas approved in the FERC's Orders...	Project-related ground disturbance shall be limited to the construction right-of-way, extra additional work space areas (ATWS), pipe storage yards, borrow and disposal areas, access roads, shooflies and other areas approved in the FERC's Orders. Where fill is imported to provide a stable work surface in any of the above areas, the fill will be permanently left in place as authorized as permanent fill by the US Army Corps of Engineers permit. The Project will not leave imported fill in jurisdictional wetlands unless authorized as permanent fill by the US Army Corps of Engineers...	AGDC's justification for the use of granular fill includes providing a stable and safe construction work surface, maximizing utilization of construction personnel and equipment, minimizing construction costs, providing access to remote areas, and protection of permafrost. AGDC has stated that use of timber mats, wood chips, and corduroy mats in lieu of granular fill would be cost prohibitive given the lack of material availability and shipping costs. AGDC additionally states that granular fill would provide thermal insulation to the existing tundra, thereby reducing the likelihood of thermokarst occurring in areas of thaw sensitive soils with high moisture content;...	Deemed acceptable with a recommendation (see section 4.2.4).	See AGDC's Proposed Modification.

TABLE D-3 (cont'd)

AGDC's Modifications to FERC's Plan with Revisions or Recommendations Needed ^a

Section	Original FERC Language	AGDC's Proposed Modification ^b	AGDC's Justification	FERC Conclusion ^c	Final Language
IV.A.2	The construction right-of-way width for a project shall not exceed 75 feet or that described in the FERC application unless otherwise modified by a FERC Order...	The construction right-of-way width for a project the Project shall not exceed 75 145 feet or that described in the FERC application unless otherwise modified by a FERC Order...	<p>The most common construction right-of-way width for the Project would be 145 feet, consisting of a 110-foot-wide working area, a 20-foot-wide travel lane, and a 15-foot-wide bypass lane. ATWS would be required at crossings, points of intersection, and on side slopes.</p> <p>ROW Mode 05A is the only mode that would require an additional 25 feet outside of the 145-foot-wide right-of-way. The criteria for the additional 25 feet in non-wetland areas includes:</p> <ul style="list-style-type: none"> · ATWS required for summer season topsoil stockpiling; · providing additional space for safe construction in side slope areas; and · providing truck turnarounds where no reasonable alternative access exists. 	Denied—unnecessary modification; the width of the right-of-way is described in AGDC's application	N/A
IV.B.3	Where topsoil segregation is required, the project sponsor must: <ul style="list-style-type: none"> a. segregate at least 12 inches of topsoil in deep soils (more than 12 inches of topsoil); and b. make every effort to segregate the entire topsoil layer in soils with less than 12 inches of topsoil. 	Where topsoil segregation is required, the project sponsor Project must: <ul style="list-style-type: none"> a. segregate at least 12 inches of topsoil in deep soils (more than 12 inches of topsoil); topsoil areas where more than 12 inches of topsoil is present; and b. make every effort practicable efforts to segregate the entire topsoil layer in soils with less than 12 inches of topsoil. 	Project specific conditions, such as terrain, environment, construction season, and other constraints make topsoil segregation infeasible in some areas.	Deemed acceptable with revisions.	Where topsoil <u>organic layer</u> segregation is required, <u>as established in the FERC-approved Project Revegetation Plan</u> , the Project must: <ul style="list-style-type: none"> a. segregate at least 12 inches of topsoil <u>the organic layer</u> in deep soils (more than 12 inches of topsoil <u>organic layer</u>); and b. make every effort <u>practicable</u> efforts to segregate the entire topsoil <u>organic layer</u> in soils with less than 12 inches of topsoil <u>organic material</u>.

TABLE D-3 (cont'd)

AGDC's Modifications to FERC's Plan with Revisions or Recommendations Needed ^a

Section	Original FERC Language	AGDC's Proposed Modification ^b	AGDC's Justification	FERC Conclusion ^c	Final Language
IV.F.3.b	At a minimum, install and maintain temporary sediment barriers across the entire construction right-of-way at the base of slopes greater than 5 percent where the base of the slope is less than 50 feet from a waterbody, wetland, or road crossing until revegetation is successful as defined in this Plan...	At a minimum, install and maintain temporary sediment barriers across the entire construction right-of-way at the base of slopes greater than 5 percent where the base of the slope is less than 50 feet from a waterbody, wetland, or road crossing until revegetation final restoration is deemed successful as defined in this Plan...	None provided.	Deemed acceptable with revisions.	At a minimum, install and maintain temporary sediment barriers across the entire construction right-of-way at the base of slopes greater than 5 percent where the base of the slope is less than 50 feet from a waterbody, wetland, or road crossing until <u>final restoration is deemed considered successful as defined in this Plan according to the final performance standards in the FERC-approved Project Revegetation Plan...</u>
V.A.2	...When access is no longer required the travel lane must be removed and the right-of-way restored.	...When access is no longer required the travel lane must be removed will be deactivated and the right-of-way restored.	Deactivation has been defined as modifying the travel lane so it would no longer be usable for access by placing traffic barriers, removing culverts, and reestablishing natural drainage. AGDC has stated that the fill used for construction of the travel lane would not be removed.	Deemed acceptable with a recommendation (see section 4.2.4).	See AGDC's Proposed Modification.
V.A.5	Grade the construction right-of-way to restore pre-construction contours and leave the soil in the proper condition for planting.	Grade the construction right-of-way to restore pre-construction and leave the soil in the proper condition for planting stable contours with the surface soils in a suitable condition for restoration.	Stability of the right-of-way is paramount to the success of restoration. Stable contours to ensure restoration may not be the pre-construction contours.	Deemed acceptable with revisions.	Grade the construction right-of-way to stable contours with the surface soils in a suitable condition for restoration <u>in accordance with the FERC-approved Project Revegetation Plan.</u>

TABLE D-3 (cont'd)

AGDC's Modifications to FERC's Plan with Revisions or Recommendations Needed ^a

Section	Original FERC Language	AGDC's Proposed Modification ^b	AGDC's Justification	FERC Conclusion ^c	Final Language
V.A.7	Remove temporary sediment barriers when replaced by permanent erosion control measures or when revegetation is successful.	Remove temporary synthetic sediment barriers when replaced by permanent erosion control measures or when initial revegetation and/or stabilization is successful complete.	Initial revegetation and/or stabilization would be considered complete following restoration when re-seeding of the restored ground and spreading of soil additives is finished. All temporary synthetic sediment barriers would be removed from the ROW and construction sites when restoration and revegetation is deemed acceptable. Restoration and re-seeding would take place during late summer and early fall in each construction section following pipe backfill and continuing until freeze-up. Permanent ROW slope breakers would be left in place to impede erosion within the ROW in sloped terrain. An initial construction monitoring and remediation period would be established beginning with completion of re-seeding and ending with final construction at commissioning. This construction monitoring and remediation period would be one to two growing seasons. After commissioning, pipeline operation would continue ROW monitoring and remediation on an as-needed basis, estimated to be two growing seasons, for a total of three complete growing seasons following completion of the initial ROW reclamation.	Deemed acceptable with revisions.	Remove temporary synthetic sediment barriers when replaced by permanent erosion control measures or when initial-revegetation and/or stabilization is complete <u>according to the final performance standards in the FERC-approved Project Revegetation Plan.</u>
V.D.1.a	The project sponsor is responsible for ensuring successful revegetation of soils disturbed by project-related activities, except as noted in section V.D.1.b.	The project sponsor is responsible for ensuring successful revegetation of soils disturbed by project-related activities, except as noted in section V.D.1.b or in other areas where application of stabilization measures precludes revegetation (such as where a permanent mulch or other ground cover has been installed).	The response from AGDC referred to the justification for a proposed modification to V.B.3, which was subsequently retracted.	Deemed acceptable with revisions.	The project sponsor is responsible for ensuring successful revegetation of soils disturbed by Project-related activities, except as noted in section V.D.1.b or in other areas where application of stabilization measures precludes revegetation (such as where a permanent mulch or other ground cover has been installed), <u>subject to field determination under the Compliance Monitoring Program.</u>

TABLE D-3 (cont'd)

AGDC's Modifications to FERC's Plan with Revisions or Recommendations Needed ^a

Section	Original FERC Language	AGDC's Proposed Modification ^b	AGDC's Justification	FERC Conclusion ^c	Final Language
V.D.3.e	In the absence of written recommendations from the local soil conservation authorities, seed all disturbed soils within 6 working days of final grading, weather and soil conditions permitting, subject to the specifications in section V.D.3.a through V.D.3.c.	In the absence of The Project will adhere to written recommendations from the local soil conservation authorities, seed all disturbed soils within 6 working days of final grading, weather and soil conditions permitting, subject to the specifications in section V.D.3.a through V.D.3.c.	The response from AGDC references the Project-specific Restoration Plan. ^d	Deemed acceptable with revisions.	In the absence of written recommendations from the local soil conservation authorities, <u>the Project will adhere to reseeding protocols established in the FERC-approved Revegetation Plan</u> , subject to the specifications in section V.D.3.a through V.D.3.c.
VII.A.1	Conduct follow-up inspections of all disturbed areas, as necessary, to determine the success of revegetation and address landowner concerns. At a minimum, conduct inspections after the first and second growing seasons.	Conduct follow-up inspections of all disturbed areas, as necessary, to determine evaluate the success of revegetation site stabilization and address landowner concerns. At a minimum, conduct inspections after the first and second growing seasons.	None provided, but the requested modifications are consistent with other changes regarding restoration.	Deemed acceptable with revisions.	Conduct follow-up inspections of all disturbed areas, as necessary, to evaluate the success of site stabilization and address landowner concerns. At a minimum, conduct inspections after the first and second growing seasons <u>and in accordance with the FERC-approved Project Revegetation Plan.</u>

TABLE D-3 (cont'd)

AGDC's Modifications to FERC's Plan with Revisions or Recommendations Needed ^a

Section	Original FERC Language	AGDC's Proposed Modification ^b	AGDC's Justification	FERC Conclusion ^c	Final Language
VII.A.2	<p>Revegetation in non-agricultural areas shall be considered successful if upon visual survey the density and cover of non- nuisance vegetation are similar in density and cover to adjacent undisturbed lands. In agricultural areas, revegetation shall be considered successful when upon visual survey, crop growth and vigor are similar to adjacent undisturbed portions of the same field, unless the easement agreement specifies otherwise.</p>	<p><i>Where revegetation is performed,</i> revegetation in non-agricultural areas shall be considered successful if upon visual survey the density and cover of non- nuisance vegetation are similar in density and cover to adjacent undisturbed lands. In agricultural areas, revegetation shall be considered successful when upon visual survey, crop growth and vigor are similar to adjacent undisturbed portions of the same field, unless the easement agreement specifies otherwise <i>evaluated against performance standards in the Project Restoration Plan.</i></p>	<p>Although seeding or planting would be limited to certain construction modes, AGDC's approach to revegetation also includes natural revegetation by native plant species as described in the Project Restoration Plan. Natural revegetation takes place without any management input but can be assisted or enhanced with any combination of surface preparation or modification techniques, fertilizers, and soil amendments. Scarification is a surface preparation technique that disturbs the soil surface providing micro-sites favorable to plant growth. Fertilizer may be used to provide nutrients that plants will uptake for growth. Inputs such as these may aid the natural revegetation process.</p> <p>Revegetation of Representative Monitoring Evaluation Sites (RMES) would be considered successful when vegetation within the reclaimed ROW supports plants that are similar in cover and/or density to those growing on adjacent undisturbed reference sites that will be determined later.</p> <p>The erosion control standard, amount of canopy (or aerial) cover, and density standard would be based on quantitative information collected from adjacent reference or control sites. A quantitative vegetative monitoring program would document the revegetation progress. RMES would be established approximately every 10 miles along the ROW, or as agreed upon with the landowner to reflect various conditions, in addition to specific sites used for temporary support purposes.</p>	<p>Deemed acceptable with revisions.</p>	<p>Where revegetation is performed, revegetation in non-agricultural areas shall be evaluated against <u>in accordance with the final performance standards in the FERC-approved Project Restoration Revegetation Plan.</u></p>

TABLE D-3 (cont'd)

AGDC's Modifications to FERC's Plan with Revisions or Recommendations Needed ^a

Section	Original FERC Language	AGDC's Proposed Modification ^b	AGDC's Justification	FERC Conclusion ^c	Final Language
VII.A.4	Restoration shall be considered successful if the right-of-way surface condition is similar to adjacent undisturbed lands, construction debris is removed (unless otherwise approved by the landowner or land managing agency per section V.A.6), revegetation is successful, and proper drainage has been restored.	Restoration <i>of the right-of-way surface</i> shall be considered successful if the right-of-way surface condition is similar to adjacent undisturbed lands <i>evaluated against performance standards in the Project Restoration Plan</i> , construction debris is removed (unless otherwise approved by the landowner or land managing agency per section V.A.6), revegetation is successful, and proper drainage has been restored.	None provided, but the requested modifications are consistent with other changes with regard to restoration.	Deemed acceptable with revisions.	Restoration of the right-of-way surface shall be evaluated against <u>considered successful once the final performance standards in the FERC-approved Project Restoration Revegetation Plan are met</u> , construction debris is removed (unless otherwise approved by the landowner or land managing agency per section V.A.6), revegetation is successful , and proper drainage has been restored.
VII.A.5	...In no case shall routine vegetation mowing or clearing occur during the migratory bird nesting season between April 15 and August 1 of any year unless specifically approved in writing by the responsible land management agency or the U.S. Fish and Wildlife Service.	...In no case shall routine vegetation mowing or clearing occur during the migratory bird nesting season between April 15 and August 1 of any year unless specifically approved in writing by the responsible land management agency or the U.S. Fish and Wildlife Service.	Some vegetation maintenance may occur in the winter because of restrictive access to the ROW; therefore, the window would vary by region and terrain. Winter vegetation maintenance would be limited to mechanized tree cutting and brushing within the permanent right-of-way. This would include Mainline Pipeline areas in the forested climate zone (south of Arctic Circle) that can only be accessed during winter due to remote location or are confined by wetlands. The approximate milepost ranges for these segments are MPs 179 to 532, 543 to 561, and 566 to 766.	Deemed acceptable with a recommendation (see section 4.6.2).	See AGDC's Proposed Modification.

N/A = Not applicable

^a Modifications we (FERC Staff) have deemed acceptable as written are listed in table D-1.

^b AGDC's proposed modifications are shown in italicized bold and struck-out text.

^c For modifications deemed acceptable with revisions, the revisions are shown in underlined text / strike-out and should be incorporated into a revised version of the Project Plan, as shown in the "Final Language" column. For modifications deemed acceptable with a recommendation only, we have determined that AGDC's additions and/or wording of the proposed modifications are acceptable, as shown in the "AGDC's Proposed Modification" column, as long as AGDC applies the recommendation(s) related to the content included in section 4.0, as referenced.

^d The Project Winter & Permafrost Construction Plan was included in appendix M to AGDC's Resource Report 1 (Accession No. 20170417-5339), and the Project Restoration and Revegetation Plans were included in response to environmental information request No. 107 (Accession No. 20181120-5161). The documents are available on the FERC website <http://www.ferc.gov>. Using the "eLibrary" link, select "Advanced Search" from the eLibrary menu and enter 20170417-5339 or 20181120-5161 in the "Numbers: Accession Number" field.

TABLE D-4

AGDC's Modifications to FERC's Procedures with Revisions or Recommendations Needed ^a

Section	Original FERC Language	AGDC's Proposed Modification ^b	AGDC's Justification	FERC Conclusion ^c	Final Language
V.B.5.e	Remove temporary equipment bridges as soon as practicable after permanent seeding.	Remove temporary equipment bridges as soon as practicable after permanent seeding restoration is complete.	Provides improved clarity and flexibility to address potential delays in the removal of temporary bridges due to limited existing infrastructure, weather conditions, or impassible terrain. The revised wording reflects the remoteness of many of the water crossing sites, the difficulty in accessing these sites and right-of-way areas beyond the water crossing and other issues. For example, the need to maintain a crossing structure may be controlled by construction and/or restoration activities taking place on a pipeline section at some distance from the crossing structure.	Deemed acceptable with revisions.	Remove temporary equipment bridges as soon as practicable after restoration is complete <u>in accordance with the final performance standards in the FERC-approved Project Revegetation Plan.</u>
V.B.6.d (new)		Channel Diversion ^d	Diversion is a subcategory of flow isolation that can be used in lieu of, or in conjunction with, flumes or pumps. Flow is diverted to existing channels in the active floodplain or section of the channel defined by ordinary high water. Diversion is most commonly used at braided stream crossings or streams with secondary floodplain channels where diversion can be easily employed in lieu of flumes or pumps. Diversion can also be used on larger stream crossings where flow cannot be reasonably managed with flumes or pumps alone. Project would obtain the necessary permit authorization from the COE before initiating a waterbody crossing.	Deemed acceptable with a recommendation (see section 4.3.2.4).	See AGDC's Proposed Modification.
V.B.8 (new)		Aerial Span ^d	Aerial span would be used for crossing waterbodies primarily in the PTTL portion of the Project where the pipeline will be supported with VSMS. Two river crossings of the Mainline Pipeline would be crossed with aerial spans consisting of engineered structural bridges. A pipeline bridge exists on the Sag River bridge, which would be used for an aerial crossing. Aerial crossings supported by VSMS on each side of the waterbody would span all but three additional channels. Those three would be trenched, to avoid disturbance of permafrost and tundra impacts where reasonable. The two Mainline crossings have incised channels with steep banks requiring aerial crossings. Project would obtain the necessary permit authorization from the COE before initiating a waterbody crossing.	Deemed acceptable with a recommendation (see section 4.3.2.4).	See AGDC's Proposed Modification.

TABLE D-4 (cont'd)

AGDC's Modifications to FERC's Procedures with Revisions or Recommendations Needed ^a					
Section	Original FERC Language	AGDC's Proposed Modification ^b	AGDC's Justification	FERC Conclusion ^c	Final Language
V.B.9 V.B.11	<p>Crossings of Major Waterbodies</p> <p>Before construction, the project sponsor shall file...and shall include extra work areas, spoil storage areas, sediment control structures, etc., as well as mitigation for navigational issues....</p> <p>The Environmental Inspector may adjust the final placement of the erosion and sediment control structures in the field to maximize effectiveness.</p>	<p>Crossings of Major Waterbodies</p> <p>Before construction, the project sponsor Project shall file...and shall include extra work areas ATWS, spoil storage areas, sediment control structures, etc., as well as mitigation for navigational issues...</p> <p>The Environmental Inspector may adjust the final placement of the erosion and sediment control structures in the field to maximize effectiveness.</p>	Minor text changes consistent with Project-specific Procedures.	Deemed acceptable with a recommendation (see section 4.3.2.4).	See AGDC's Proposed Modification.
V.C.7	Revegetate disturbed riparian areas with native species of conservation grasses, legumes, and woody species, similar in density to adjacent undisturbed lands.	Revegetate disturbed riparian areas with native species of conservation grasses, legumes, and woody species, similar in density to adjacent undisturbed lands in accordance with the Project Restoration Plan, developed in consultation with federal and state regulatory authorities (see appendix P in Resource Report 3). ^e	None provided.	Deemed acceptable with revisions.	Revegetate disturbed riparian areas with native species of conservation grasses, legumes, and woody species <u>in accordance with the FERC-approved Project Restoration Revegetation Plan</u> , developed in consultation with federal and state regulatory authorities (see Appendix P in Resource Report 3).

TABLE D-4 (cont'd)

AGDC's Modifications to FERC's Procedures with Revisions or Recommendations Needed ^a					
Section	Original FERC Language	AGDC's Proposed Modification ^b	AGDC's Justification	FERC Conclusion ^c	Final Language
V.D.1	Limit routine vegetation mowing or clearing adjacent to waterbodies to allow a riparian strip at least 25 feet wide, as measured from the waterbody's mean high water mark, to permanently revegetate with native plant species across the entire construction right-of-way...HDD entry and exit points.	Limit routine vegetation mowing or clearing adjacent to waterbodies to allow a riparian strip at least 25 feet wide, as measured from the waterbody's mean high water mark, to permanently revegetate with native plant species across the entire construction right-of-way in accordance with the Project Restoration Plan...HDD Buried Trenchless entry and exit points.	None provided.	Deemed acceptable with revisions.	Limit routine vegetation mowing or clearing adjacent to waterbodies to allow a riparian strip at least 25 feet wide, as measured from the waterbody's mean high water mark, to permanently revegetate with native plant species across the entire construction right-of-way <u>in accordance with the FERC-approved Project Revegetation Plan...Buried Trenchless</u> entry and exit points.
V.D.3	Time of year restrictions specified in section VII.A.5 of the Plan (April 15 – August 1 of any year) apply to routine mowing and clearing of riparian areas.	Time of year restrictions specified in section VII.A.5 of the Applicant's Plan (April 15 – August 1 of any year) apply to routine mowing and clearing of riparian areas.	Not provided for the Procedures. For the Plan, AGDC stated that some vegetation maintenance might occur in the winter because of restrictive access to the ROW; therefore, the window will vary by region and terrain.	Deemed acceptable with revisions and a recommendation (see section 4.6.2).	Time of year restrictions specified in section VII.A.5 of the Applicant's Project Plan apply to routine mowing and clearing of riparian areas.
VI.B.2.h	Segregate the top 1 foot of topsoil from the area disturbed by trenching, except in areas where standing water is present or soils are saturated. Immediately after backfilling is complete, restore the segregated topsoil to its original location.	Segregate approximately the top 1 foot of topsoil organic material from the area disturbed by trenching grading (trench and spoil side) , except in areas where standing water is present or soils are saturated or frozen, or where the ditch is opened by "Drill and Shoot" . Immediately after backfilling is complete, restore the segregated topsoil to its original location organic material back to the trench .	Changed reference from topsoil to organic material to reflect the varying depth of topsoil throughout the Project area. The depth of 1 foot reflects the practical minimum depth of organic material that can be segregated. Additional notes added to reflect the conditions under which it is technically infeasible, due to location conditions, to segregate organic material, e.g. inundated wetlands, frozen ground (winter construction), or where 'drill and shoot' is required to open the trench. See section 2.6.3 [in Resource Report 2] ^f for additional justification.	Deemed acceptable with revisions.	Segregate approximately the top 1 foot of organic material from the area disturbed by grading (trench and spoil side), except in areas where standing water is present or soils are saturated or frozen, or where the ditch is opened by "Drill and Shoot." Immediately after backfilling is complete, restore the <u>segregated organic material to its original location back to the trench</u> .

TABLE D-4 (cont'd)

AGDC's Modifications to FERC's Procedures with Revisions or Recommendations Needed ^a					
Section	Original FERC Language	AGDC's Proposed Modification ^b	AGDC's Justification	FERC Conclusion ^c	Final Language
VI.B.2.i	Do not use rock, soil imported from outside the wetland, tree stumps, or brush riprap to support equipment on the construction right-of-way.	Do not use rock, soil imported from outside the wetland, tree stumps or brush riprap to support equipment on the construction right-of-way. Gravel fill work pads may be used to provide safe working conditions for equipment and personnel and minimize disturbance to the underlying permafrost and thaw sensitive soil regime.	Project may, where necessary, use locally sourced granular fill to minimize disturbance to underlying permafrost and thaw sensitive soils, and provide safe working conditions in sloping terrain conditions in the season of construction (slopes >5 percent grade in winter and any slope in summer where permafrost or thaw sensitive soil is found in the subsurface).	Deemed acceptable with revisions and a recommendation (see section 4.2.4).	Do not use tree stumps or brush riprap to support equipment on the construction right-of-way. Gravel Granular fill work pads may be used to provide safe working conditions for equipment and personnel and minimize disturbance to the underlying permafrost and thaw sensitive soil regime.
VI.B.2.j	If standing water or saturated soils are present, or if construction equipment causes ruts or mixing of the topsoil and subsoil in wetlands, use low-ground-weight construction equipment, or operate normal equipment on timber riprap, prefabricated equipment mats, or terra mats.	If standing water or saturated soils are present, or if construction equipment causes ruts or mixing of the topsoil organic material and subsoil in wetlands, use low-ground-weight construction equipment, or operate normal equipment on timber riprap, prefabricated equipment mats, or terra mats. Soil fill or rock riprap may be used to stabilize the right-of-way where authorized as permanent fill by the COE for jurisdictional wetlands. Frost-packing may be utilized during winter construction in thaw stable permafrost and non-permafrost areas.	Changed reference from topsoil to organic material to reflect the varying depth of topsoil throughout the Project area. Ground freezing (frost packing) is a principal means of improving ground support for construction equipment. The Project might, where necessary, use imported granular fill to construct a safe work pad and access within wetland areas.	Deemed acceptable with a recommendation (see section 4.2.4).	See AGDC's Proposed Modification.
VI.B.2.k	Remove all project-related material used to support equipment on the construction right-of-way upon completion of construction.	Remove all project-related material used to support equipment on the construction right-of-way upon completion of construction except where permanent fill is authorized by the COE for jurisdictional wetlands.	Added provision to allow continued access by equipment needed for post-construction restoration over long-term restoration timeframes in arctic/sub-arctic regions. Material to support equipment is proposed to remain in place to prevent further disturbance, subject to COE authorization.	Deemed acceptable with a recommendation (see section 4.2.4).	See AGDC's Proposed Modification.

TABLE D-4 (cont'd)

AGDC's Modifications to FERC's Procedures with Revisions or Recommendations Needed ^a

Section	Original FERC Language	AGDC's Proposed Modification ^b	AGDC's Justification	FERC Conclusion ^c	Final Language
VI.B.3	Install sediment barriers (as defined in section IV.F.3.a of the Plan) immediately after initial disturbance of the wetland or adjacent upland... Temporary erosion and sediment control measures are addressed in more detail in the Plan.	Install sediment barriers as defined in section IV.F.3.a of the Applicant's Plan immediately after initial disturbance of the wetland or adjacent upland in summer or in winter prior to the spring snow melt ... Temporary erosion and sediment control measures are addressed in more detail in the Applicant's Plan.	Minor text changes consistent with the Project-specific Procedures. Clarifies that temporary sediment barriers would be installed in advance of spring breakup and snowmelt. Refer also to the Winter & Permafrost Construction Plan in Resource Report No, 1, Appendix M. ⁹	Deemed acceptable with revisions.	Install sediment barriers as defined in section IV.F.3.a of the Applicant's Project Plan immediately after initial disturbance of the wetland or adjacent upland in summer or in winter prior to the spring snow melt... Temporary erosion and sediment control measures are addressed in more detail in the Applicant's Project Plan.
VI.C.6	Until a project-specific wetland restoration plan is developed and/or implemented, temporarily revegetate the construction right-of-way with annual ryegrass at a rate of 40 pounds/acre (unless standing water is present).	Until a project-specific wetland restoration plan is developed and/or implemented, temporarily revegetate the construction right-of-way with annual ryegrass at a rate of 40 pounds/acre Temporarily revegetate the construction right-of-way in accordance with the Project Restoration Plan (unless standing water is present).	None provided.	Deemed acceptable with revisions.	Temporarily Revegetate the construction right-of-way in accordance with the <u>FERC-approved Project Restoration Revegetation</u> Plan (unless standing water is present).

TABLE D-4 (cont'd)

AGDC's Modifications to FERC's Procedures with Revisions or Recommendations Needed ^a

Section	Original FERC Language	AGDC's Proposed Modification ^b	AGDC's Justification	FERC Conclusion ^c	Final Language
VI.C.7	Ensure that all disturbed areas successfully revegetate with wetland herbaceous and/or woody plant species.	Ensure that all disturbed areas successfully revegetate with wetland herbaceous and/or woody plant species except where surface stabilization measures or native conditions preclude revegetation such as on slopes covered with wood chips to control permafrost degradation or exposed bedrock.	The revised text is intended to reflect the application of the Project Plan (Appendix D in Resource Report No. 7) ^h and Best Management Practices in Resource Report No. 2, Appendix J Stormwater Pollution Prevention Plan. ⁱ	Deemed acceptable with revisions.	Ensure that all disturbed areas successfully revegetate with wetland herbaceous and/or woody plant species except where surface stabilization measures or native conditions preclude revegetation such as on slopes covered with wood chips to control permafrost degradation or exposed bedrock <u>subject to field determination under the Compliance Monitoring Program.</u>
VI.C.8	Remove temporary sediment barriers located at the boundary between wetland and adjacent upland areas after revegetation and stabilization of adjacent upland areas are judged to be successful as specified in section VII.A.4 of the Plan.	Remove temporary synthetic sediment barriers located at the boundary between wetland and adjacent upland areas after initial revegetation and/or stabilization of adjacent upland areas are judged to be successful as specified in section VII.A.4 of the Plan the Project Restoration Plan.	Clarifies that organic based sediment barriers may be left in place. Synthetic barriers would be removed. Clarifies that stabilization may not include revegetation. Removed section callout to refer to the Project Restoration Plan (See Resource Report No. 3, Appendix P). ^e	Deemed acceptable with revisions.	Remove temporary synthetic sediment barriers located at the boundary between wetland and adjacent upland areas after initial revegetation and/or stabilization of adjacent upland areas are judged to be successful <u>based on the final performance standards as specified in the FERC-approved Project Restoration Revegetation Plan.</u>
VI.D.3 VI.D.4	Time of year restrictions specified in section VII.A.5 of the Plan (April 15 – August 1 of any year) apply to routine mowing and clearing of wetland areas.	Time of year restrictions specified in section VII.A.5 of the Applicant's Plan (April 15 – August 1 of any year) apply to routine mowing and clearing of wetland areas. ^h	None provided for Procedures. For the Plan, AGDC stated that some vegetation maintenance may occur in the winter because of restrictive access to the ROW; therefore, the window will vary by region and terrain.	Deemed acceptable with revisions and a recommendation (see section 4.6.2).	Time of year restrictions specified in section VII.A.5 of the <u>Applicant's Project Plan</u> apply to routine mowing and clearing of <u>wetland riparian</u> areas.

TABLE D-4 (cont'd)

AGDC's Modifications to FERC's Procedures with Revisions or Recommendations Needed ^a

Section	Original FERC Language	AGDC's Proposed Modification ^b	AGDC's Justification	FERC Conclusion ^c	Final Language
VI.D.4 VI.D.5	Monitor and record the success of wetland revegetation annually until wetland revegetation is successful.	Monitor and record the success of wetland revegetation annually on a monitoring cycle agreed to in the Project Restoration Plan until wetland revegetation is successful.	None provided.	Deemed acceptable with revisions.	Monitor and record the success of wetland revegetation on a monitoring cycle agreed to in the Project Restoration Plan until wetland revegetation is successful <u>in accordance with final restoration performance standards. Monitoring cycles and performance standards will be followed in accordance with the FERC-approved Project Revegetation Plan.</u>

TABLE D-4 (cont'd)

AGDC's Modifications to FERC's Procedures with Revisions or Recommendations Needed ^a					
Section	Original FERC Language	AGDC's Proposed Modification ^b	AGDC's Justification	FERC Conclusion ^c	Final Language
VI.D.5 VI.D.6	Wetland revegetation shall be considered successful if all of the following criteria are satisfied: a. the affected wetland satisfies the current federal definition for a wetland (i.e., soils, hydrology, and vegetation); b. vegetation is at least 80 percent of either the cover documented for the wetland prior to construction, or at least 80 percent of the cover in adjacent wetland areas that were not disturbed by construction; c. if natural rather than active revegetation was used, the plant species composition is consistent with early successional wetland plant communities in the affected ecoregion; and d. invasive species and noxious weeds are absent, unless they are abundant in adjacent areas that were not disturbed by construction.	Wetland revegetation shall be considered successful if all of the following criteria are satisfied: criteria as defined in the Project Restoration Plan are met. Example criteria could include but are not limited to: wetland functions, noxious weeds, invasive species, and agency-approved performance criteria. a. the affected wetland satisfies the current federal definition for a wetland (i.e., soils, hydrology, and vegetation); b. vegetation is at least 80 percent of either the cover documented for the wetland prior to construction, or at least 80 percent of the cover in adjacent wetland areas that were not disturbed by construction; c. if natural rather than active revegetation was used, the plant species composition is consistent with early successional wetland plant communities in the affected ecoregion; and d. invasive species and noxious weeds are absent, unless they are abundant in adjacent areas that were not disturbed by construction.	None provided.	Deemed acceptable with revisions.	Wetland revegetation shall be considered successful <u>once the final performance standards</u> # <u>criteria as defined in the FERC-approved Project Restoration Revegetation Plan are met. Example criteria could</u> Standards include but are not limited to wetland functions, <u>noxious weeds, non-native invasive plant species occurrences,</u> and <u>plant cover</u> agency-approved performance criteria.

TABLE D-4 (cont'd)

AGDC's Modifications to FERC's Procedures with Revisions or Recommendations Needed ^a					
Section	Original FERC Language	AGDC's Proposed Modification ^b	AGDC's Justification	FERC Conclusion ^c	Final Language
VI.D.6 VI.D.7	<p>Within 3 years after construction, file a report with the Secretary identifying the status of the wetland revegetation efforts and documenting success as defined in section VI.D.5, above. The requirement to file wetland restoration reports with the Secretary does not apply to projects constructed under the automatic authorization, prior notice, or advance notice provisions in the FERC's regulations.</p> <p>For any wetland where revegetation is not successful at the end of 3 years after construction, develop and implement (in consultation with a professional wetland ecologist) a remedial revegetation plan to actively revegetate wetlands. Continue revegetation efforts and file a report annually documenting progress in these wetlands until wetland revegetation is successful.</p>	<p>Within 3 years after construction, file a report with the Secretary identifying the status of the wetland revegetation efforts and documenting success as defined in section VI.D.5, above the Project Restoration Plan. The requirement to file wetland restoration reports with the Secretary does not apply to projects constructed under the automatic authorization, prior notice, or advance notice provisions in the FERC's regulations.</p> <p>For any wetland where revegetation is not successful at the end of 3 years after construction, develop and implement (in consultation with a professional wetland ecologist) a remedial revegetation plan to actively revegetate wetlands. Continue revegetation efforts and file a report annually documenting progress in these wetlands until wetland revegetation is successful. periodic reports as agreed to with regulatory agencies that document revegetation progress until the performance criteria are met as set out in the Alaska LNG Restoration Plan.</p>	None provided.	Deemed acceptable with revisions.	<p>Within 3 years after construction, file a report with the Secretary identifying the status of the wetland revegetation efforts and documenting success, as defined in the <u>FERC-approved Project Restoration Revegetation Plan</u>.</p> <p>Continue revegetation efforts and file periodic reports as agreed to with regulatory agencies that document revegetation progress until the <u>final</u> performance standards are met, as set out <u>specified</u> in the Alaska LNG <u>FERC-approved Project Restoration Revegetation Plan</u>.</p>

TABLE D-4 (cont'd)

AGDC's Modifications to FERC's Procedures with Revisions or Recommendations Needed ^a

Section	Original FERC Language	AGDC's Proposed Modification ^b	AGDC's Justification	FERC Conclusion ^c	Final Language
^a	Modifications we (FERC Staff) have deemed acceptable as written are listed in table D-2.				
^b	AGDC's proposed modifications are shown in italicized bold and struck-out text.				
^c	For modifications deemed acceptable with revisions, the revisions are shown in underlined text / strike-out and should be incorporated into a revised version of the Project Plan, as shown in the "Final Language" column. For modifications deemed acceptable with a recommendation, we have determined that AGDC's additions and/or wording of the proposed modifications are acceptable, as shown in the "AGDC's Proposed Modification" column, as long as AGDC applies the recommendation(s) related to the content included in section 4.0, as referenced.				
^d	The full text for AGDC's new proposed requirements was not included in this appendix and should be incorporated as provided by AGDC into the updated Project Procedures.				
^e	The Project Restoration and Revegetation Plans were included in response to environmental information request No. 107 (Accession No. 20181120-5161), available on the FERC website http://www.ferc.gov . Using the "eLibrary" link, select "Advanced Search" from the eLibrary menu and enter 20181120-5161 in the "Numbers: Accession Number" field.				
^f	Section 2.6.3 – Topsoil Segregation was included as part of AGDC's Resource Report 2, (Accession No. 20170417-5341), available on the FERC website http://www.ferc.gov . Using the "eLibrary" link, select "Advanced Search" from the eLibrary menu and enter 20170417-5341 in the "Numbers: Accession Number" field.				
^g	The Winter & Permafrost Construction Plan was included in appendix M to AGDC's Resource Report 1 (Accession No. 20170417-5339), available on the FERC website http://www.ferc.gov . Using the "eLibrary" link, select "Advanced Search" from the eLibrary menu and enter 20170417-5339 in the "Numbers: Accession Number" field.				
^h	The Alaska LNG Project Plan was included in appendix D to AGDC's Resource Report 7, (Accession No. 20170417-5345), available on the FERC website http://www.ferc.gov . Using the "eLibrary" link, select "Advanced Search" from the eLibrary menu and enter 20170417-5345 in the "Numbers: Accession Number" field.				
ⁱ	AGDC's Project Best Management Practices were included as part of AGDC's Resource Report 2, appendix J (Accession No. 20170417-5357), and the Stormwater Pollution Prevention Plan was provided in response to information request No. 35, dated 10/22/2018 (Accession No. 20181022-5218). They can be viewed on the FERC website http://www.ferc.gov . Using the "eLibrary" link, select "Advanced Search" from the eLibrary menu and enter 20170417-5357 or 20181022-5218 in the "Numbers: Accession Number" field.				