2.0 DESCRIPTION OF THE PROPOSED ACTION

As described previously, FGS is seeking:

- a certificate to site, construct, and operate an LNG storage facility and associated facilities in Martin County, Florida; and
- a certificate to construct and operate natural gas pipelines and associated aboveground facilities in Martin County, Florida.

The Project would operate as follows: existing gas companies would deliver natural gas to the Project through interconnections with their existing pipelines during off-peak days. FGS would liquefy the gas and transfer the liquid (i.e., LNG) into full-containment storage tanks. On peak days, or during unexpected outages such as hurricanes, FGS would re-gasify the LNG and deliver the natural gas through a sendout pipeline back to the gas companies' pipelines.

The Project is proposed to be built in two phases. Section 2.5 (Construction Schedule) contains additional details regarding the phasing. For the purpose of this EIS, we have evaluated potential Project effects in terms of the full build-out of both phases.

2.1 PROPOSED FACILITIES

This section describes the proposed LNG storage facility and the associated pipelines and aboveground facilities that would be located approximately two miles northwest of the unincorporated town of Indiantown, Florida. Figure 2.1-1 shows the location of Project facilities. Figure 2.1-2 shows the location of other land use and natural features in the Project area, which is defined herein as approximately a two-mile radius of the LNG storage facility site.

2.1.1 LNG Storage Facility Description

The LNG storage facility would be located on a 144.63-acre site, which is bounded by State Route (SR) 710 (also known as Warfield Boulevard and as the Bee Line Highway), a CSX rail line, the Cogentrix 330 megawatt (MW) coal-fired power plant, a Florida Power & Light (FPL) electric transmission line right-of-way, the Louis Dreyfus citrus processing facility, the Tampa Farms wholesale egg production facility, and other agricultural uses. The storage facility would consist of the following major components:

- two full-containment LNG storage tanks;
- liquefaction system;
- vapor handling system;
- vaporization system;
- natural gas liquids (NGL) storage; and
- other miscellaneous facility buildings, utility systems, facilities, and safety controls.

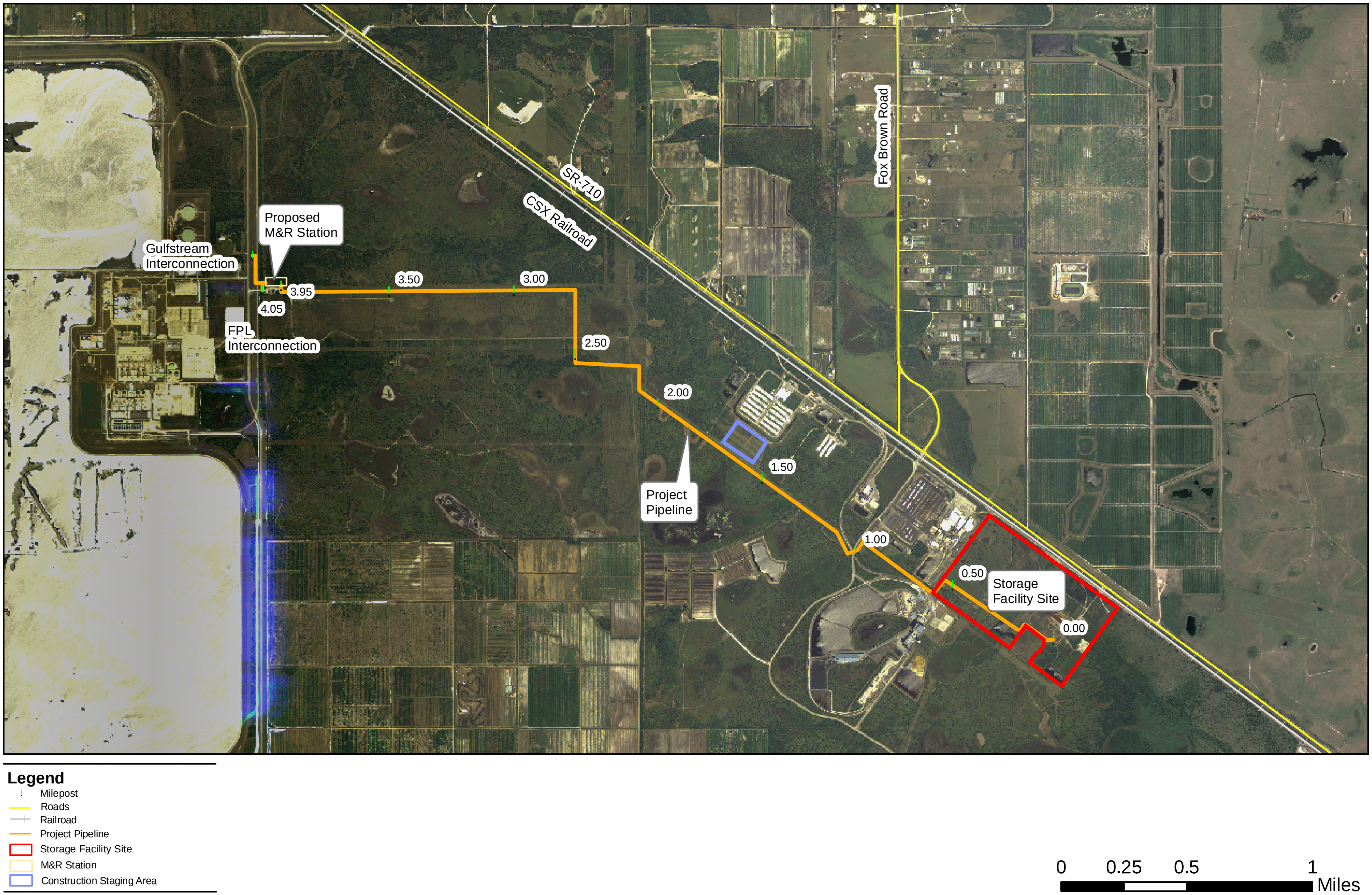


Figure 2.1-1
FGS Project
Project Facility Location Map

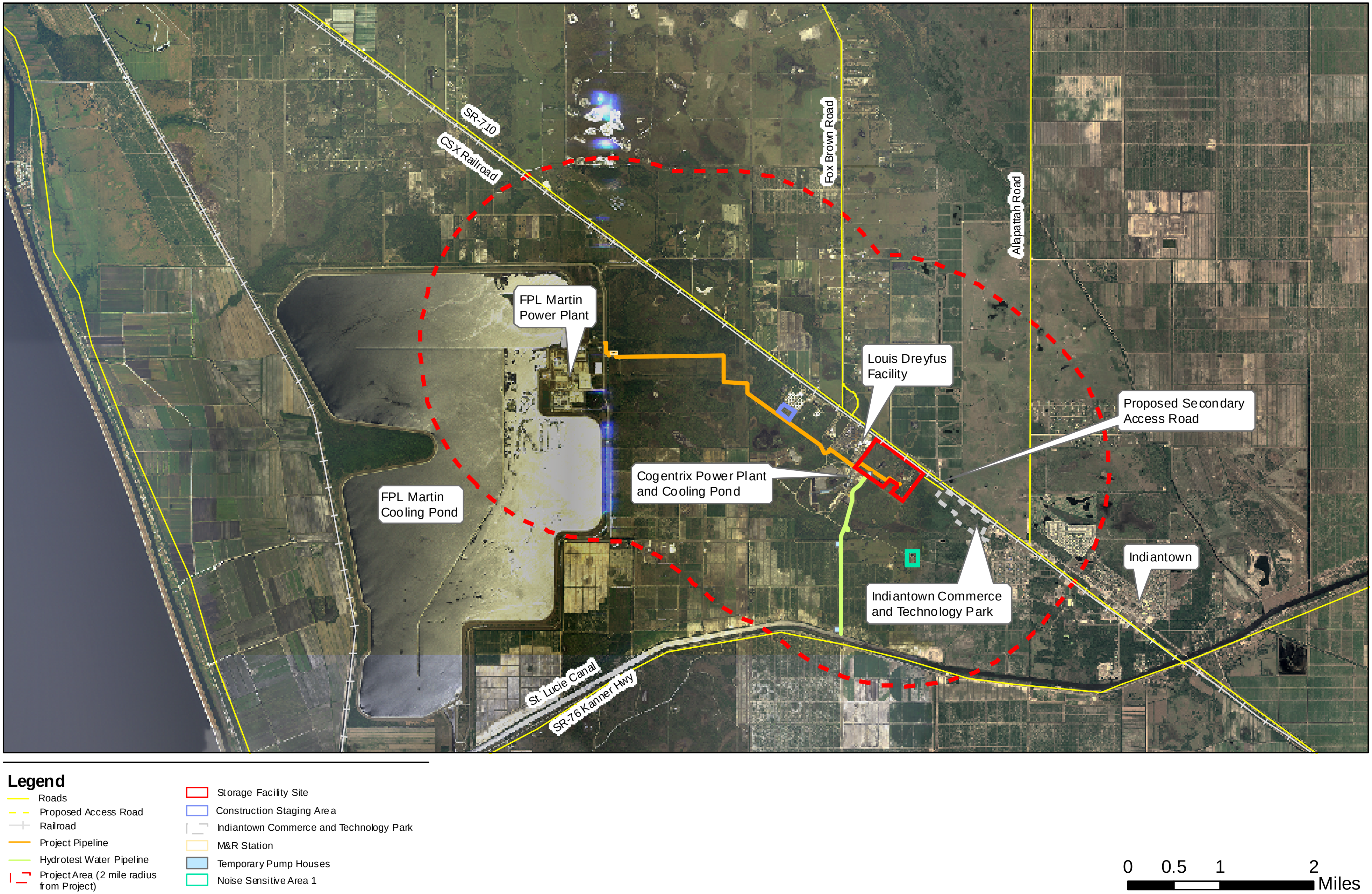


Figure 2.1-2
FGS Project
Project Location Map

The following sections describe these components. Figure 2.1-3 shows the plot plan of the storage facility site.

2.1.1.1 Liquefaction System

Natural gas would be delivered to the FGS site via a 12-inch-diameter receiving pipeline, which would allow delivery of natural gas from either the Gulfstream or Florida Gas Transmission (FGT) (via a FPL lateral) interstate pipeline systems. Once on-site, the gas would be converted through the proposed liquefaction system into a liquefied state. The mixed refrigerant (MR) required for cooling the natural gas is composed of methane (a greenhouse gas (GHG)), ethylene, propane, i-pentane, and nitrogen. The liquefaction system would consist of four MR trains, each sized to process up to 25 million standard cubic feet per day (MMscfd), for a total liquefaction capacity of 100 MMscfd. Each MR train would contain centrifugal refrigeration compressors rated at 13,000 horsepower (hp) that would refrigerate the gas to a temperature of -260 degrees Fahrenheit (°F), the point at which natural gas turns into liquid.

2.1.1.2 LNG Storage Tank

LNG transfer lines would transport the LNG to two, full-containment storage tanks designed to store a gross volume of 190,000 and a nominal working volume of 184,750 cubic meters (m^3) of LNG at a temperature of -260°F and a design pressure of 2.5 pounds per square inch gauge (psig) (Figure 2.1-4). The storage tank would have a primary nine percent nickel steel inner container and a secondary pre-stressed concrete outer container wall; a reinforced concrete foundation; a concrete domed roof; and an aluminum insulated support deck suspended from the outer container roof over the inner container. The tank is designed and would be constructed so that both the primary and secondary containers are capable of independently containing the stored LNG. The primary container holds the cryogenic liquid under normal operating conditions. The secondary container would be capable of containing the cryogenic liquid and controlling boiloff vapors resulting from heat leak into the inner container. The outside diameter of the outer container would be approximately 280 feet and the height of the top of the dome would be approximately 174 feet above grade. The storage tanks would be enclosed within a tertiary earthen berm designed to contain the entire contents of one tank plus any displacements.

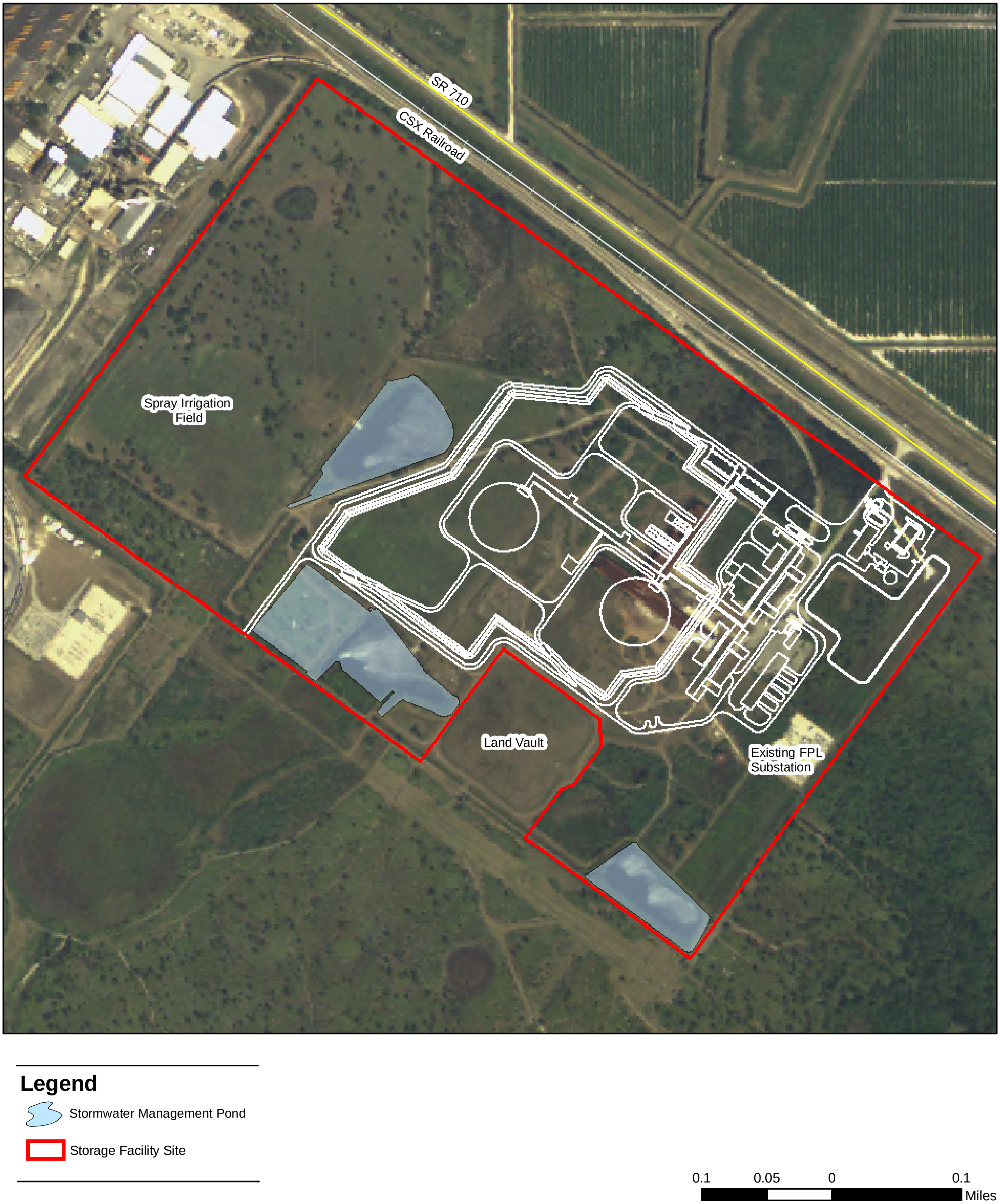


Figure 2.1-3
FGS Project
Storage Facility Plot Plan

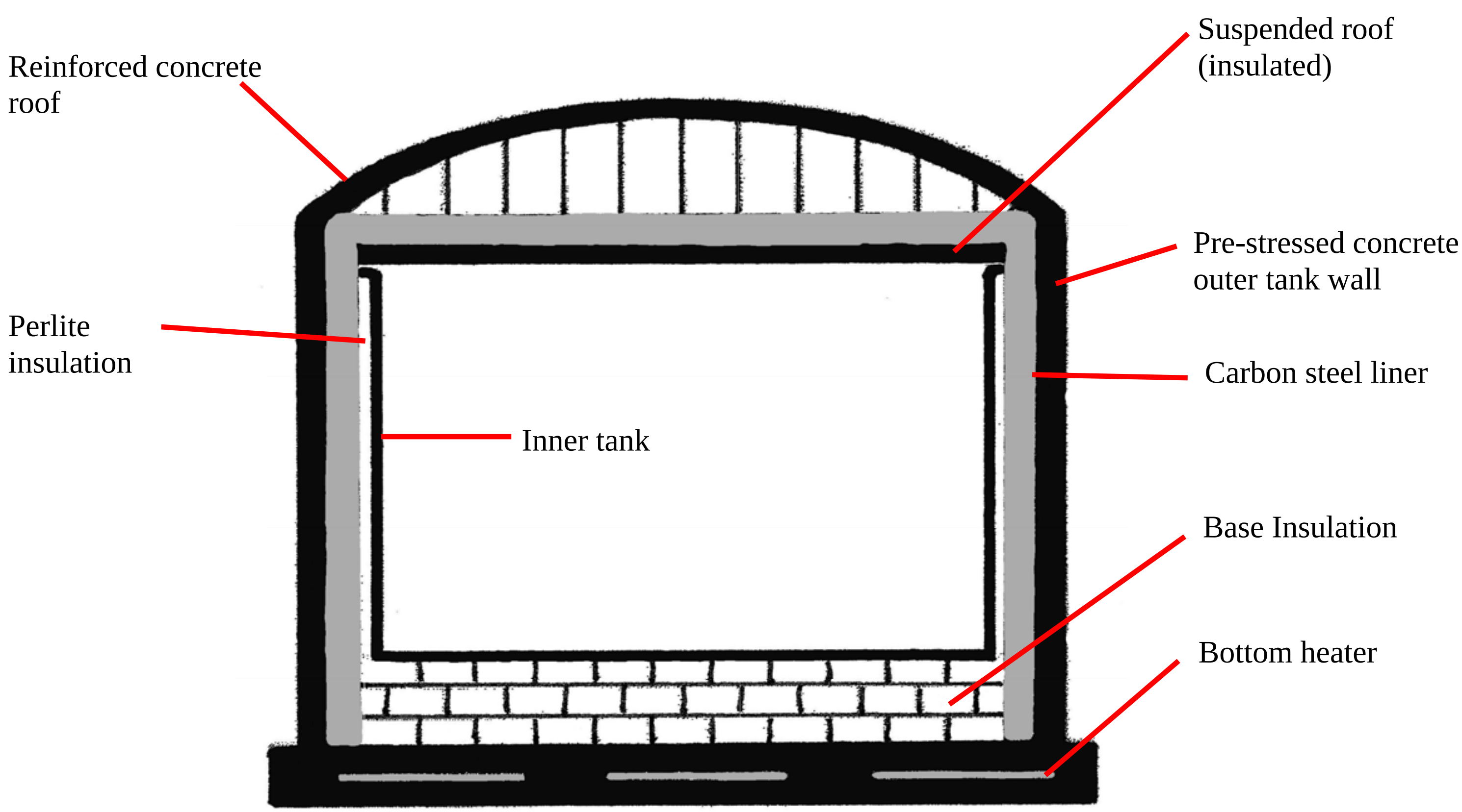


Figure 2.1-4
FGS Project
Typical Full Containment Storage Tank

The tank foundation slab would be set on grade and include an electric heating system to prevent freezing of the earth below the foundation slab. The space between the inner container and outer container walls would be insulated with a fiberglass resilient blanket and expanded perlite compacted to reduce long-term settling. This insulation would allow the LNG to be stored at -260°F while maintaining the outer container at near ambient temperature. The inner container's bottom would be underlain by a cellular glass load-bearing insulation. The outer concrete container above the approximately 16-foot-high thermal corner protection system (nine percent nickel) would be lined inside with carbon steel plates. This carbon steel liner would serve as a vapor barrier and to keep atmospheric moisture from reaching the insulation inside the outer container. To increase the safety of the tank, there would be no penetrations through the inner container or outer container sidewalls or bottom. All piping into and out of the tank would be located at the top of the tank.

2.1.1.3 Vapor Handling System

During normal operation, ambient heat input into the storage tanks and liquid-filled lines would cause a small amount of LNG to be vaporized. Some vaporization of LNG would also be caused by other factors, such as barometric pressure changes, heat input from pumping, and solar heat input from the piping system and tank walls. The vapor handling system would recover and compress these vapors (boil-off gas, or BOG) and combine them with the sendout natural gas when the liquefaction system is not operating. During liquefaction, BOG would be recovered from the storage tanks, warmed, and sent to the BOG compressors to be compressed up to the pressure required for regeneration of the pretreatment system. During an upset condition, all of the vapor would be directed to the interconnecting Gulfstream and FPL lateral pipelines to prevent over-pressuring of the storage tanks using the tail gas compressors. The vapor handling system would use five reciprocating BOG compressors rated at 1,700 hp coupled with five reciprocating tail gas compressors rated at 650 hp.

2.1.1.4 Vaporization System

LNG from the storage tanks would be pressurized and vaporized (i.e., returned to a gaseous state) so that natural gas could be sent out via the natural gas pipeline system. Each of the storage tanks would have three in-tank pumps to deliver the LNG from the storage tank to the natural gas booster pumps. The pressurized LNG discharged from the booster pumps would flow to the vaporizers.

Four shell and tube vaporizers would be used to vaporize the LNG. Each vaporizer would be capable of vaporizing 200 MMscfd of natural gas, for a total vaporization capacity of 800 MMscfd. Hot water-ethylene-glycol (WEG) would be used as an intermediate heat transfer fluid to supply heat for the shell and tube vaporizers and the fuel gas heat exchangers. In this closed circulating system, the WEG would be pumped from the water baths in the fire-tube heaters prior to delivery to the vaporizers and fuel gas heat exchangers. The WEG system consists of direct fuel-gas fire-tube WEG heaters, an expansion drum, and hot WEG circulation pumps. The WEG heaters, each rated for a heat output duty of 83 million British thermal units per hour (MMBtu/hr), would heat the

WEG to 200°F. These pumps and vaporizers would be located within the earthen tertiary berm around the LNG storage tanks.

After leaving the vaporizers, the high-pressure gas would pass through the 24-inch-diameter sendout pipeline to the metering and regulating (M&R) station and then to the Gulfstream and FPL lateral pipelines.

2.1.1.5 NGL Storage System

FGS proposes to install a NGL storage system that would be constructed in accordance with all applicable design codes and standards, including the Liquefied Petroleum Gas Code (NFPA 58). The NGL storage system would consist of four 60,000-gallon horizontal pressurized storage vessels. The stored NGLs would consist of heavy hydrocarbons (primarily n-butane, propane, and hexane) removed from the feed gas prior to the liquefaction process.

The NGL extraction system would be designed to remove high molecular weight components typically present in the feed gas. During normal operations, FGS would re-inject NGLs back into the sendout gas to meet pipeline tariff requirements and for Btu adjustment. During the aftermath of a hurricane or other natural gas supply interruption, however, excessive high molecular weight components would be present in the feed gas. Therefore, FGS proposes to install a NGL storage system to accommodate the additional NGLs that would accumulate during an upset condition. In addition, FGS proposes to use a NGL truck loading station to remove the excessive NGLs stored on-site.

2.1.1.6 Other LNG Storage Facility Components

The LNG storage facility would include safety controls (see Section 2.8) and several buildings (i.e., administration, maintenance, control, and electrical). The storage facility would also include the following utility systems:

- Electrical power - An existing on-site FPL 230 kilo-Volt substation main power transformers and 13.8 kilo-Volt switchgear would provide electrical power. The anticipated peak operating load of the Project would be approximately 60 MW.
- Redundant emergency generators – These generators would provide backup power for critical operations, including lighting and the control/hazard system. These generators would be diesel engine-driven and have two 60,000 gallon diesel fuel tanks, sufficient for five days of run time. A concrete containment dike, capable of holding the full capacity of a single diesel fuel tank plus any displacements, would contain any spills from the diesel fuel tanks.
- Utility nitrogen - A liquid nitrogen dewar with ambient vaporizer would support maintenance purging of equipment and pipelines and operational blanket purges for certain equipment.
- Instrument and plant air - An air compressor, instrument air dryer, and instrument air receiver would provide dry air for operation of control

instruments and service air for operation of pneumatic tools and other maintenance needs.

- Potable water and wastewater service – These services would be extended to the site by the Indiantown Company (a private utility company).

The LNG storage facility would also include a truck loading station to allow for the transfer of LNG to other facilities by truck only during emergency situations such as hurricanes and other outages that disrupt the existing natural gas distribution infrastructure. The station would be capable of loading two trucks simultaneously.

2.1.2 Pipelines and Aboveground Facilities

In addition to the LNG storage facility, FGS proposes to construct and operate the following natural gas pipeline facilities in order to receive and deliver natural gas from the Gulfstream and Florida Gas Transmission (via a FPL lateral) interstate pipeline systems:

- An approximately 4-mile-long, 12-inch-diameter receiving pipeline to interconnect with and receive natural gas from the Gulfstream and/or FPL lateral pipelines.
- An approximately 4-mile-long, 24-inch-diameter sendout pipeline that would parallel the 12-inch-diameter pipeline and interconnect with and deliver natural gas from the storage facility to the Gulfstream and the FPL lateral pipelines.
- Interconnection points with the 30-inch-diameter Gulfstream pipeline at milepost (MP) 4.18 and with the 20-inch-diameter FPL lateral to the FGT pipeline system at MP 4.05.[1] Each interconnection would include a tap into the pipeline for a receiving and a sendout pipeline. Each of these interconnection would occur within an approximately 50- by 100-foot (0.11 acre each) graveled, fenced area.
- A 2.75-acre aboveground M&R station, which would also include an odorant system. The liquefaction process would remove odorants from incoming gas prior to storage, and therefore, odorant would need to be added to the sendout gas.
- Valves would be located on the LNG storage facility site, at the M&R station, and at the interconnection points.

Due to the short length of each of the proposed pipelines, no compressor stations would be needed along the pipeline route. Figure 2.1-1 depicts the general location of these facilities.

[1] Throughout this EIS, the location of specific features along the proposed pipelines, such as Project facilities and environmental resources, are identified by milepost (MP). Both Project pipelines begin at MP 0.0 on the LNG storage facility site.

2.2 NONJURISDICTIONAL FACILITIES

In addition to the facilities discussed in Section 2.1, the Project would require construction of facilities that do not fall under the jurisdiction of the FERC. These facilities include the extension of a potable water main and a sanitary sewer line by the Indiantown Company (a private utility company). The extension of the water and sewer lines to the Project would be completed as part of a larger utility improvement program designed to serve multiple customers. The portion of the program specifically for the Project includes the extension of approximately 2,305 feet of an 8-inch-diameter polyvinyl chloride (PVC) sanitary sewer line connecting to a sewer force main, and a similar length of 8-inch-diameter PVC water main. These utility lines would extend from the Indiantown Company system south of the property parallel to the CSX and SR 710 rights-of-way, connecting to the northeast corner of the LNG storage facility site. The Indiantown Company has initiated the permitting process for the system extensions with the South Florida Water Management District (SFWMD), Martin County, and FDEP.

Since these utility lines are subject to review by various state and local agencies and would occur in or parallel to existing highway or rail right-of-ways, we believe the construction of the nonjurisdictional water and sewer lines would have no significant impacts.

2.3 LAND REQUIREMENTS

The construction and operational land requirements of the Project are summarized in the following sections.

2.3.1 LNG Storage Facility

The proposed LNG storage facility site has a gross acreage of 144.63 acres. The storage facility site excludes a 6.88-acre area (referred to as the "land vault") that would be retained by the current property owners (i.e., Gerdau Ameristeel). The land vault includes a mound of contaminated soil that has been remediated. FGS has an agreement with Gerdau Ameristeel that limits any potential future land use, occupancy, and assembly of persons in the vault area. Section 4.7.5 provides additional information regarding the land vault. Figure 2.1-3 shows the location of the vault relative to the storage facility site.

Construction and operation of the storage facility (excluding the on-site pipeline facilities) would require 55.58 acres and 53.10 acres of land, respectively.

The LNG storage facility site also includes the initial 0.59 mile of the pipeline and would affect 7.82 acres of land during construction. In order to avoid double counting of acreage, those areas on the storage facility site affected by pipeline construction are discussed in the pipeline section. Therefore, the storage facility site has a net acreage of 136.81 acres (144.63 – 7.82 acres).

Access to the LNG storage facility site would be from SR 710 via a driveway that crosses the CSX railway. This driveway would serve as the primary access to the facility for both construction and operations traffic. FGS is working on an agreement for a secondary access between the Indiantown Commerce and Technology Park and the storage facility site that would allow construction or operations access to the site if the primary access was blocked by a train on the CSX railway (see Figure 2.1-1).

2.3.2 Pipelines and Aboveground Facilities

2.3.2.1 Pipelines and Aboveground Facilities

The proposed pipeline route originates at the LNG storage facility vaporizers (MP 0.00), traverses approximately 0.59 mile on the storage facility site, then follows the FPL 230 kV transmission line right-of-way northwest until approximately MP 2.70, where it turns west and follows the FPL 500 kV transmission line right-of-way until reaching the proposed M&R station at MP 3.95. After the M&R station, the proposed route splits with the southern route connecting with the FPL lateral pipeline at MP 4.05 and the northern route connecting with the Gulfstream pipeline at MP 4.18.

Construction of the proposed pipelines, including extra work areas, the construction staging area, the M&R station, and the interconnections with the FPL lateral and Gulfstream pipelines would affect 71.45 acres of land (including the 7.82 acres on the storage facility site). The proposed permanent pipeline right-of-way, M&R station, and interconnections with the FPL lateral and Gulfstream pipelines total 25.30 acres (including 3.55 acres on the storage facility site). Table 2.3-1 summarizes the affected land areas.

Table 2.3-1

Locations and Land Requirements for the Proposed Pipeline Facilities

Facility	Milepost	Land Affected by Construction (acres)[1]	Land Affected by Operation (acres)[1]
Pipeline Facilities	0.0-4.18	48.57	22.33
Construction Staging Area	1.60	10.50	0.00
M&R Station	3.95	2.75	2.75
Interconnect with FPL Lateral	4.05	0.11	0.11
Interconnect with Gulfstream	4.18	0.11	0.11
Extra Work Areas			
1. Bore Entry East of Cogentrix Entry Road	0.99	0.75	0.00
2. Bore Exit West of Cogentrix Rail Spur	1.02	0.23	0.00
3. Temporary Work Space for Wetland Crossing	0.38	0.30	0.00
4. Temporary Work Space for Wetland Crossing	0.46	0.53	0.00
5. Temporary Work Space for Wetland Crossing	1.23	0.99	0.00
6. Temporary Work Space for Wetland Crossing	1.50	0.87	0.00
7. Temporary Work Space for Wetland Crossing	1.65	1.42	0.00
8. Temporary Work Space for Wetland Crossing	2.12	1.51	0.00
9. Temporary Work Space for Wetland Crossing	2.90	0.90	0.00
10. Temporary Work Space for Wetland Crossing	3.45	0.87	0.00
11. Temporary Work Space for Wetland Crossing	3.76	0.66	0.00
12. Temporary Work Space for Wetland Crossing	4.01	0.07	0.00
13. Temporary Work Space for Wetland Crossing	4.06	0.31	0.00
	Total:	71.45	25.30

[1] Acreages reflect a nominal 100-foot-wide construction right-of-way in uplands, 65-foot-wide construction right-of-way in wetlands, and 50-foot-wide permanent easement to be maintained along the pipeline route following construction.

2.3.2.2 Pipeline Right-of-Way and Temporary Extra Workspaces

Pipeline Right-of-Way Cross Section

FGS proposes to construct the two pipelines (i.e., receiving and sendout) within a 100-foot-wide construction right-of-way in the upland portion of the pipeline route and 65-foot-wide construction right-of-way in wetland areas. These construction widths would encompass a 50-foot-wide permanent right-of-way offset from the centerline by five feet. Figures 2.3-1 and 2.3-2 show the typical pipeline construction right-of-way and wetland cross sections, respectively.

Additional Temporary Workspaces

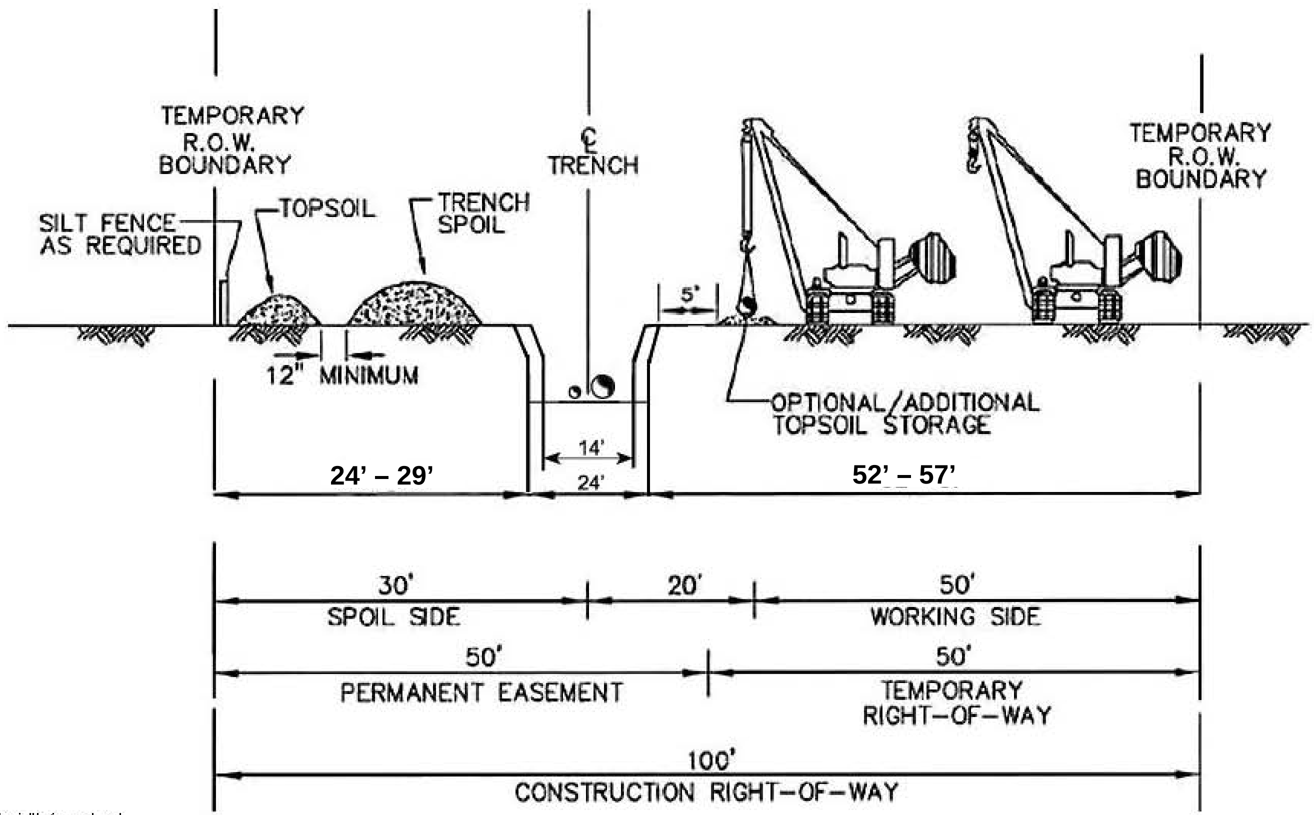
Additional temporary workspaces would be required at entry and exit points of the pipe bore, as well as at each wetland crossing, as indicated in Table 2.3-1 above. Temporary workspaces would affect 9.41 acres, which would be restored and allowed to revert to pre-construction conditions upon completion of construction activities. Although FGS has identified areas where extra workspaces would be required, additional or alternative areas could be identified in the future due to changes in site-specific construction requirements. FGS would be required to file information on each of those areas for review and approval prior to use.

Construction Staging Area

A pipe receipt and temporary storage and contractor yard would be located at the off-site Tampa Farms property and require a total area of approximately 10.50 acres, which is already heavily disturbed from its prior use as a mulch yard. This property would only be used during construction and would be restored in accordance with FGS' agreement with the property owners.

Access Roads

No new access roads (temporary or permanent) would be required for the pipelines and aboveground facilities. All construction access would be from the proposed pipeline right-of-way and existing private and electric transmission line access roads without any improvements.



Note:
1. 14-foot width for upland crossings. in stable soils
2. 24-foot width for upland crossings in unstable soils.

Not to Scale

Figure 2.3-1
FGS Project
Proposed Pipeline Right-of-Way Section

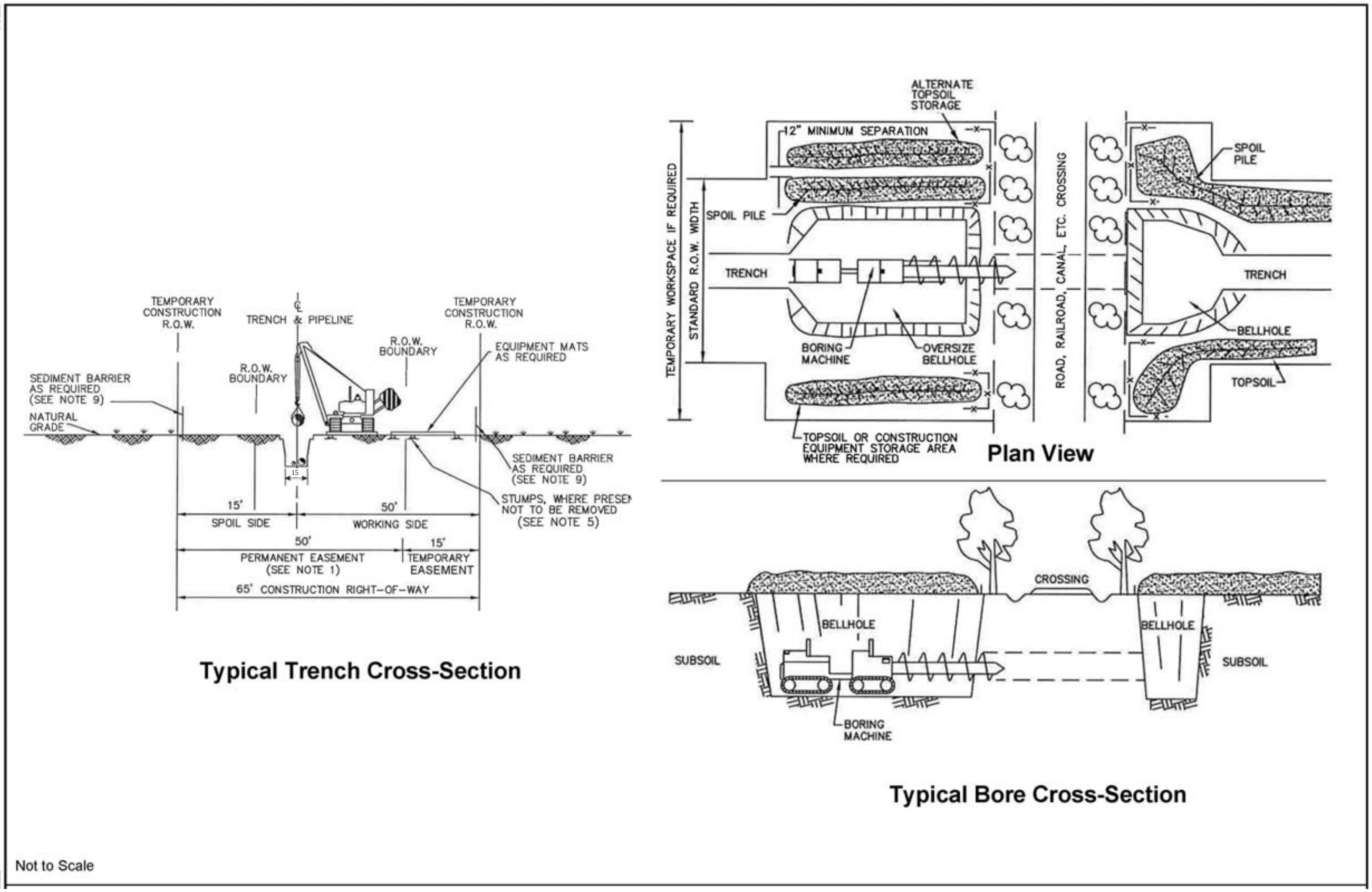


Figure 2.3-2
FGS Project
Proposed Wetland Crossing Pipeline Right-of-Way Section

2.4 CONSTRUCTION PROCEDURES

The Project would be designed and constructed in accordance with federal standards intended to protect the public by preventing or mitigating LNG and natural gas pipeline failures or accidents. Under provisions of the Natural Gas Pipeline Safety Act of 1968, as amended, FGS would design, construct, operate, and maintain the LNG storage facility in accordance with U.S. Department of Transportation's (DOT) *Federal Safety Standards for Liquefied Natural Gas Facilities* at 49 CFR 193 and the National Fire Protection Association's (NFPA) *Standards for the Production, Storage, and Handling of LNG* (NFPA 59A). The proposed pipeline facilities would be designed, constructed, operated, and maintained in accordance with DOT regulations at 49 CFR 192, *Transportation of Natural or Other Gas by Pipeline: Minimum Federal Safety Standards.* Among other items, these regulations specify material selection, design criteria, corrosion protection, and qualifications for welders and operation personnel. In addition, FGS would comply with the Commission's regulations at 18 CFR 380.15 regarding the siting and maintenance of pipeline rights-of-way.

To minimize construction-related effects, FGS has agreed to adopt the January 2003 versions of our *Upland Erosion Control, Revegetation, and Maintenance Plan* (Plan) and our *Wetland and Waterbody Construction and Mitigation Procedures* (Procedures). The FERC Plan and Procedures are available for review on the FERC website at www.ferc.gov/industries/gas/enviro/guidelines.asp. The intent of the Plan is to identify baseline mitigation measures to minimize erosion and enhance revegetation in upland areas. The intent of the Procedures is to identify baseline mitigation measures to minimize the extent and duration of construction-related disturbance on wetlands and waterbodies. FGS would construct and operate the Project in accordance with our Plan and Procedures.

In addition to accepting our Plan and Procedures, FGS has developed a Project-specific Spill Prevention, Control, and Countermeasures (SPCC) Plan that describes the management of hazardous materials and/or wastes such as fuels, lubricants, and coolants used or stored during construction and operation. The SPCC Plan was filed by FGS in its certificate application in October 2007 and can be found on the FERC's eLibrary website at www.ferc.gov under Docket No. CP08-13-000.

2.4.1 LNG Storage Facility Construction Procedures

Construction of the LNG storage facility would include site preparation, storage tank construction, and construction of other associated aboveground facilities.

2.4.1.1 Site Preparation

FGS would remove the existing structures at the storage facility site, which include the former rolling mill building, an existing small office building, and rail siding. Scrap metal would be disposed of off-site or sold at the contractor's discretion. Concrete foundations would be crushed and used in place of gravel for the on-site roads. The railroad siding is still useable and may be used for material deliveries, but the rails would ultimately be removed prior to the completion of construction and either offered to CSX or sold as scrap. The wooden ties would be removed from the site and either offered to local landscape companies or properly disposed of in a landfill permitted to accept them. The remaining stone ballast would be gathered and stockpiled for use in the on-site roads.

The area affected by Project construction is relatively flat with little vegetation. Construction areas would be cleared of vegetation, grubbed, and rough graded. The underground pipeline and electrical trenching would be at a depth of approximately three feet below finish grade. The approximate grade elevation for the storage tank and process areas would be six to 18 inches above finish grade.

Following clearing and grading, the structurally inadequate soils or fill would be over-excavated and filled with structural fill. Temporary ditches, sediment fences, and silt traps would be installed as required and in accordance with our Plan. All settlement-sensitive equipment, buildings, and structures would be supported on engineered, improved soil as specified in the Geotechnical Report (Golder, 2007). Following completion of foundations, the site would be filled, compacted, and brought to final grade.

The majority of the construction materials would be delivered via truck. FGS may use the existing rail infrastructure to transport some large materials.

2.4.1.3 Storage Tank Construction

Storage tank construction is the most schedule-sensitive element in the Project. Each tank would take approximately 32 months to construct with an additional four months for performance testing. After installation of the foundation, FGS would construct the post-tensioned outer concrete container wall including nine percent nickel and carbon steel insert strips; install the bottom carbon steel vapor liner; construct and raise the steel dome roof and suspended deck; install roof nozzles, penetrations, studs, and steel reinforcement; and pour the concrete roof. FGS would install vapor barriers and insulation in the inner container; install the nine percent nickel steel "secondary bottom;" erect the inner tank shell with a temporary opening into the inner container at the same location as the outer tank opening; install the internal tank accessories; and then close the temporary opening in the outer tank.

FGS would fill the inner container of the storage tank with water for hydrostatic testing and settlement monitoring and conduct pneumatic testing after closure of the outer opening. After the testing, FGS would wash, clean, and dry the inner tank and install a resilient blanket on the outside of the inner tank shell; install the instrumentation inside the tank and annular space; close the temporary opening; and install the perlite insulation. After visual inspection and cleaning, FGS would purge the storage tank with nitrogen.

Due to the duration and complexity of the tank construction, emphasis would be placed on coordinating the arrival of the major equipment with the completion and curing of the respective foundations so that the equipment can be placed in its foundation when it arrives. Some on-site fabrication may occur, however, some tank erectors have partial off-site fabrication, such as sections of the inner plate and steel, which would be delivered by train or truck. Large items such as tank shell plates would be delivered to the site.

2.4.1.4 LNG Storage Facility Performance Testing

All testing, including hydrotesting, pneumatic testing, and pipework testing would be carried out in accordance with applicable codes and requirements.

Hydrotesting

The inner container of the storage tank would be hydraulically tested (i.e., hydrotested) in accordance with the requirements of API Standard 620. Hydrotesting of each tank would involve filling the inner tank with approximately 32 million gallons of water, with an additional 1.5 million gallons assumed for transmission losses. The hydrotest water would be withdrawn from the St. Lucie Canal, pumped using either electrically- or engine-driven pumps at a rate of approximately 1,500 gallons per minute (gpm), and delivered to and from the site via 1.86 miles of temporary, six-inch-diameter irrigation–type aluminum pipe. Figure 2.4-1 shows the proposed route for the water pipeline used to transport the hydrotest water, which generally follows existing drainage ditches and utility rights-of-way. Vehicular access would be maintained at the one public road crossing.

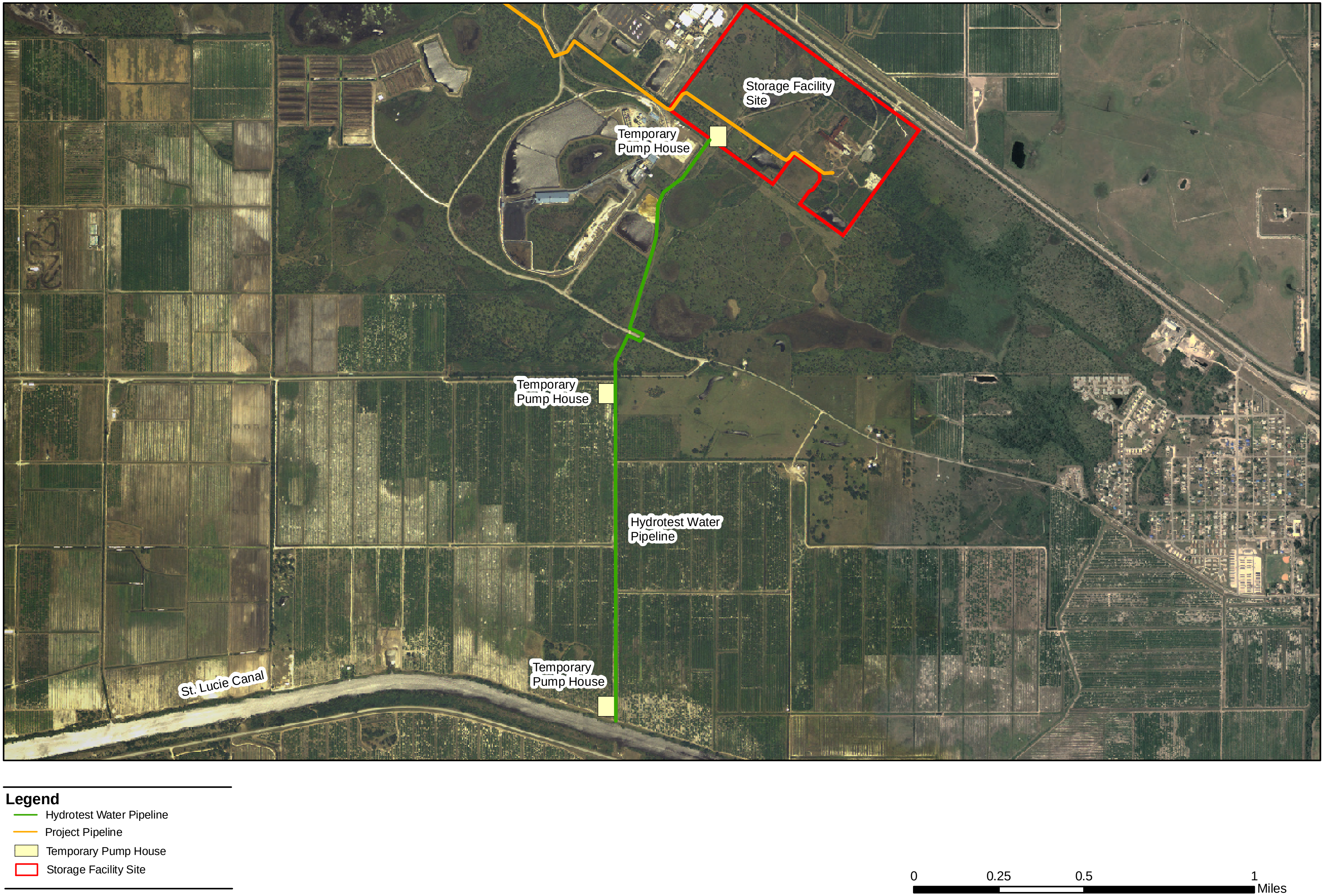


Figure 2.4-1
FGS Project
Hydrotest Pipeline Route Location Map

Before filling the tank, the hydrotest water source would be tested to ensure that the water would meet all applicable code requirements. No biocides or other water additives would be used. Water would be introduced into the inner tank container through a manhole in the top of the tank at a rate that would not exceed the limitations specified in API 620. The duration that the water remains in the tank would be strictly limited and controlled.

On completion of hydrotesting, the water would be pumped from inside the inner tank using electrically-driven submersible pumps suitably sized for the required lift height out of the tank, as there are no bottom or side outlets in the storage tank. The temporary piping used to initially fill the tank would then be used to return the test water to the St. Lucie Canal. The total duration of the hydrotest, from start of filling to completion of emptying, would be approximately five weeks.

Pneumatic Testing

A pneumatic test of the storage tank outer container would be performed in accordance with API 620, which would hold the outer container at 1.25 times the design pressure for one hour.

Pipework Testing

Piping would be tested using hydrostatic or pneumatic testing. In general, cryogenic piping would be pneumatically tested with dry air or nitrogen at 1.1 times design pressure. Non-cryogenic piping would be hydrotested using clean water at 1.5 times design pressure. Testing would be performed in accordance with the American Society of Mechanical Engineers (ASME) B31.3.

2.4.1.5 Construction of Other Facilities

Construction of the foundations and pipe racks, together with installation of major mechanical equipment, process and utility piping, and electrical instrumentation, would consist of the following steps:

- installation of the fire water, potable water, and other underground piping;
- construction of foundations, including engineered improved soils as required, for the major equipment and pipe racks;
- delivery of equipment and components to the site, either by trucks using nearby highway routes or by rail, as required by the construction schedule and equipment manufacturing durations;
- installation of the process and utility piping and cable trays;
- installation of piping and electrical and instrumentation systems;
- installation of pipe insulation; and
- testing of instrumentation and electrical loops and start of pre-commissioning activities.

Ancillary facilities such as the office, control, workshop/warehouse, electric, and security buildings would be constructed in a sequence to enable the facilities to be inspected prior to the commissioning of the LNG storage tank.

2.4.1.6 Restoration

Areas disturbed by Project construction would be stabilized with temporary erosion controls until construction is complete unless covered by equipment, gravel, or other covering. Following construction, the on-site areas affected by construction of Project facilities would be returned to pre-construction conditions or maintained as landscaping.

2.4.2 Pipeline and Aboveground Facilities

2.4.2.1 General Pipeline Construction Techniques

The majority of the proposed pipeline construction process would be accomplished using conventional open-cut methods, which is best represented as a moving assembly line with a construction spread proceeding along the construction right-of-way in a continuous operation. This operation includes survey and staking of the right-of-way; clearing and grading; trenching; pipe stringing, bending and welding; and lowering-in and backfilling. Due to the short length and homogeneous makeup of the soils of the pipeline, FGS proposes to use one construction spread (crew and equipment). After the backfilling, the pipeline would be hydrotested and the right-of-way restored and revegetated. The entire process would be coordinated to limit the time of disturbance to an individual area, minimizing the potential for erosion and loss of normal use. The trench generally would not remain open for more than five days in any one area; there would be about 30 days between initial grading and final backfilling.

Survey and Staking

Before the start of construction, FGS would finalize surveys and stake the centerline and exterior boundaries of the construction right-of-way, including additional temporary workspaces. The stakes would be consistent with the alignment sheets, mark the limit of approved disturbance area, and be maintained throughout the construction period. Sensitive resources such as wetlands and protected species habitat would also be marked. Prior to the commencement of any ground-disturbing activities, a standard utility line survey would be conducted to identify existing utility lines within the proposed pipeline right-of-way.

Clearing and Grading

The construction right-of-way and temporary extra workspaces would be cleared and, where needed, graded to provide a relatively level surface for trench-excavating equipment and a sufficiently wide work space for the passage of heavy construction equipment and safety of the pipeline workers. In grassy areas where grading is not required, vegetation would be mowed to avoid damage to root systems. Generally, stumps would be cut flush with the surface of the ground and left in place, except where removal is necessary to create a safe and level work surface. Cleared vegetation and stumps would be burned (in accordance with state and local burning requirements), chipped (in accordance with applicable local restrictions, regulatory requirements, and landowner agreements), except in wetlands, or hauled off-site to a commercial disposal facility.

Topsoil would be stripped and segregated according to our Plan and Procedures. Topsoil would be removed to its actual depth, up to a maximum of 12 inches, and stockpiled separately from the subsoil excavated from the pipeline trench. To contain disturbed soils in upland areas and minimize the potential for sediment loss to wetlands and water bodies, temporary erosion controls would be installed immediately after initial disturbance of the soils and maintained throughout construction.

Trenching

The trench would be excavated to a depth sufficient to provide the minimum cover required by DOT specifications. Typically, the trench would be about five or six feet deep to allow for a minimum of three feet of cover; about 14-feet-wide in stable soils; and up to 24-feet-wide at the top in any unstable soils. Additional trench width may be required to maintain stability of trench walls for the safety of pipeline workers and equipment. Spoil would be stored within the construction right-of-way, next to the trench on the opposite (non-working) side of the right-of-way. Temporary trench plugs or barriers would be used to create segments within the open trench to reduce erosion and allow access across the trench. Trench plugs would typically consist of either compacted subsoil or sandbags placed across the ditch (soft plugs) or short, unexcavated portions of the trench (hard plugs). FGS does not anticipate the need for any trench dewatering.

Areas of bedrock that might be encountered along the pipeline route should be easily workable with standard construction equipment and techniques. FGS does not anticipate the need for blasting associated with trench excavation; however, if blasting were to be required, such work would be accomplished in accordance with applicable state regulations.

Pipe Stringing, Bending, and Welding

After trenching, the pipe would be delivered to the job site and temporarily placed or "strung" along the excavated pipeline trench within the right-of-way. Individual sections of pipe would be bent in the field where necessary to fit the contours of the trench; aligned; welded together into long strings; and placed on temporary supports along the edge of the trench. Pipe would be bent at the mill when necessary for sharp bends. The pipe would be pre-coated at the mill with a fusion-bonded epoxy external coating (or other coating technique) to protect it from corrosion.

All welds would be X-rayed to ensure structural integrity and compliance with applicable DOT regulations. Those welds that do not meet established specifications would be repaired or removed. Once the welds are approved, the welded joints would be coated with a protective coating and the entire pipeline visually and electronically inspected for any faults, scratches, or other damage, including coating defects. Any damage would be repaired before lowering the pipe into the trench excavation.

Lowering-in and Backfilling

If dewatering becomes necessary, the trench would be dewatered and cleaned of debris before the pipeline is lowered into the trench. In rocky areas, the bottom of the trench may be padded with sand gravel, screened soils, sandbags, or support pillows to protect the pipe coating. No topsoil would be used for pipeline padding. The pipelines would be lowered into the trench and trench barriers or breakers installed at specified intervals before backfilling to prevent water movement or subsurface erosion. The trench would then be backfilled, using the excavated materials, to existing grade or higher to accommodate future soil settlement. If the excavated material could damage the pipe coating, the pipeline would be protected with a rock shield and/or covered with select fill obtained from commercial borrow areas or by separating suitable material from the existing trench spoil to prevent damage to the pipe and pipe coating.

Hydrotesting

After the trench is backfilled, and before Project operation, the pipeline would be hydrotested in accordance with DOT safety standards (49 CFR Part 192) to verify its integrity. Approximately one million gallons of water would be needed to test the pipelines. Some water used for hydrotesting the 24-inch pipeline would be reused to test the 12-inch pipeline. The test water would be pumped into the pipeline or section of pipeline pushing a foam pig to ensure a positive displacement of air. The pipeline or segments would then be pressurized to the design test pressure and maintained at that pressure for a minimum of eight hours. If during the eight-hour test period any leaks are detected, the leaks would be repaired and the test section re-pressurized until the DOT specifications are met.

After successfully hydrotesting each section, the new pipelines would be cleaned and dried using pipeline pigs propelled through the pipelines with compressed air. The hydrotest water would be discharged back to the St. Lucie Canal in accordance with NPDES permit requirements.

Cleanup and Restoration

Following hydrotesting, the trenches would be compacted to minimize future settling, all work areas would be final-graded and restored as closely as possible to pre-construction contours. Permanent erosion control measures would be installed during this phase in accordance with our Plan and Procedures. Restoration would begin as soon as possible upon completion of final grading. Topsoil previously segregated from the trench material would be spread uniformly across the construction right-of-way. Pipeline markers and/or warning signs would be installed along the pipeline centerlines at specified intervals to identify the location of the pipes. Any remaining construction material or debris would be removed and disposed of at an appropriate disposal site. Revegetation would be accomplished by seeding disturbed areas in accordance with recommendations of the local office of the Natural Resources Conservation Service (NRCS) or as requested by the landowner.

Post-Construction Monitoring

FGS would monitor all areas disturbed by construction in accordance with our Plan and Procedures to identify any areas that require additional restoration work, noxious weed treatment, or erosion controls. FGS would repair and correct any areas identified as needing additional work in consultation with the landowner. The FERC would conduct periodic independent inspections to monitor the Project for compliance with the Commission's environmental conditions.

2.4.2.2 Special Pipeline Construction Procedures

Pipeline construction would not affect any agricultural lands residential or commercial areas; therefore, no special procedures are required for these areas. Special construction procedures are proposed for road, railroad, overhead piping, waterbody, and wetland crossings.

Roads and Railroads

The pipeline route crosses a paved road (i.e., Silver Fox Lane) and a rail spur to the Cogentrix power plant. FGS proposes to use a single-hole bore to cross these features from MP 0.99 to MP 1.02. The two pipelines would be bundled and pulled through the bore. Unpaved roads would be open-cut.

Overhead Piping

The pipeline route crosses existing aboveground piping related to operations at the Cogentrix power plant. FGS proposes to use a single-hole bore to cross these features from MP 0.66 to MP 0.69. The two pipelines would be bundled and pulled through the bore hole. The temporary workspaces would be contained within the existing pipeline easement and would not impact any wetlands or waterbodies.

Wetlands and Waterbodies

The pipeline route would not cross any major, navigable, or sensitive water bodies. Four minor ditches would be crossed by the open cut/conventional lay method and one would be bored. Rubber tire backhoe-type excavators would be used to open a trench across a flowing ditch. During these operations, flow would be maintained at all water crossings in accordance with the Procedures. Trench spoil would be placed on the bank above the high water mark for use as backfill. A prefabricated segment of pipeline, concrete coated as needed to provide negative buoyancy, would be placed below scour depth. Standard backfill cover requirements would be met. Once the trench is backfilled, the banks would be stabilized by seeding or use of riprap materials. Excavated material not required for backfill would be removed and disposed of at an upland disposal site.

FGS would use a reduced construction right-of-way width of 65 feet for its 2,620 linear feet of wetland crossings. For conventional wetland crossings in stable soil conditions, the construction technique would be similar to that used in dry upland areas, except that the temporary workspace during construction through wetlands would be reduced and limited to adjacent upland areas as much as possible.

Construction in wetlands with wet, saturated soils and/or standing water could require the push/pull method to install pipelines. This method involves equipment pushing prefabricated pipe from the edge of the wetland and/or pulling the pipe from the opposite bank of the wetland into an excavated trench. The trench would be excavated using either a backhoe working on equipment support in the wetland or a dragline or clamshell dredge working either in the wetland or from the edge of the wetland, depending on wetland size and extent of soil saturation. Floats may be attached to the pipe to give it positive buoyancy, allowing it to be floated into place in the trench. Once the pipe is positioned, these floats would be removed, the pipe would settle to the bottom of the trench; and the trench would be backfilled. The push/pull method would enable the pipeline to be installed with minimal equipment operation in the wetland. No dewatering is proposed, but would be undertaken as necessary (e.g., in the case of rain filling an open ditch).

FGS proposes one bore, at the road and rail spur crossing from MP 0.99 to MP 1.02 to avoid 0.03 acre of wetlands (i.e., the roadside ditches). The bore would require additional temporary workspaces at the entry and exit points (0.75 and 0.23 acre, respectively). To avoid or minimize impacts on water quality and wetlands, FGS would implement measures outlined in our Procedures during the construction and operation of the pipeline facilities. Sections 4.3 and 4.4 provide a more detailed description of waterbody and wetland protection measures.

2.4.2.3 Aboveground Facilities Construction Procedures

Construction of the M&R station and interconnections would begin with clearing and grubbing. After site grading, foundations would be poured; piping and valves assembled; and equipment mounted on the foundations. The sites would be stabilized with gravel or pavement and a security fence installed. Pipe sections within the M&R station and interconnections would be tested at the same time as the pipelines.

2.5 CONSTRUCTION SCHEDULE

FGS proposes a phased construction schedule. At a minimum, Phase 1 would include the construction of at least one storage tank with a nominal working volume of 184,750 m^3 and a storage capacity of 4 Bcf, liquefaction systems with a 50 MMscfd capacity, two 60,000 gallon NGL storage vessels, vaporization systems with a design sendout capacity of 400 MMscfd, and the two approximately 4-mile-long parallel pipelines to connect the facility with the existing interstate pipeline systems northwest of the site.

Phase 2 would include the construction of a second, identical LNG storage tank and additional 50 MMscfd of liquefaction capacity, 400 MMscfd of vaporization capacity, and 120,000 gallons of NGL storage capacity. Phase 2 would be in service no later than March 2016; this date may be advanced based on market demand, and it is possible that the two LNG storage tanks would be constructed simultaneously.

FGS anticipates construction of Phase 1 to take approximately 36 months. Upon initiating construction, FGS would begin with the LNG storage tank(s), which would take approximately 32 months to complete. Construction of the pipeline would be accomplished with a single construction spread over about 4 to 6 weeks, with activities proceeding at an average rate of about 1,500 feet per day. M&R station construction would require approximately 17 weeks and would shortly follow pipeline construction.

2.6 ENVIRONMENTAL COMPLIANCE AND MONITORING

FGS would implement environmental compliance and monitoring measures from our Plan and Procedures during Project construction. FGS would also incorporate compliance and monitoring measures as required by the federal, state, and local permits obtained for the Project.

In accordance with our Plan and Procedures, FGS would conduct environmental training for construction and contractor personnel before construction and periodically during construction. FGS would employ at least one environmental inspector (EI). The EI would be responsible for monitoring construction activities for compliance with the conditions of the FERC certificate and all other applicable federal, state, and local permits. The EI would have independent status, but would report to FGS's Chief Inspector, submit bi-weekly status reports to the FERC, and would have stop-work authority in the event of a noncompliance issue that requires corrective action.

In addition, the FERC would conduct independent quarterly inspections to monitor the Project for compliance with the Commission's environmental conditions.

2.7 OPERATION AND MAINTENANCE

The following sections summarize the operation and maintenance procedures for the Project. FGS would incorporate post-construction environmental requirements into a LNG storage facility Operation and Maintenance Plan and a pipeline Emergency Plan and Procedures.

2.7.1 LNG Storage Facility

FGS would operate and maintain its facilities in compliance with 49 CFR 193, NFPA 59A, and other applicable federal and state regulations. In accordance with 49 CFR 193.2503 and 193.2605 and Sections 11.3.1 and 11.5.2 of NFPA 59A, FGS is required to prepare and submit manuals that address specific procedures for the safe operation and maintenance of the LNG storage and processing facilities. These manuals would address startup, shutdown, cool-down, purging, and other routine operation, maintenance, and monitoring procedures. These manuals would also include training requirements and programs for operation and maintenance personnel.

During emergency events (i.e., the aftermath of a hurricane or other supply interruption) when pipeline delivery is not possible, LNG would be transported from the FGS facility by truck to FGS capacity holders. Any trucks accessing the facility would be required to be in compliance with all codes and regulations pertaining to the design, construction and operation of vehicles used to transport LNG.

2.7.2 Pipelines and Associated Aboveground Facilities

FGS would operate and maintain the proposed facilities in accordance with the applicable safety standards established by the DOT Minimum Federal Safety Standards as specified in 49 CFR 192 and in accordance with the Natural Gas Act. Pipeline markers would be placed and maintained along the right-of-way at road crossings, railroad crossings, and other highly visible places to alert construction workers and the general public to the presence of the buried pipelines. The pipelines would be patrolled on a periodic basis. This patrol would provide information on possible leaks, encroachments into the right-of-way, third-party construction activity near the pipeline, erosion, waterbody crossings, exposed pipe, or population density changes in the vicinity of the pipeline. FGS would also monitor the cathodic protection units installed for corrosion control (see Section 2.8.2) along the pipeline to ensure proper functioning.

Maintenance activities would include regularly scheduled gas leak surveys and measures necessary to repair any leaks. All fencing, signs, marker posts, and decals would be painted or replaced as necessary to ensure the pipeline location remains visible from the air and ground. Maintenance would also include routine (no more frequently than every three years) vegetation clearing; annual mowing of a corridor not exceeding 10-feet-wide centered on each pipeline to facilitate periodic corrosion and leak surveys; and vegetation control around aboveground facilities. Safety equipment such as pressure relief devices, fire detection and suppression systems, and gas detection systems would be maintained throughout the life of the facilities. Valves would also be inspected, serviced, and tested to ensure proper function. Qualified personnel would conduct routine monitoring and maintenance at the M&R station.

2.8 SAFETY CONTROLS

2.8.1 LNG Storage Facility

The LNG storage facility would be sited, designed, constructed, operated, and maintained in compliance with federal safety standards. Table 2.8-1 summarizes the federal siting and design requirements for LNG facilities.

Table 2.8-1 **Federal Siting and Design Requirements for LNG Facilities**	
Requirement	**Description**
Thermal Radiation Protection (49 CFR 193.2057 and Section 2.2.3.2 of NFPA 59A)	This requirement is designed to ensure that certain public land uses and structures outside the LNG facility boundaries are protected in the event of an LNG fire.
Flammable Vapor-Gas Dispersion Protection (49 CFR 193.2059 and Sections 2.2.3.3 and 2.2.3.4 of NFPA 59A)	This requirement is designed to prevent a flammable vapor cloud associated with an LNG spill from reaching a property line of a property suitable for building.
Wind Forces (49 CFR 193.2067)	This requirement specifies that all facilities be designed to withstand wind forces of not less than 150 miles per hour without the loss of structural integrity.
Proximity to Airport Runways (49 CFR 193.2155)	This requirement specifies that an LNG storage tank must not be located within a horizontal distance of 1 mile from the ends of, or 0.25 miles from the nearest point of, an airport runway, whichever is longer.
Impounded Liquid (Section 2.2.3.8 of NFPA 59A)	This requirement specifies that liquids in spill impoundment basins cannot be closer than 50 feet from the property line of a property suitable for building or a navigable waterway.
Container Spacing (Section 2.2.4.1 of NFPA 59A)	This requirement specifies that LNG containers with capacities greater than 70,000 gallons must be located a minimum distance of 0.7 times the container diameter from the property line or buildings.
Vaporizer Spacing (Section 2.2.5.2 of NFPA 59A)	This requirement specifies that integral heated vaporizers must be located at least 100 feet from the property line of a property suitable for building and at least 50 feet from other select structures and equipment.
Process Equipment Spacing (Section 2.2.6.1 of NFPA 59A)	This requirement specifies that process equipment containing LNG or flammable gases must be located at least 50 feet from sources of ignition, a property line of property suitable for building, control rooms, offices, shops, and other occupied structures.
Seismic and Foundation Design (Sections 4.1.3 and 4.1.7 of NFPA and Appendix B 59A)	This requirement specifies seismic events and use of ASCE 7 for foundation design.
Seismic Design (Section 4.1.3 of NFPA 59A)	This requirement specifies that the critical safety related components of an LNG facility must be designed to withstand, without loss of containment capability, earthquake ground motion having a mean return interval of 4,975 years

2.8.1.1 Spill Containment

The Project's spill containment systems are designed and would be constructed to comply with DOT regulations 49 CFR Part 193. These regulations require that each container of, and each transfer system for, LNG be provided with a means of secondary containment sized to hold the quantity of LNG that could be released as a result of a design spill, as defined in NFPA 59A, for the area and equipment. FGS proposes full containment LNG storage tanks in which the outer tank wall serves as the impoundment system. These concrete outer tanks would be designed to hold the contents of 110 percent of one nominal 190,000 m^3 LNG storage tank.

A spill containment system would be provided that consists of a system of concrete transmission troughs that would direct any spillage, whether from the storage tank or the liquefaction-to-tank and tank-to-vaporization transfer systems, to spill impoundment sumps. The collection troughs would be approximately three-feet-wide by two-feet-deep and as long as necessary to direct any spill to the spill containment sumps. Two LNG containment sumps would be installed. The usable volume of the sump would provide for containment of a 10-minute spill from a single full-bore pipe rupture that would produce the highest release rate.

FGS would also construct an NGL spill containment system. This system would consist of a concrete curbed area directly underneath the entire NGL storage tank area. The curbed area would slope towards the NGL spill impoundment sump, which would be sized to impound a 10-minute design spill from the area.

The facility stormwater drainage system would consist of low lift stations for the collection and transfer of stormwater runoff within the tertiary impoundment berms around the storage tank areas, plus a system of swales, ditches, and culverts for collection of clean stormwater from outside the bermed areas. Non-contact stormwater runoff within the process areas would be discharged to existing outfalls. The spill containment sumps would contain pumps that pump the stormwater out of the respective areas and into the outer stormwater runoff system for the facility. The sumps would be equipped with a low temperature switch to prevent LNG from being pumped into the stormwater drainage system. Stormwater runoff from around the administrative offices, access roads, parking areas, and related infrastructure would be temporarily retained within on-site retention areas, with eventual discharge through existing outfalls.

2.8.1.2 Hazard Detection System

Hazard detectors would be installed throughout the LNG storage facility to give operations personnel a means for early detection and location of released flammable gases or fires. The hazard detection system would consist of separate detection units for combustible gas, fire, and high and low temperatures, and would be hard-wired to the main alarm control system. Smart area gas detectors would be provided to monitor flammable gases within the storage facility. Each of these detectors would trigger visual and audible alarms at specific on-site locations and in the control room areas to enable effective and immediate response.

Smart ultraviolet/infrared fire and flame detectors would be located throughout the storage facility. High temperature detectors to detect fire would be located on the vent pipes of the storage tank relief valves.

2.8.1.3 Fire Protection System

The LNG storage facility would have a fire protection system for extinguishing fires, cooling structures and equipment exposed to thermal radiation, and dispersing flammable vapors. The main components of the system include a 500,000 gallon firewater tank and two 4,000 gpm pumps, one electric motor-driven and one diesel engine-driven. The looped underground firewater distribution system would include monitors, hydrants, and hose reels, as follows:

- Firewater monitor nozzles would be adjustable from straight stream to full fog and generally rated for 750 gpm. In locating firewater monitors, an effective coverage range of 200 feet was used.

- Dry barrel, compression-type fire hydrants offer the opportunity for direct action by means of 2.5-inch hose lines, as well as the capability to deliver pressurized firewater to automotive fire apparata equipped with a fire pump. Hydrant spacing is approximately 300 to 500 feet around the storage tank. Each fire hydrant is provided with a six-inch gate valve installed in the lateral between the hydrant and fire main. The valve is fitted with a two-piece adjustable roadway box, with cover at grade, to permit T-wrench access to the valve's operating nut.
- A hose reel with mounting, including 100 feet of hard rubber non-collapsible 1.5-inch fire hose and adjustable fog nozzle for a rapid first response with fire water.

The firewater tank would normally be filled from on-site wells. The municipal water system would serve as backup for the wells.

In addition to the firewater system, several other types of fire suppression agents would be available to control potential fires at the storage facility, including fixed, hand-portable, and wheeled fire extinguishers employing dry chemical and carbon dioxide. The type of agent used in a specific situation would depend on the characteristics of a particular event and the relative effectiveness of the various agents on that particular type of fire. Dry chemical fire suppression systems would be provided for the storage tank relief valves and would be manually activated (remotely or locally) to extinguish any potential fires at the valves. Portable dry chemical units would be strategically located throughout the facility.

2.8.1.4 Emergency Shutdown System

The Project would have an emergency shutdown (ESD) system to allow the safe, sequential shutdown and isolation of equipment designed to leave the facilities in a safe state during an emergency. The ESD system would be used for major incidents and result in shutdown of either the total plant or individual pieces of equipment, depending on the type of incident.

The basic ESD system consists of strategically placed instruments that would alert the plant operators of an incident. Emergency shutdown procedures would typically be initiated by operators pushing strategically placed ESD push buttons; however, where necessary, some instruments could automatically begin equipment shutdown sequences.

2.8.1.5 Security Systems

The Project facilities would include sirens with a distinctive tone for easy differentiation between alarms and emergency events.

The LNG storage facility would have a security fence completely surrounding its perimeter. Guards based at the main entrance guardhouse would control personnel access to the facility and conduct periodic security sweeps of the grounds. In addition, closed circuit television cameras with 360-degree pan, tilt, and zoom capabilities would be located throughout the facility for remote monitoring of activities in local areas.

For the Project, including the pipeline, FGS has committed to preparing a Security Procedures Plan and Manual. The plan and manual would establish a written program for physical security for all Project facilities including security inspections and patrols as well as a liaison with local law enforcement officers. The plan, which would comply with DOT regulations, would provide for risk-based levels of security carried out by trained personnel during all operation shifts and, if necessary, by government law enforcement offices that may respond to serious threats.

2.8.2 Pipelines and Associated Aboveground Facilities

The pipelines and aboveground facilities associated with the Project would be designed, constructed, operated, and maintained in accordance with DOT Minimum Federal Safety Standards in 49 CFR 192.

Corrosion Protection and Detection Systems

The pipelines would be constructed of welded carbon steel that meets or exceeds industry standards and covered with a protective epoxy coating to minimize rust and corrosion. During construction, FGS would install a cathodic protection system to further prevent or minimize corrosion of the buried pipelines and aboveground facilities. The cathodic protection system impresses a low-voltage current on the pipeline to offset natural soil and groundwater corrosion potential. The condition of the pipe coating and effectiveness of the cathodic protection system would be monitored during regularly scheduled surveys in accordance with federal standards and regulations. Cathodic protection surveys usually require walking the pipeline right-of-way with monitoring instruments. Repairs to the pipe, the pipe coating, or the cathodic protection system would be made as appropriate.

Emergency Response Procedures

Under 49 CFR 192.615, each pipeline operator must establish an emergency plan that includes procedures to minimize hazards in a natural gas pipeline emergency. Key elements of the plan include procedures for:

- receiving, identifying, and classifying emergency events, gas leakage, fires, explosions, and natural disasters;
- establishing and maintaining communications and coordinating emergency response with local fire, police, and public officials;
- making personnel, equipment, tools, and materials available at the scene of an emergency;
- protecting people first and then property, and making them safe from actual or potential hazards; and
- emergency shutdown of the system and safe restoration of service.

Part 192 also requires that each operator must establish and maintain a liaison with appropriate fire, police, and public officials to learn the resources and responsibilities of each organization that may respond to a natural gas pipeline emergency, and coordinate mutual assistance. The operator must establish a continuing education program to enable customers, the public, government officials, and those engaged in excavation activities to recognize a gas pipeline emergency and report it to appropriate public officials. FGS indicated it would participate in the "One Call" program. This program provides telephone numbers for excavation contractors to call prior to commencing any excavation activities. The One Call operator would notify FGS of any planned excavation in the vicinity of the pipelines so that FGS could flag the location of pipelines and assign staff to monitor the activities, if required.

Prior to commencing operations, FGS would also have to prepare emergency procedures manuals, as required by 49 CFR Part 193.2509, that provide for: (a) responding to controllable emergencies and recognizing an uncontrollable emergency; (b) taking action to minimize harm to the public including the possible need to evacuate the public; and (c) coordination and cooperation with appropriate local officials.

2.9 FUTURE PLANS AND ABANDONMENT

There are no FERC jurisdictional facilities to be abandoned as part of the Project.

The only future plans include Phase 2, which, as discussed previously, would include a second LNG storage tank with with a nominal working volume of 184,750 m^3, associated liquefaction (50 MMscfd) and vaporization (400 MMscfd) equipment to increase the liquefaction and vaporization rates, and additional NGL storage. Facilities included as part of Phase 2 are considered as part of the proposed action that is evaluated in this EIS.