TITAN PARTNERS
FUEL TERMINAL

One Greenway Plaza, Suite 600, Houston TX 77046

October 7, 2020

Mr. Michael K. Adams, PE
Executive Director
Water Authority of Dickson County
101 Cowan Road
Dickson, TN 37055

RE: Titan Partners Terminal
WADC Update on Fire Protection System and Fluorine Free & PFAS Free Foams

Dear Mr. Adams:

This is an update to the information we provided the WADC on August 7th regarding the fire protection and firefighting foam suppression systems that Titan Partners plans to utilize at the proposed petroleum storage and distribution terminal in Dickson County, Tennessee. The fire prevention and suppression planning for the terminal is being completed by a Buckeye/Titan Fire Safety Engineer and ESDC Engineering. The fire suppression design and pre-emergency planning that are under development will be reviewed by the Dickson County Emergency Management Agency.

Buckeye/Titan Partners has been monitoring the development of and is evaluating the feasibility of utilizing a fire suppression agent that is Fluorine free and Per- and Polyfluoroalkyl (PFAS) free in lieu of the currently proven Alcohol-Resistant Aqueous Film-Forming Foam (AR-AFFF) foams for extinguishing hydrocarbon and polar solvent fires. Fire suppression agents are required by the Tennessee State Building and Fire Codes to be tested/listed for the purpose they are selected for, with listing through agencies such as UL (commonly known as Underwriter's Laboratories www.ul.com) or other agencies acceptable to the authority having jurisdiction (Dickson County EMA). This ensures that if ever needed, the agent will work quickly and effectively for both the tank and truck loading rack sprinkler applications at this proposed facility. At the same time, should it ever need to be used, Titan wants to be sure that the agent selected for use here will minimize any impact on the environment. The development and listings of these foam concentrates continues to evolve with new listings being added regularly. Titan Partners is committed to closely monitoring this process to choose the best suppression agent for this project from both a fire suppression and environmental perspective.

In addition to monitoring the development of fluorine-free and PFAS free fire suppression agents, Buckeye is taking the following proactive steps in the design of the Terminal while the suppression agents are still being tested to earn their UL listing for use in these applications. The total investment costs associated with the proactive fire protection/suppression design additions for the state of the art terminal are worth noting at greater than $600,000.

1. Designing the fire protection system to accommodate the use of Fluorine free and PFAS free foams;
2. Addition of a FireDos Foam Proportioner that will allow Buckeye/Titan to test the foam suppression system with water instead of requiring the discharge and cleanup of foam concentrate periodically;
3. The terminal's fire water tank and pump system have been designed to be tested throughout its lifetime by recycling water back to the tank thus reducing impact on the area water supply;
4. The location of the foam suppression discharge points at the facility are primarily contained within the tank secondary containment dike and the truck loading track containment areas where the residual foam can be collected for appropriate disposal in accordance with local, State, and Federal requirements;
5. Installing flame detectors inside the aboveground petroleum storage tanks which will help shorten the detection time of a potential tank fire, potentially reducing the volume of foam agent (no matter the type) discharged.