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March 27, 2019

South Carolina Department of Health and Environmental Control
2600 Bull Street
Columbia, South Carolina 29201-1708

Attention: Ms. Kim Kuhn transmitted by electronic mail to: kuhnkm@dehc.sc.gov

Reference: **Water Well Receptor Update**
Marsh Lumber - VCC Number 16-5858-RP
Pamplico, South Carolina
S&ME Project No. 1584-98-146C

Dear Ms. Kuhn:

S&ME, Inc. (S&ME) has prepared this water well receptor survey update for the Marsh Lumber site, VCC number 16-5858-RP. The following provides background information, a description of our methods and our finds.

◆ Background

The water table aquifer at the subject site is not known to be used as an underground source of drinking water (USDW). In general, the Black Creek unit is more commonly used as a USDW in the Pamplico area. As discussed in prior site investigation reports for the subject site, a clay-rich layer found to underlie the study area at depths ranging from 13 feet below grade to 28 feet below grade, has limited vertical migration of the pentachlorophenol (PCP), with the upper most portion of the surficial aquifer being the only impacted aquifer unit.

Based a prior water well use survey, the Town of Pamplico utilizes three wells for the potable water system. Well No.1 is located at River Road and Lewis Road, approximately 0.85 mile to the east southeast of the site, Well No. 2 is located at Highway 51 in Hyman, approximately 1.75 miles to the west of the subject site, and Well No. 3 is located at the corner of Trade Street and First Avenue approximately 0.46 mile to the southeast of the site. Well No. 1 and Well No. 2 are the primary wells used and the system rotates these wells off and on for rest time. Well No. 3 is reportedly active but only used as a backup. The Town of Pamplico provides water to residents and businesses in the Town. The Town's wells draw water from the deeper aquifer system. Given that potable water is provided by the Town of Pamplico, the potential future use of the shallow aquifer in the immediate vicinity of Marsh Lumber as a drinking water source is presumed to be low.

Marsh Lumber Company used an on-site water well solely to provide water for the facility's boiler and to provide water used to spray on stored logs (e.g. the wet deck) to maintain moisture prior to processing the logs in the saw mill. The well is located adjacent to the boiler room. The on-site water supply well water was tested by S&ME numerous times, with analytical results consistently reporting no detectable concentrations of compounds on the Method 8270, acid extractable, Priority Pollutant List. Closure of the saw-mill operations eliminated the need to spray logs stored on the wet deck. The Marsh Lumber Company operations no longer include operation of the boiler; therefore, the on-site well has been out of use for several years, and the well pump is currently inoperable.



◆ Water Well Survey Update Methods

The following outlines the methods employed for this water well survey update:

- S&ME reviewed water well records data maintained on-line by the South Carolina Department of Natural Resources (SCDNR) at <http://dnr.sc.gov/water/hydro/WellRecords/locatewells/index.html>, as the South Carolina Coastal Plain Well Inventory. A search radius of approximate 0.5 mile from the approximate center of the dissolved phase pentachlorophenol groundwater plume, at the Marsh Lumber site was applied. **Table 1** summarizes the data obtained from this data resource, along with the Marsh Lumber on-site well discussed above.
- S&ME conducted a vehicular reconnaissance of the ± 0.5 mile search area. Observations were made of private property from public roadways. Properties were observed for signs of possible water supply wells or suspect water well structures.
- Interviewed Mr. Stewart Johnson, with the Town of Pamplico. According to Mr. Johnson properties within the Town of Pamplico have active water accounts. It is possible that residents may have water wells for irrigation. The Town of Pamplico water supply is from water wells, consistent with the information presented in the background section above.
- Based on the observation of suspect well structures on properties not listed in the SCDNR database, S&ME submitted a Freedom of Information Act request to South Carolina Department of Environmental Control (SCDHEC) requesting information available regarding water wells in Florence County. Upon receipt, the database was sorted by location data and listed well locations reviewed to determine if they were located within the approximate 0.5 mile search radius.
- For select properties, the Property Cards maintained online at the Florence County G.I.S. Website were reviewed.
- **Table 2** provides a summary of the water wells located within approximately 0.5 miles of the Marsh Lumber PCP plume based on a sorting of the data provided by SCDHEC, the limited visual reconnaissance of the search area, and review of select Property Cards maintained online by Florence County.

◆ Water Well Survey Update Findings

Figure 1 depicts the approximate location of water wells identified by the methods employed for this water well receptor survey update. The well identification numbers shown on **Figure 1** are keyed to information presented in **Table 1** and **Table 2**. Water wells with MAP ID# FLO-1 through FLO-6 are located north of the Marsh Lumber site along Marsh Road represent rural residential properties that are located outside of the Pamplico Town limits. Wells FLO-2 through FLO-6 are located on the opposite side of the unnamed tributary to Big Swamp Branch.

The Town of Pamplico water wells listed in **Table 1** reportedly withdraw water from a separate aquifer that is substantially deeper than the PCP impacted surficial aquifer at the Marsh Lumber site. Three of the seven water wells listed in **Table 2** were deeper water wells. No well depth information was uncovered for the remaining four water wells listed in **Table 2**. As previously assessed, the Marsh Lumber PCP impacts were limited to the surficial aquifer and appear limited to the Marsh Lumber site.



◆ **Closure**

Please contact the undersigned if you have any questions.

S&ME, Inc.

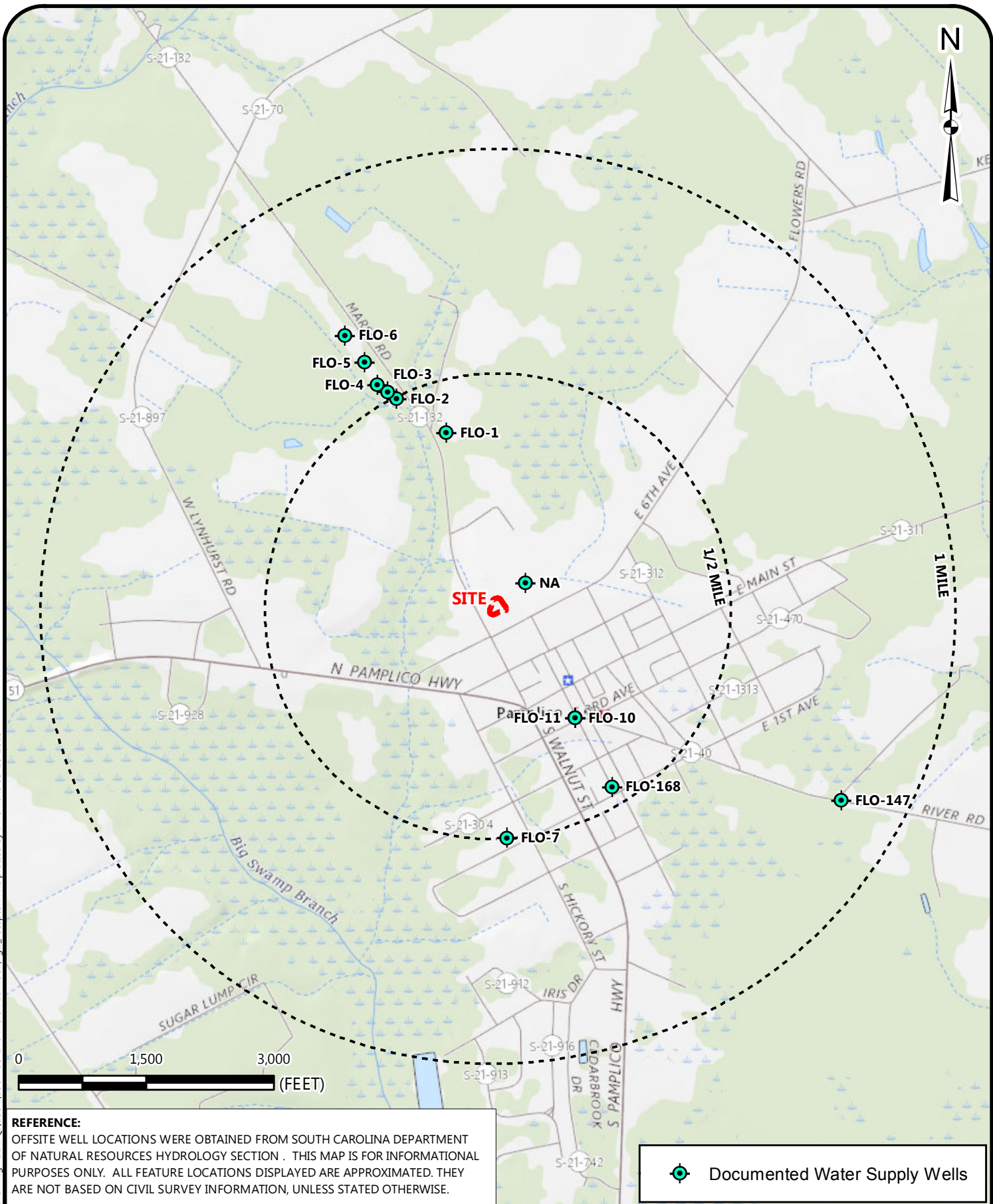
A handwritten signature in black ink that reads "Edmund Q.B. Henriques".

Edmund Q.B. Henriques
Senior Project Manager
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A handwritten signature in blue ink that reads "John Whitehead".

John Whitehead, P.G.
Senior Geologist
jwhitehead@smeinc.com

Drawing Path: Q:\1584\1584-98-146 Marsh Lumber\fig2_receptor.mxd plotted by DHomans 03-26-2019



REFERENCE:
 OFFSITE WELL LOCATIONS WERE OBTAINED FROM SOUTH CAROLINA DEPARTMENT OF NATURAL RESOURCES HYDROLOGY SECTION . THIS MAP IS FOR INFORMATIONAL PURPOSES ONLY. ALL FEATURE LOCATIONS DISPLAYED ARE APPROXIMATED. THEY ARE NOT BASED ON CIVIL SURVEY INFORMATION, UNLESS STATED OTHERWISE.

 Documented Water Supply Wells


	WATER WELL RECEPTOR SURVEY		SCALE: 1" = 1,500'	FIGURE NO. 1
	MARSH LUMBER COMPANY PAMPLICO, SOUTH CAROLINA		DATE: 3-26-19 PROJECT NUMBER 1584-98-146C	

Table 1
Updated Water Well Receptor Survey - 2019
Department of Natural Resource On-Line Database
Marsh Lumber Company VCC Site
S&ME Project No. 1584-98-146C



SC DNR Well ID	Latitude	Longitude	Well Owner	Well Use	Approximate Distance From PCP Plume	Well Depth (feet bgs)	Casing Depth (feet bgs)	Screen (Top) (feet bgs)	Screen (Bottom) (feet bgs)	Year Drilled	Well Yield (GPM)
					(miles)						
NA	339999	795698	Marsh Lumber	Unused ₁	On-site					-	Undocumented
FLO-10	335944	793405	Town of Pamplico	Unused	0.28	202	192	182	192	-	100
FLO-11	335944	793405	Town of Pamplico	Unused	0.28	-	157	147	157	1934	50
FLO-147	335934	793328	Town of Pamplico (Well#1)	Public Supply	0.85	405	300	210	300	1965	540
FLO-317	335940	793605	Town of Pamplico (Well#2)	Public Supply	1.75	447		270	454	2000	305
FLO-168	335936	793400	Town of Pamplico (Well#3)	Public Supply	0.46	-	203	-	203	1958	175

Unused₁ = Marsh Lumber water well used solely to provide water for the facility's boiler and to provide water used to spray on stored logs (e.g. the wet deck) to maintain moisture prior to processing the logs in the saw mill. Closure of the saw mill prior to 2007 eliminated the need to spray logs stored on the wet deck. Marsh Lumber operations no longer include operation of the boiler. The well has been out of use for several years and the well pump is currently inoperable.

Source = <http://dnr.sc.gov/water/hydro/WellRecords/locatewells/index.html>

Table 2
Updated Water Well Receptor Survey - 2019
SCDHEC Database, Florence County GIS, & Site Reconnaissance
Marsh Lumber Company VCC Site
S&ME Project No. 1584-98-146C



Map ID	Latitude	Longitude	Owner	Address	City	State	Well Type	Approximate Distance From PCP Plume (miles)	Information Source	Well Depth	Well Diameter
FLO-1			Creel, Austin	420 Marsh Road	Pamplico	SC	Domestic	0.37	FOI, 1, 2, 3	170	2
FLO-2			Evans, Anthony	429 Marsh Road	Pamplico	SC		0.50	1, 3		
FLO-3			Smith, John	437 Marsh Road	Pamplico	SC		0.53	1, 3		
FLO-4			Smith, John	445 Marsh Road	Pamplico	SC		0.58	1, 3		
FLO-5			Isgett, Bobby	503 Marsh Road	Pamplico	SC		0.63	1, 2, 3		
FLO-6	34 00 50 N	79 34 61 W	Sutton, Mike	513 Marsh Road	Pamplico	SC	Irrigation	0.75	FOI, 2, 3	170	4
FLO-7	33 59 31	79 34 15	Munn, Ollie Mae	311 S Hickory Street	Pamplico	SC	Cooling	0.5	FOI	240	2

FOI = Data obtained as a results of a Freedom of Information request submitted to SCDHEC
 1 = Water well assumed present because parcel was located outside of Pamplico Town limits
 2 = Suspect Well Structure Visual Observation
 3 = Florence County GIS records
 Longitude and Latitude data present as reported in the SCDHEC database
 Blank cells = no information reported or obtained