

APPENDIX N

List of Applicant's BMPs and Agency Recommended Mitigation Measures

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BMP Number	BMP Description
1	The Applicant would implement its Construction BMPs (Response to Information Request #107).
2	<p>In order to protect water wells, the Applicant would utilize temporary boundaries, including barricades and/or fencing, in addition to job planning and communication to prevent construction vehicles from entering well areas within the construction workspace.</p> <p>If erosion were to occur, the Applicant would use silt fencing, hay bale structures, and vegetation buffers as needed. Hay bale structures would be installed by placing and staking hay bales, wedging loose straw between bales, and backfilling and compacting soil as an anchor. Vegetation buffers would be used where dense herbaceous vegetation is present and would be monitored for continued stability.</p> <p>For any wellheads that are within the permanent pipeline right-of-way, and for which the permanent right-of-way cannot be moved to avoid the wellhead, the Applicant would consult with the landowners prior to construction to determine acceptable mitigation measures that could include:</p> <ol style="list-style-type: none"> 1. Closing and capping the wellhead in accordance with approved procedures by a licensed water well contractor; 2. Installing a new water well in a more desirable location; and/or 3. Providing the landowner with an alternate water source (Response to Information Request #103).
3	The Applicant would implement its Construction Spill Response Plan in the event of a spill during construction (Application, Vol. IIb, Appendix F).
4	The Applicant would implement its Unanticipated Discovery of Contamination Plan if contaminated soil or groundwater were identified during construction (Response to Information Request #221).
5	The Applicant would implement industry standard wetland and waterbody construction procedures (Response to Information Request #228).
6	In the event of an inadvertent release during HDD operations, the Applicant would implement its HDD Contingency Plan (Application, Vol IIb, Appendix H and Response to Information Request #227).
7	To stabilize segregated topsoil, the Applicant would install and maintain silt fence on the downslope side of spoil piles. Where no slope exists, silt fence may be installed around the entire perimeter to protect adjacent sensitive resources, if applicable (Response to Information Request #179).
8	The Applicant would implement the Final Revegetation Plan, developed in coordination with TPWD, to restore workspaces affected by pipeline construction (Response to Information Request #30, #171, #217, #313).
9	During construction, the Applicant would limit ground disturbance to the construction rights-of-way and other approved workspaces (Application, Vol. IIb, Sec. 3).
10	During construction, the Applicant would limit access on the right-of-way with use of signs, fences, and/or gates (Application, Vol. IIb, Sec. 5).
11	The Applicant would avoid paving and gravel where possible within the Oyster Creek Terminal site (Application, Vol. IIb, Sec. 3).
12	The Applicant would avoid surveyed wetlands to the extent possible (Application, Vol. IIb, Sec. 3).
13	During construction, the Applicant would use containment berms to preserve outlying herbaceous areas at the Oyster Creek Terminal site (Vol. IIb, Sec. 3).
14	The Applicant would implement its SWPPP.
15	Within the Applicant's construction workspaces, speed limits less than 10 mile per hour would be enforced for construction-related vehicular traffic (Response to Information Request #168).
16	The Applicant would either clear vegetation outside the nesting season or coordinate with USFWS to develop measures to minimize impacts on migratory birds (Application, Vol. IIb, Sec. 5).

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17	During nighttime construction at HDD locations, lighting would be directed downward or directly at active construction, where feasible, while maintaining safety (Application, Vol. IIB, Sec. 5).
18	The Applicant would collocate new pipelines within and adjacent to existing linear rights-of-way where possible (Application, Vol. IIB, Sec 5).
19	The Applicant would limit nighttime construction, traffic, noise, and lighting (Application, Vol. IIB, Sec. 5).
20	Construction lighting would be down-shielded and the minimum light intensity necessary for safety would be used (Response to Information Request #308).
21	<p>The Applicant would:</p> <ul style="list-style-type: none"> • Inspect open trenches for wildlife each morning prior to beginning construction. • Install escape ramps at least every 98 yards in the open trench to allow wildlife to climb out. Escape ramps should be short, lateral trenches or wooden planks sloping to the surface at an angle of less than 45 degrees (1:1). • Hazing methods would be intended to flush wildlife toward an escape ramp. Hazing methods would vary by species and individual circumstances but may include loud shouting and/or clapping, the use of air horns or whistles, walking toward the individual, and other humane means intended to persuade wildlife to leave. • Environmental Inspectors would be trained on which federal and state-listed species have the potential to occur in project workspaces and what those species look like. Any wildlife that may resemble a listed species would first be positively identified by a qualified biologist prior to hazing. • Hazing of any federal or state-listed species would be conducted and/or supervised by a qualified biologist. • Should any state-listed species require removal, such as the alligator snapping turtle or timber rattlesnake, the qualified biologist would be TPWD-certified for that particular species, if applicable. Should a TPWD-certified biologist not be immediately available, a biological monitor or Environmental Inspector would request that the local TPWD game warden remove the individual.
22	The Applicant would implement the recommended mitigation measures and best management practices 1 through 6 as noted in Noise Report responses to Information Request #68, #70, and #72 when necessary and applicable: 1) Prohibit unnecessary idling of internal combustion engines. 2) All equipment will be shut off when not in use. 3) All equipment will be kept in good repair and all worn, loose, and unbalanced machines parts will be replaced as soon as possible. 4) Stationary noise-generating equipment such as air compressors or portable power generators will be kept as far as possible from neighboring houses. 5) Designate a "disturbance coordinator" who will be responsible for responding to any complaints about facility noise. The "disturbance coordinator" will determine the cause of the noise complain (e.g., bad muffler) and will require that reasonable measures be implemented to correct the problem. 6) Mufflers will be used on appropriate equipment during operation (Response to Information Request #68, #70, #72, #239).
23	<p>The Applicant would implement the acoustic disturbance mitigation measures outlined below:</p> <ol style="list-style-type: none"> 1. Acoustic Disturbance Mitigation <ol style="list-style-type: none"> a. The lowest noise producing impact hammer for pile driving would be utilized to reduce in-water noise levels. b. The Applicant would implement a “soft start” procedure to pile driving, which involves ramping up the intensity of the hammer strikes prior to operating at full capacity. c. A bubble curtain system would be applied to all pile driving activity. d. The Applicant would implement a “shut down” of pile driving activity if a marine mammal is observed approaching or within the Level A ensonified zone. 2. Visual Monitoring <ol style="list-style-type: none"> a. During pile driving activities an approved Protected Species Observer(s) (PSO) would be stationed onboard the pile driving vessel and conduct monitoring for marine mammals and

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	<p>sea turtles. Additional mitigation procedures, such as implementing shut-downs, would be implemented as required through consultation with NMFS.</p> <p>b. As required, NMFS-approved PSOs would be stationed at the site of pile driving activity to monitor for protected species within a pre-determined zone of influence (ZOI).</p> <p>c. Prior to the start of in-water activities, the PSO would monitor the ZOI for 30 minutes to ensure that the area is clear of all marine mammals and sea turtles. The activity would only commence once the PSO has declared that the ZOI is clear.</p> <p>d. The PSO would monitor the ZOI for the entirety of the in-water activity and record any sightings of protected species. Monitoring would be conducted during daylight and nighttime hours to account for 24-hour pile driving activity. Observations would be conducted using high-quality binoculars during daylight hours, and with thermal imaging cameras or night vision binoculars during periods of low or no light situations (nighttime pile driving).</p> <p>e. All marine mammal sightings would be fully documented.</p> <p>f. Following the in-water activity, the PSO would conduct post-monitoring of the ZOI for 30 additional minutes.</p> <p>3. Vessel Strike Avoidance</p> <p>a. Year-round, the vessel would maintain a predetermined minimum separation distance to all other marine mammals and sea turtles.</p> <p>b. Vessel traffic would be kept to a minimum during development phases of the SPOT Project's offshore work.</p> <p>4. Accidental Spill Prevention</p> <p>a. The Applicant would implement an Oil Spill Contingency Plan and an HDD Contingency Plan during all phases of the SPOT Project.</p>
24	The Applicant would follow NOAA Fisheries' Vessel Strike Avoidance Measures and Reporting for Mariners (Response to Information Request #228).
25	During construction, the Applicant would implement the USFWS Standard Manatee Conditions for In-Water Work (Response to Information Request #228).
26	The Applicant would implement industry standard upland construction plans (Response to Information Request #228).
27	The Applicant would consult with the well owner/operators to avoid impact if mineral wells are present and active (Application, Vol. IIb, Sec. 7).
28	The Applicant would develop an avoidance plan for the active oil well located approximately 14 feet from the Project (Application, Vol. IIb, Sec. 7).
29	The Applicant would follow the onshore Unanticipated Discovery Plan in the event of an unanticipated discovery of cultural resources during construction (Application, Vol. IIb, Appendix G).
30	The Applicant would cross 51 roads using HDD or bore construction method (Response to Information Request #234).
31	The Applicant would install temporary acoustic panels around noise sources such as shakers and generators and/or perimeter sound walls around the HDD locations where needed as identified in Table 3.13-10 (Response to Information Request #68, #70, #72).
32	The Applicant would require contractors to include drip pans for all heavy equipment parked overnight on the Project right-of-way, terminal sites, and contractor/pipe yards (Response to Information Request #263).
33	The Applicant would conduct a Bald Eagle survey prior to initiating Project construction for areas within 0.5 mile of onshore facilities where potentially suitable habitat exists. Any nests would be documented. Additionally, the Applicant would contact USFWS and TPWD to obtain the most current Bald Eagle nesting data and if any nests were present within the Project workspace, it would comply with all recommendations in the National Bald Eagle Management Guidelines to minimize or avoid "take" of any Bald Eagles.

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34	For state-listed species, the Applicant would: <ul style="list-style-type: none"> • Provide environmental training for all construction staff prior to initiation of construction activities. Training would include pictures of threatened and endangered species, including pictures of burrows/nests and pictures of habitats that are preferred by each species. • Construction staff would be directed to stop work and immediately inform the Environmental Inspector in the event individuals or burrows/nests are encountered. If an individual is present, the Environmental Inspector would only authorize a return to work once the individual has left the workspace on its own. The Environmental Inspector would contact Texas Parks and Wildlife Department if an individual remained in the workspace, and could employ exclusionary devices (e.g., silt fencing) to keep the individual out of the nearby workspace. Any removal would be conducted by a certified monitor for the particular species. • Should encounters with state-listed species occur, the Applicant or Environmental Inspector would file a monthly environmental compliance report to Texas Parks and Wildlife Department detailing the encounter(s), action(s) taken, and resulting outcomes (Response to Information Request #314).
36	The Applicant would: <ul style="list-style-type: none"> • Increase the avoidance distances for the two sonar targets and six of the magnetic anomalies identified in Vol. III, Appendix 2A by an additional 50-foot (15-meter) for each target; and • Avoid magnetic anomalies by a minimum of 100 feet (30 meters) or half the duration of the anomaly, whichever distance is greater, in order to account for uncertainty in the seafloor location of the potential archaeological material creating the anomaly.
37	All outdoor lighting fixtures would contain protective globes and refractors to minimize blue light emissions (Response to Information Request #318).
38	The Applicant would implement several of the best practices recommended by the USEPA Region 6 Regional Response Team to prevent or minimize damage to aboveground oil and gas facilities during significant flooding or storm events (USEPA 2016), including the following: <ul style="list-style-type: none"> • Fill the tanks to a height 3 to 6 feet higher than the expected storm surge or predicted reach of flood water. • Anchor the tanks and piping to prevent uplift or flotation. • Use stiffener rings to prevent buckling from wind or water loads. • Remove or secure possible projectile hazards from the facility grounds, to the extent possible. • Ensure that all storm drains and dewatering intakes are clear and free of debris. • Inventory and record the level of product in each tank to account for any loss or water entry. • Conduct a risk assessment of the facility and develop a detailed timeline for preparing the tanks ahead of an event, and include the assessment in the SPCC Plan, Facility Response Plan, Risk Management Plan, or other pollution prevention plan, as applicable. • Seal thief hatches with locks and sand-bags. • Stay in contact with responsible authorities such as the U.S. Army Corps of Engineers, U.S. Coast Guard, USEPA, state and local agencies. Monitor water levels closely. • Alert the local and state health departments if there has been a release or discharge. • Facility personnel will need to know the hazards involved; this may require an assessment to identify spilled or released substances. Sampling, monitoring, as well as personal protective equipment may also be required (for more information, see OSHA's Hurricane eMatrix). • Move small portable tanks to higher ground, ensure valves are tightened. Do not leave tanks in unventilated sheds or buildings. • Palletize individual compressed gas cylinders together using straps, chains, or rope and move to higher ground. • Lash storage containers together, then anchor and secure in the same manner as a large storage tank. • Close the shear valves below the dispensers on each underground tank's pressurized piping system. Inventory and record the level of product in each underground tank to account for any loss or water entry.

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	<ul style="list-style-type: none"> • Be sure to avoid securing tanks, cylinders, or containers to power or telephone poles. • Inventory all stored products and have this available for response personnel post-event. • Accelerate or postpone any product shipments as the timeline of the event demands. • Ensure the facility name, contact phone number and contents are prominently displayed on all tanks, cylinders, and containers. • Carefully check all tanks, cylinders, and containers for damage or leaks. • Look specifically for dents, torn or disconnected supply lines, broken valves, or evidence that its condition is compromised in any way. • Conduct a post-event inventory; report any discrepancies. • Use certified inspectors, as required, to inspect tanks and equipment before reconnection and use. • Alert the local and state health departments if there has been a release or discharge. • Separate and make safe all water-reactive chemical products and flammable liquids. In case of spillage, they would create a pollution issue and a fire hazard with potentially catastrophic consequences. • If possible, make sure that vents from tanks and containers are extended above the maximum anticipated flood level. • Raise facility utility equipment above the maximum anticipated flood level. This equipment might include transformers, switchgear, electrical cabinets, gas and oil control valves, critical control equipment and critical drive motors. • Avoid installing critical equipment (such as computer servers) in basements or other flood-prone areas of the facility. • Close any unnecessary building openings with masonry and seal any cracks in floors and walls with hydraulic cement. • Check for the possibility of water entering into buildings from backup of sewer or drainage lines. Provide valves or check valves on underground sewer or drainage lines to prevent flood water from backing up into the building. • Indicate valve and hydrant positions on walls or on indicating panels at a level higher than the maximum anticipated flood level. • Provide sandbags or other provisional alternatives to protect window and door openings. • After the storm, contact local emergency organizations as needed (e.g., fire department, emergency management) and those companies able to provide services and equipment for cleanup, salvage, or alternative production. If the entire region was subjected to flooding, such services will be in heavy demand. • Once cleanup operations are completed, a more in-depth assessment of flood damage to equipment will be necessary. The degree of damage to mechanical or electrical equipment may not be immediately apparent. A quick check of equipment such as transformers, compressors, and electric motors may lead to a hasty conclusion that the flood did little damage. Here are some examples of damage that may not be readily observed after a flood: <ul style="list-style-type: none"> - Compressor intakes filled with water - Water-contaminated oil in transformers - Electric motors with water-soaked and debris-filled windings - Large machines which may be misaligned due to undetected damage - Foundations of buildings and machines damaged from water washout - Loss of potable water - Damage to telephone lines or roads to the facility
Revised Attachment E to the Biological Assessment	NMFS updated the Sea Turtle and Smalltooth Sawfish Construction Conditions in November, 2021, which were an attachment to the Biological Assessment. The Applicant agreed to the following NMFS Protected Species Construction Conditions: <u>Protected Species Sightings—All project personnel will be instructed about the presence of protected species before the construction start date.</u> 1. Equipment

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	<ul style="list-style-type: none">a. In-water lines (rope, chain, and cable, including the lines to secure turbidity curtains) will be consistent with the response to data gap #299.2. Operations<ul style="list-style-type: none">a. The Project will pause activities for ESA-listed marine species within 150 feet of operation.b. The project will pause activities for ESA-listed marine species within 150 feet of operation. The activity will not resume until the species is observed departing by any project personnel or 20 minutes have passed since the animal was last seen.3. Vessels—The project will follow Vessel Strike Avoidance Measures.4. Consultation Reporting Requirements—All project personnel operating in water will be instructed about the presence of protected species and reporting measures in the event of possible interaction with protected species.5. Additional Conditions—The project will comply with any special required construction conditions identified during project consultation.