



JERRY AYCOCK
PLANTATION PIPE LINE
1000 WINDWARD CONCOURSE
SUITE 450
ALPHARETTA GA 30005

DEC 11 2018



Re: Reviews of Misc. Reports, Annual Report and Response to Comments
Plantation Pipe Line Lewis Drive Release, 112 Lewis Dr., Belton, SC
Anderson County
Site #18693
Petroleum Pipe Line Release Reported December 8, 2014
Monthly Status Updates received April 19, 2018, May 30, 2018, June 28, 2018 & July 31, 2018
2018 Annual Monitoring Report received June 29, 2018
Response to Comments Correspondence received July 25, 2018
2018 Second Quarter Monitoring Report received September 27, 2018
Meeting held November 1, 2018 and Conference Calls held November 9 and 19, 2018 with Plantation
Pipe Line and/or Jacobs

Dear Mr. Aycock,

The South Carolina Department of Health and Environmental Control (Department) has reviewed the above referenced documents in conjunction with the Annual Report. Based upon our meeting on November 1, 2018 and subsequent conference calls, the following comments are provided. A written response is requested within 30 days of this correspondence.

- 1) In the future, field data sheets will be provided on a standardized form and a discussion of field observations (i.e. odors, sheens, seeps, biota changes) will be provided in quarterly reports, regardless of the nature of the visit, should any environmental changes be noted. If a sheen or seep is observed it will be noted and the action taken documented. These forms should include a designated space for all pertinent information to include current and recent weather events that could impact results, site conditions, etc. The Department noted in the November 19, 2018 conference call that the Department cannot agree with the statement that the hydrocarbon sheen noted in a depressed area caused by the settlement of the recovery trench adjacent to Brown's Creek naturally biodegraded and did not migrate to Brown's Creek as laboratory analysis collected at SW-12 documents a release to Brown's Creek in the area of the trench during this time period.
- 2) In the future, a discussion of influence from the air sparge system (i.e. bubbling, air sparging, pressure, etc), in any monitoring well will be documented and discussed within the next quarterly report.
- 3) Every effort will be made to not to collect any environmental samples during rain events to reduce the possibility of bias in samples.

- 4) In the future, notation will be provided on Table 3 (Groundwater Elevation and Product Thickness Data) when a well is not bracketing the water table. The Department requests that in areas where monitoring points/wells are not bracketing the water table, the ability to determine the extent of free phase petroleum be discussed in the quarterly report text. The following locations are of concern due to multiple events where the water table was not bracketed and their location relative to a receptor or the current product plume and/or the dissolved concentration within the well: MW-38, MW-40, RT-2A-RT2f, RT-2G, RT-2I, RT-2J, RT-2K, RT-2L, MW-11, MW-2, MW-9, and MW-45.
- 5) In the future, Product Thickness Trend Graphs and Groundwater Analytical Trend Graphs will be enlarged for better evaluation.
- 6) Plantation Pipeline will provide iso-concentration maps and product thickness maps for the surficial aquifer and the bedrock aquifer for March 2017, September 2017, March 2018, September 2018, and henceforth going forward. These maps are anticipated by December 30, 2018.
- 7) Monthly gauging of all existing wells with quarterly groundwater sampling of all monitoring wells with the exception of MW-7, MW-15B, MW-17B, MW-20, MW-26, MW-34, MW-36, MW-37, MW-38, MW-39, MW-40, and MW-41 which will be sampled monthly. An updated Groundwater Monitoring Well Plan Table is anticipated by December 30, 2018. The Department requests that groundwater collected from all newly installed monitoring wells be sampled monthly for the first 4 sampling events. Based upon those initial monthly events, sampling frequency would be evaluated.
- 8) During annual maintenance of the air sparge system, when the system is turned off, groundwater sampling will be conducted.
- 9) Surface water sampling and analysis will continue monthly at all surface water sampling locations with the exception of FP-1, FP-2, FP-3, and SW-6. FP-1, FP-2 and FP-3 have never had contaminant detections and surface water locations will continue to be monitored both upstream and downstream monthly. SW-6 has not had adequate water for sampling since this location was selected and other surface water locations are sampled downstream monthly.
- 10) All bubblers within Brown's Creek will be turned off 24 to 48 hours prior to conducting surface water sampling.
- 11) The addition of oxygen releasing compounds to supplement the existing remedial measures will be evaluated in the area of Cupboard Creek. This evaluation is anticipated by December 30, 2018.
- 12) Routine monitoring reports will be provided quarterly. Should there be a change in environmental conditions at the site; the Department should be notified immediately.
- 13) An evaluation of the method used to collect dissolved oxygen (DO) will be evaluated to include low flow purging and sampling of monitoring wells and measurement of DO using a flow through cell with stable DO values recorded and provided in the quarterly reports. Low flow purging and sampling would aid in collecting ground water samples representative of the aquifer where screens do not bracket the water table.
- 14) Visual inspection of the full site as a whole, to include Cupboard Creek and Brown's Creek, will continue and any issues will be reported in each quarterly report. Should any issues need immediate action, the Department should be notified as soon as possible. If any action is taken by Plantation Pipe Line, notification should be provided to the Department immediately and included within the next quarterly report.

- 15) A proposal to conduct additional assessment in the areas south and west of MW-46 and the area east of MW-38 will be provided by December 30, 2018.
- 16) Neither MW-17 nor MW-19 will be abandoned. These monitoring wells will remain on the routine monitoring schedule.
- 17) Concentration trends will be evaluated to determine areas where additional remediation and monitoring is needed. Trend evaluation should include bubbling, pressure, and other signs of impact from the air sparge system that may impact results and each monitoring well's ability to monitor the impact of the air sparge system on the plume.
- 18) Evaluating the bedrock monitoring network's ability to monitor groundwater as the fracturing that is bracketed in bedrock wells across the site varies, providing all bedrock geologic logs with one or more geologic cross sections was discussed. It was noted that well logs for groundwater monitoring wells MW-44B, MW-45B could not be located in the Department's file and would need to be provided. Contaminant levels in existing bedrock wells will continue to be monitored to evaluate the effects of air sparging.

Please note, measureable free phase petroleum product must be evacuated per the June 16, 2017 and December 14, 2017 correspondence (Coleman to Aycok).

The Department should be notified a minimum of four days prior to any environmental work being conducted. Documents should continue to be provided in paper format and pdf via a disk with Site ID # 18693 and Plantation Pipe Line Lewis Drive Release noted in a prominent location. Should you have any questions, I can be reached at (803) 898-0628 or colemaj@dhc.sc.gov. Faxes can be sent to (803) 898-0673.

Sincerely,



Bobbi Coleman, Hydrogeologist
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Technical File