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Dear PHMSA Interpretations Team,

WSP Energy Storage Services (WSP USA ESS) respectfully requests an official interpretation of 49 CFR 192.631(a)(ii) as it applies to our Spindletop Gas Storage & Pipeline System. We aim to ensure full compliance with all applicable regulations and believe a clear interpretation from PHMSA will be invaluable in achieving this.

This email provides an informative overview of the WSP Energy Storage Services (WSP USA ESS)-Spindletop Gas Storage & Pipeline System, which is owned by Entergy, operated and maintained by WSP USA ESS.

I. Overview of WSP USA ESS-Spindletop Gas Storage & Pipeline System:

Purpose of the Facility: The primary purpose of the Spindletop facility is to serve as a fuel supply for Entergy's Bridge City, Texas Power Plant. The Spindletop storage facility plays a crucial role in managing the fuel supply to ensure the consistent operation of Entergy's 2000-megawatt generation facility.

Spindletop Storage Facility Capabilities: The facility boasts significant injection and withdrawal capacities:

- Injection Capacity: 240 MM scf/D (6.8 MM m3/D)
- Withdrawal Capacity: 480 MM scf/D (13.6 MM m3/D)

Leaching Operation: The leaching facility, designed for cavern creation, has a capacity of 3000 gpm (11,356.24 liters per minute). It utilizes a 16-inch (40.64 cm) pipeline that spans 3.1 miles (5 km). The operation includes three disposal wells. Both the leaching facility and the disposal wells off the dome are 50% owned by Entergy and 50% by DCP/ Phillips 66. Salt dome storage caverns can be created through drilling and tubular installation, direct leaching, or indirect/reverse leaching methods.

Compression Capabilities: The facility is equipped with substantial compression capabilities, totaling 32,000 HP. This is provided by four 8000 HP electric-driven 3-stage reciprocating compressors. These compressors are designed to feed into the onsite caverns and do not have the capability to compress gas into the pipeline system.

Storage Wells: The Spindletop system includes two significant storage wells:

- Storage Well #1:
- Capacity: 6.4 Bcf (181.228 MM m3)
- Depth to Cavern Roof: 4120 ft (1255.78 m)
- Actual Cavern Dimensions: 625 ft (190.5 m) in depth and 290 ft (88.38 m) in diameter
- Storage Well #2:
- Capacity: 4.7 Bcf (133.09 MM m3)
- Depth to Top of Cavern: 4240 ft (1280.16 m)
- Actual Cavern Dimensions: 640 ft (224 m) in depth and 240 ft (73.5 m) in diameter

Cavern Withdrawal Process: During withdrawal, gas from the wells is heated to 150°F (65.56°C) before the first pressure reduction to prevent frost heave of the underground header. The first pressure reduction station decreases the pressure from 3100 psi to 800 psi (213.74 bar to 55.158 bar). For selling gas from storage, there is a second pressure reduction from 800 psi to 400 psi (55.158 bar to 27.58 bar) with orifice metering. The plant 150 gas yard features four pressure reduction runs with liquids knockout, enabling a delivery capability of 480 MM Scf/D (6.8 MM m3/D) and further reducing pressure from 400 psi to 150 psi (27.6 bar to 10.342 bar).

Operations: Both storage and pipeline operations at the facility are managed using Delta V SCADA Control Software.

II. Specific Questions Regarding 49 CFR 192.631(a)(ii):

Our primary area of inquiry concerns the application of 49 CFR 192.631(a)(ii) to the described systems and facility. Specifically, we seek clarification on:

192.631(a)(ii) Transmission without a compressor station, the operator must have and follow written procedures that implement only paragraphs (d) (regarding fatigue), (i) (regarding compliance validation), and (j) (regarding compliance and deviations) of this section.

We received the following interpretation of this code section from the Railroad Commission of Texas; The intention of this exception was to cover pipeline operations that receive natural well-head pressure from the source, where they would have no control on increasing the pressure coming into the system by compressors. Some operations only receive and monitor the pressure without being capable of directly controlling the pressure and may have to call a separate entity to do so. If the operator has the capability to increase or decrease pressure, this exception is typically not applicable.

Given that our compressors can only feed into the onsite caverns and not the pipeline system, how should their role, or lack thereof, be considered within the scope of 192.631(a)(ii)?

We are committed to operating our facilities safely and in full compliance with all federal regulations. Your guidance and interpretation of 49 CFR 192.631(a)(ii) will be invaluable in ensuring our control room program effectively address’s all requirements for our specific operations.

I have also included some imaging of our operation.

We are available to provide any additional information or clarification you may require. Please let us know the appropriate next steps for receiving an official interpretation.

Thank you for your time and assistance.

Sincerely,

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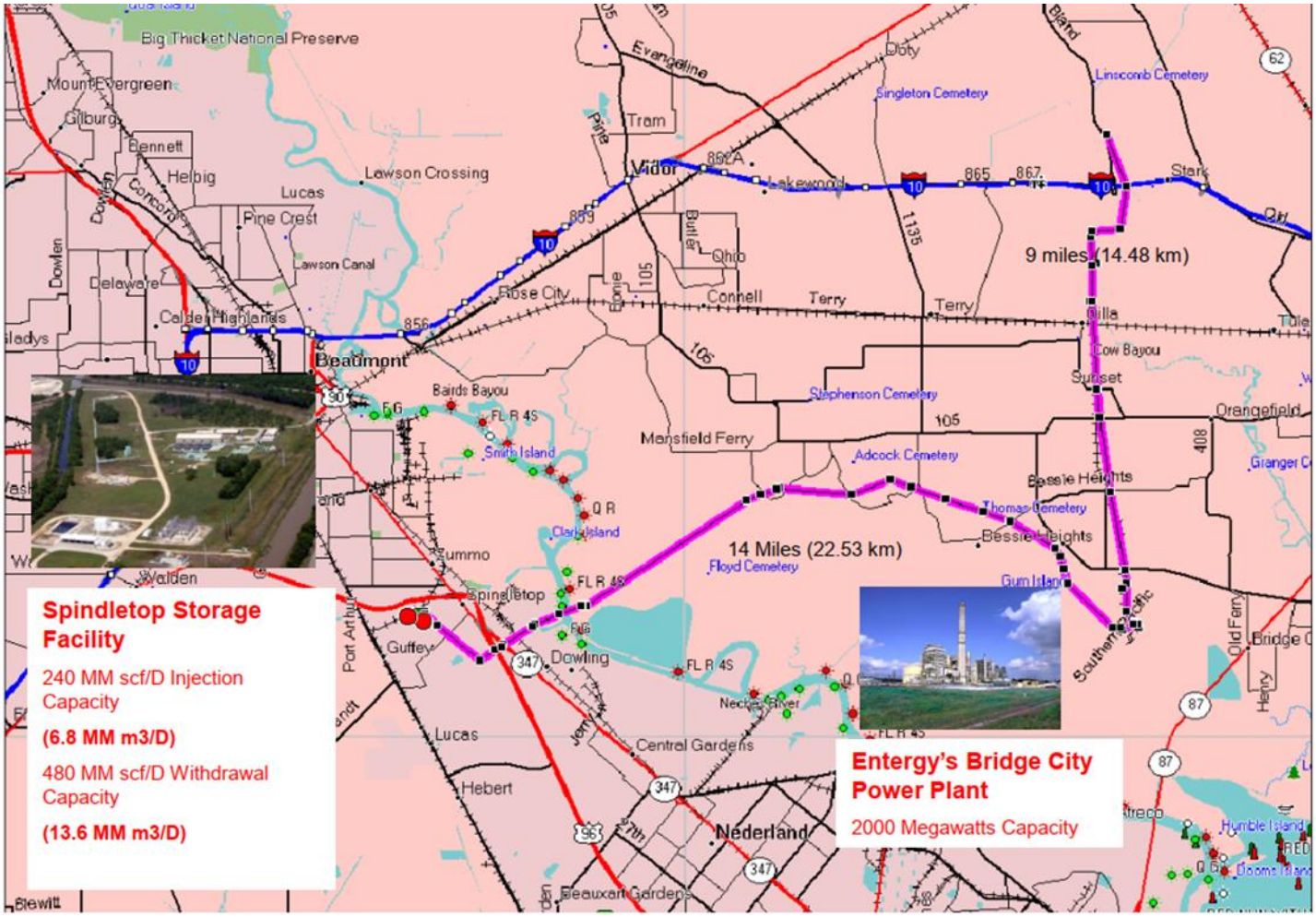


Maximum Injection Capacity
240 MM scf/D @ 400 psi
(6.8 MM m³/D @ 27.6 bar)
Maximum Withdrawal Capacity
480 MM scf/D @ 400 psi
(13.6 MM m³/D @ 27.6 bar)
INJECTION
WITHDRAWAL