October 27, 2025

Jonathan Rice, Chief
Industrial and General Permits Division
Maryland Department of the Environment
1800 Washington Boulevard
Baltimore, Maryland 21230

RE: Monthly Progress Report – October 2025
Perdue AgriBusiness LLC
AI#2087, State Permit No. 15-DP-0359, NPDES Permit No. MD0000060
6906 Zion Church Road, Salisbury, Maryland 21804
Langan Project No.: 220210101

Dear Mr. Rice:

Langan Engineering and Environmental Services, LLC (Langan) has prepared this progress report for September 2025 on behalf of Perdue AgriBusiness LLC (PAB) regarding the Zion Church Road (ZCR) facility located at 6906 Zion Church Road in Salisbury, Maryland (the "Facility"). This report was prepared in response to the *Request for Action to Address PFAS in Wastewater* letter issued to PAB on November 8, 2024, by the Maryland Department of the Environment (MDE), Water and Science Administration, Wastewater Pollution Prevention and Reclamation Program.

The MDE's letter contained the following two substantive requests:

1. ***Monitoring and Reporting:*** *As soon as possible, but no later than 15 days from the date of this letter, collect your first monthly sample at Outfall 001 for PFAS and submit it for testing using EPA Method 1633. Samples shall be collected every month until further notice. Sample results shall be provided to the Department via email to jonathan.rice@maryland.gov no later than 7 days after you receive each lab report.*

2. ***Source Identification:*** *As soon as possible, but no later than 5 days from the date of this letter, begin a comprehensive assessment of the Facility's processes, materials, and any third-party waste streams to identify sources of PFAS that may enter the Facility's discharges, stormwater runoff, or sludge. Progress reports regarding the evaluation, including any preliminary results or final findings, shall be submitted to the Department on a monthly basis. Monthly reports shall be provided to the Department via email to jonathan.rice@maryland.gov by the final date of each month, with the first report due on November 30, 2024. Based on the findings, a mitigation plan may be necessary to propose a strategy to reduce or to the extent practicable eliminate PFAS-containing materials entering the Facility's wastewater, stormwater runoff, or sludge.*

This is the twelfth report submitted in accordance with the Department's request for monthly progress reports to be submitted by the final date of each month, starting on or before November 30, 2024. This monthly progress report provides a summary of per- and polyfluoroalkyl substances (PFAS) monitoring and reporting activities (Section "A" below), a summary of PFAS source assessment activities (Section "B" below), and conclusions (Section "C" below).

A. Monitoring and Reporting

Langan performed a monthly sampling event on September 10, 2025. Samples of the interim PFAS treatment system influent and effluent (ID WW_PFAS_INF_RO_C1_091025 and WW_PFAS_EFF_OOGP_C1_091025) were collected as composite-grabs along with a field blank. The results of this sampling were provided to MDE on October 09, 2025. The total PFAS concentration (defined as the sum of analyzed PFAS compounds detected above the reporting limit under EPA Method 1633) of the influent sample was 163.76 parts per trillion (ppt). The total PFAS concentration of the effluent sample was 50.71 ppt, which was the sum of the following concentrations of:

- Perfluorobutanoic acid (PFBA) - 9.19 ppt
- Perfluoroheptanoic acid (PFHpA) - 1.52 ppt
- Perfluorohexanesulfonic Acid (PFHxS) - 1.01 ppt
- Perfluorohexanoic Acid (PFHxA) - 8.3 ppt
- Perfluorooctanesulfonic Acid (PFOS) - 1.34 ppt
- Perfluorooctanoic Acid (PFOA) - 0.62 ppt
- Perfluoropentanoic Acid (PFPeA) - 31.7

Langan performed a monthly sampling event on October 8, 2025. Samples of the interim PFAS treatment system influent and effluent (ID WW_PFAS_INF_RO_C1_100825 and WW_PFAS_EFF_OOGP_C1_100825) were each collected as composite-grabs along with a field blank. Sample analysis has a standard turn-around time of 10 business days, and Langan will validate the results with an anticipated turnaround time of 5 business days after receipt of results from the lab. At the time of this writing, validated results of the twelfth sampling event were not yet available.

Sampling events and results obtained since November 2024 are summarized in the table below.

Sampling Event No.	Sampling Date	Sum of Analyzed PFAS – Before Interim PFAS Treatment System (ppt)	Sum of Analyzed PFAS - After Interim PFAS Treatment System, Before Discharge (ppt)	Date Provided to Department
1	11/20/2024	118.06	NA	12/26/2024
2	12/17/2024	121.79 129.12	NA	1/15/2025
3	1/15/2025	58.94	NA	2/12/2025

4	2/12/2025	98.96	NA	3/10/2025
5	3/12/2025	151.49	NA	4/10/2025
6	4/16/2025	91.17	NA	5/14/2025
7	5/14/2025	122.65	NA	6/19/2025
8	6/11/2025	247.82	NA	7/9/2025
9	7/16/2025	98.7	4.22	8/8/2025
10	8/13/2025	105.29	28.25	9/11/2025
11	9/10/2025	163.76	50.71	10/09/2025
12	10/08/2025	Pending	Pending	Pending

Sampling before and after the WWTP interim PFAS treatment will continue to occur monthly, and Perdue will conduct system maintenance and/or make modifications, as appropriate. Results will be provided to the MDE within 7 days of completing data validation and management and will also be attached to the Facility's monthly Discharge Monitoring Report (DMR).

Langan may recommend replacing "composite-grab" sampling with grab sampling, if appropriate (e.g., if the source(s) of PFAS in the wastewater is/are determined to be continuous/non-transient, PFAS concentrations are stable or exhibiting steady trends based on monthly monitoring results, etc.).

B. Source Identification

At the request of MDE's Controlled Hazardous Substance Enforcement Divisions ("CHS"), Langan performed an Environmental Assessment of PFAS, on behalf of PAB, to identify potential sources of PFAS in soil and groundwater at the Facility (referred to in the report as "Areas of Interest" (AOIs)). The assessment methods and findings were summarized in a report titled *Environmental Assessment of PFAS, Perdue AgriBusiness LLC, Salisbury, Maryland* (EA Report), which was submitted to MDE's CHS Division on January 21, 2025.

As further discussed in the EA Report, to date, PAB has not identified any PFAS-containing products or chemicals used by PAB in any of its operations at the Facility other than aqueous film-forming foam (AFFF). The AFFF Fire Suppression System is one of nine identified PFAS AOIs identified in the EA Report. The other eight PFAS AOIs are potential secondary AOIs that were, or may have been, affected by historic discharges of AFFF. Langan and PAB are in the process of gathering additional information about the AOIs. Updated information pertinent to this effort is summarized below.

The former AFFF fire suppression system, which most recently contained Ansulite AFC-3B, has been fully decommissioned and replaced with new piping and system components designed to operate with a synthetic fluorine-free foam (SFFF). At present, the facility's fire suppression system is running on water only under temporary approval from the Fire Marshal, pending completion of flow and calibration testing. Once testing is successfully completed, the system will transition to SFFF use. In the longer term, PAB is evaluating the feasibility of transitioning to a water deluge fire suppression system.

PAB submitted a Revised/Final PFAS Investigation Workplan (IWP) for the ZCR Facility to MDE on May 28, 2025, following receipt and incorporation of MDE-LRP's second round of comments,

issued on May 7, 2025, regarding PAB's April 10 (and earlier March 7) IWP submissions. MDE approved the Revised/Final IWP in a letter dated June 12, 2025.

The investigation activities outlined in the IWP focus on characterizing PFAS occurrence in soil and groundwater within the identified AOIs, including prioritized soil sampling locations, targeted groundwater sampling, and hydrogeologic characterization. Findings from this work will inform the scope and approach of potential future investigation phases. Field activities commenced on July 9, 2025, and concluded the week of September 8, 2025. The project team is compiling lab analytical results and investigation data for evaluation and interpretation. A Technical Memorandum summarizing this phase of the SI is planned for submittal to MDE by November 2025.

On May 16, 2025, Langan performed targeted sampling of various process streams at the Facility's wastewater treatment plant (WWTP) to support an ongoing evaluation of PFAS occurrence and transport within the wastewater treatment system. Samples were collected for analysis of PFAS and water quality field parameters. Additional sampling of WWTP lagoons (water and sediment) and Facility process flows was performed on June 2 and June 9, 2025, to further characterize PFAS occurrences in sediment and sludge, and to collect supporting water quality data. Results from the June sampling events are currently under review.

Langan and PAB developed an iterative, detailed process water sampling plan to identify potential sources of PFAS that may enter the Facility's process and sanitary discharges. The plan focused on evaluating PFAS occurrence across various facility operations and water use areas, including influent, effluent, and internal process streams. Sampling locations were selected to reflect distinct processes, operations, usage patterns, and treatment systems. Sampling was performed between July 7 and July 9, 2025, and results from the July sampling are currently under review. Supplemental sampling was performed on October 2, 2025.
Initial steps have been taken to investigate potential inflows, including possible groundwater intrusion, that could contribute to observed PFAS concentrations in samples taken from a comingled process sewer manhole located near the AFFF Fire Suppression System, which MDE sampled in December 2023. Further investigation of possible groundwater intrusions was conducted as part of the IWP, and results of that investigation will be included in the forthcoming Technical Memorandum.

Groundwater is used in the Facility's operations and therefore could be a source of PFAS in Facility wastewater. Accordingly, PAB has implemented PFAS treatment systems for product contact water and steam, including boiler feedwater, oil refinery process water, and oil refinery truck wash water.

C. Closing

As stated above, NPDES PFAS sampling will continue to occur monthly as required in the Department's November 2024 letter. Plans and scheduling for source assessment and sampling are continuing to be developed and implemented, as summarized above.

Sincerely,
Langan Engineering and Environmental Services, LLC

Jillian Terhune
Senior Project Manager

cc: Jaclyn Mays, PAB
Herb Frerichs, PAB