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October 3, 2023

Delivered via Trackable Overnight Delivery

Ms. Caitlin Reilly
South Carolina Department of Health and Environmental Control
Assessment and Non-Permitted Petroleum Section
UST Division
2600 Bull Street
Columbia, South Carolina 29201

Subject: Request for Well Permit to Install Additional Vertical Sparging Wells for Biosparging System Expansion
Products (SE) Pipe Line Corporation
Lewis Drive Remediation Site
Belton, South Carolina
Site ID #18693, "Kinder Morgan Belton Pipeline Release"

Dear Ms. Reilly,

On behalf of Products (SE) Pipe Line Corporation (PPL), Jacobs Engineers Group Inc. (Jacobs) has prepared this well permit request to install four new vertical sparging wells at the Lewis Drive Site in Belton, Anderson County, South Carolina (Site ID #18693) to expand the coverage of the existing biosparging remediation system (**Figure 1**). The proposed vertical sparging expansion was discussed in a meeting with the South Carolina Department of Health and Environmental Control (DHEC) on September 19, 2023 to address areas around MW-20 in the Cupboard Creek Protection Zone (CCPZ). The proposed sparging wells will be installed at or above the bedrock level to treat the groundwater in this zone. This correspondence is being submitted as an addendum to the Corrective Action Plan (CAP) that was submitted to DHEC on September 1, 2016. PPL is planning to conduct the work as early as late October 2023.

1. Proposed Scope of Work

The following activity will be performed:

- Install four vertical sparging wells (VAS-60 through VAS-63) to extend the remedial zone of influence of the CCPZ sparging curtain around MW-20 as shown on **Figure 2**. A well spacing of 10 feet surrounding MW-20 will be used due to the relatively limited saturated thickness; each sparging well will be installed to the maximum depth possible at each location (top of bedrock surface). Depths are expected to range from approximately 20 to 30 feet bgs based on previous well installations in this area. The sparge wells will be constructed in accordance with South Carolina Well Standards R.61-71. Once completed, the locations and elevations of these monitoring wells will be determined by a surveyor licensed in the state of South Carolina.

Well installation tasks are described in more detail in the following sections.

2. Well Installation and Development

The vertical saprolite sparging wells will be constructed as follows to match the 59 existing sparge wells:

- The wells will be installed using hollow-stem auger drilling methods.
- The vertical sparging wells will be constructed of 2-inch-diameter Schedule 40 PVC riser with 0.006-inch slotted Schedule 40 well screen. The 2.5-foot well screens will be installed at varying depths as deep as practical (anticipated to be 20 to 30 feet bgs at CCPZ) with a 1-foot sump at the base of each well.
- The annular space around the well screen will be filled with a fine sand filter pack, to extend approximately 1 foot above the top of the well screen.
- A 5-foot-thick bentonite seal will be installed above the filter pack, and the vertical sparging wells will be sealed with cement-bentonite grout to approximately 2 feet bgs.
- Each vertical saprolite sparging well will be piped individually back to existing spare piping to the sparging system compound, allowing each well to be controlled individually.

2.1 Well Surface Completions

The sparge wells will be finished below grade to enable connection to the biosparge system.

2.2 Well Development

The wells will be developed by the well driller using one or more of the following techniques:

- Airlift
- Surge block and well pump

The wells will be developed until the water produced is clear and free of sediment.

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If you have any further questions or concerns, please call me at 919-859-5789 or Greg Dempsey with PPL at 770-751-4143.

Regards,

William M. Waldron, P.E.
Program Manager

Copies to: Greg Dempsey, PPL (Digital, greg_dempsey@kindermorgan.com)
Mary Clair Lyons, Esq., PPL (Digital, Mary_Lyons@kindermorgan.com)

Attachments:

Figure 1 – General Site Layout
Figure 2 – Vertical Sparge Well Proposed Locations

Figures

Legend

- Monitoring Well
- Bedrock Monitoring Well
- Seep Location
- Waterbody
- Intermittent Stream
- Piezometer
- Delineated Wetland
- Septic Tank
- Release Point
- Recovery Sump
- Recovery Trench Point
- Recovery Well (4-inch diameter)
- Surface Water Sampling Location
- HAS-1 Manway
- HAS-4/HAS-5 Manway (Distal End)
- HAS-4/HAS-5 Manway (Proximal End)
- HAS-6 Manway (Proximal End)
- Main Valve Box
- Grout
- Horizontal Sparging Well Screen
- Horizontal Sparging Well Riser
- Pipeline
- Recovery Trench
- Inspection Route for Sheen or Distressed Vegetation
- AS System Compound
- Horizontal Sparging Well Riser
- Horizontal Sparging Well Screen
- Vertical Saprolite Sparging Well
- Proposed VAS Well Locations
- Recovery Well (4-inch diameter)

Notes:
AS = Air Sparge
HAS = Horizontal Sparge Well
VAS = Vertical Sparge Well

Base Map Sources:
*ESRI World Imagery Layer, 2022
*United States Geological Survey (USGS) National Hydrography Dataset (NHD)

N

0 175 350
Scale in Feet

Figure 1. General Site Layout
Lewis Drive Remediation Site
Belton, South Carolina
Site ID #18693 "Kinder Morgan Belton Pipeline Release"

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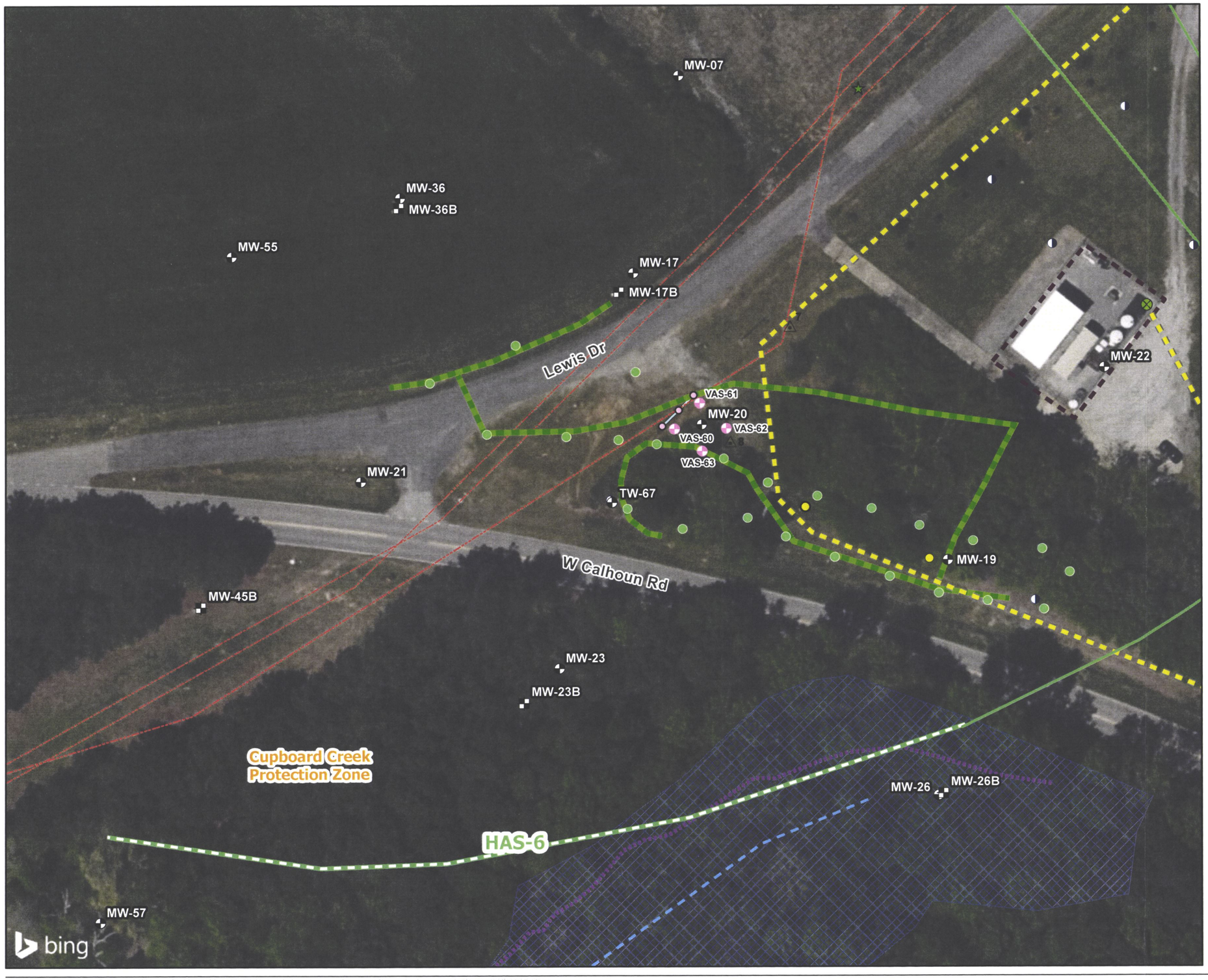

Legend

- Monitoring Well
- Bedrock Monitoring Well
- Seep Location
- Waterbody
- Intermittent Stream
- Piezometer
- Delineated Wetland
- Septic Tank
- Release Point
- Recovery Sump
- Recovery Trench Point
- Recovery Well (4-inch diameter)
- Surface Water Sampling Location
- HAS-1 Manway
- HAS-4/HAS-5 Manway (Distal End)
- HAS-4/HAS-5 Manway (Proximal End)
- HAS-6 Manway (Proximal End)
- Main Valve Box
- Grout
- Horizontal Sparging Well Screen
- Horizontal Sparging Well Riser
- Pipeline
- Recovery Trench
- Inspection Route for Sheen or Distressed Vegetation
- AS System Compound
- Horizontal Sparging Well Riser
- Horizontal Sparging Well Screen
- Vertical Saprolite Sparging Well
- Proposed VAS Well Locations
- Recovery Well (4-inch diameter)
- Overhead Utility
- As-Built VAS Line

Notes:
AS = Air Sparge
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0 50 100

Scale in Feet

Figure 2. Vertical Sparge Well Proposed Locations
Lewis Drive Remediation Site
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