Attachment B
Pluris Plan of Action to Correct
Wedgefield Water Quality
and
FDEP Letter of Concurrence

Florida Department of Environmental Protection

Central District
3319 Maguire Boulevard, Suite 232
Orlando, Florida 32803-3767

Rick Scott
Governor

Carlos Lopez-Cantera
Lt. Governor

Jonathan P. Steverson
Secretary

June 10, 2016

Maurice Gallarda, President
Pluris Wedgefield, Inc.
2100 McKinney Ave., Ste. 1550
Dallas, TX 75201
mgallarda@plurisusa.com

Re: Pluris Wedgefield
PW Facility ID #3480149
Orange County

Dear Mr. Gallarda:

The Department is in receipt of the Detailed Plan of Action (POA) for the reduction of total trihalomethanes and haloacetic acids dated June 9, 2016. The Department concurs with the POA and appreciates your efforts to maintain this facility in compliance with state and federal rules.

Should you have any questions or comments, please contact Patrick Farris at 407-897-4137 or via e-mail at patrick.farris@dep.state.fl.us.

Sincerely,

Jeff Prather
Director, Central District
Florida Department of Environmental Protection

Enclosure: Pluris-Wedgefield Plan of Action

cc: Joe Kuhns, jkuhns@plurisusa.com

PLURIS

Joseph M. Kuhns
Regional Manager

June 9, 2016

VIA EMAIL

Florida Department of Environmental Protection
Central District Office
Patrick Farris, Environmental Specialist III
Central District Office
3319 Maguire Blvd, Suite 232
Orlando, Florida 32803-3767

Re: Pluris Wedgefield, Inc. ("Pluris"), - Detailed Plan of Action for Total Trihalomethanes & Haloacetic Acid Exceedance Reduction

Dear Mr. Farris,

The following Detailed Plan of Action ("POA") is hereby submitted at the request and in cooperation with the Florida Department of Environmental Protection ("FDEP") to identify and implement corrective actions necessary to maintain the Total Trihalomethanes ("TTHM") and Haloacetic Acids ("HAA5") levels within the distribution system below the respective Maximum Contaminant Levels ("MCL").

Presented in the following is the detailed description of Pluris's POA.

- Pluris has retained the civil engineering services of senior professional engineer Steve Romano, PE with Kimley-Horn to provide engineering technical support on the evaluation and study of TTHM and HAA5 formations in the system.

- Pluris met with Dr. Steven J. Duranceau, P.E., Associate Professor of Environmental Engineering at UCF on May 31st, 2016 to discuss Dr. Duranceau's assistance in evaluating TTHM and HAA5 formation in the Pluris distribution system. Dr. Duranceau is an expert in the field of disinfectant byproducts; specifically the formation of TTHMs and HAA5s and their reduction. Dr. Duranceau's services will be utilized as part of the POA to assist in identifying the formation potential of TTHM and HAA5 in the raw and treated water. This analysis will include an evaluation of the treatment system and all chemicals used which may contribute to the formation of TTHM's and HAA5's based on the specific constituents formed during the testing.

- Pluris has retained and coordinated with representatives of IXOM, the manufacturer of the Magnetic Ion Exchange ("MIEX") system to visit the Water Treatment Facility and thoroughly evaluate the performance of the MIEX treatment system. IXOM visited the site on April 29th and provided preliminary system enhancements for optimizing removal of naturally occurring organics from the production well water. IXOM is scheduled to provide detailed analysis of the Supervisory Control and Data Acquisition ("SCADA") in coordination with Pluris' SCADA technician by June 30th. Following the SCADA analysis IXOM representatives will visit the Water Treatment Plant ("WTP") to validate the MIEX treatment optimization.

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- Pluris, along with IXOM personnel, have identified particular water treatment plant system operating items that will be enhanced to more effectively remove the organics found in the raw well water. They are as follows:
    - Install new conductivity meters that provide data to the SCADA system to ensure regeneration of the MIEX resin is occurring. Both Pluris and IXOM believe this will result in better regeneration of the MIEX resin; thus providing more effective removal of potential organics in the raw water source. This work will be completed by June 24th.
    - On the recommendation of IXOM, Pluris reconfigured the resin transport piping on June 2nd, 2016. The original venturi tube configuration has been replaced with a simple air lift system to assure reliable resin induction at the beginning of the MIEX treatment.
    - Pluris is installing Variable Frequency Drives ("VFD") on each well to allow the MIEX system to run in continuous mode. By doing so the MIEX resin should remain fluidized (in suspension), providing more surface area in constant contact with the raw water. IXOM believes this will increase the effectiveness of the process, thereby improving the organics removal efficiency. This work is scheduled to be complete by June 23rd, 2016.
    - Pluris has purchased analytical equipment used to monitor UVA on the raw water as well as the treated water. The UVA process control analytical testing will provide a data set point comparison used to monitor the effectiveness of organic removal by the MIEX system.
- IXOM staff will conduct a training refresher course with Pluris staff. The training is scheduled to be complete by July 30th, 2016.
- Additional sampling analysis will be conducted once the MIEX SCADA analysis is completed in mid-June. Sampling will include the following;
    - WTP - TOC, DOC, Iron, pH. TTHM and HAA5 will be done at the point of entry. These samples will be conducted weekly and reduced to monthly once TTHM and HAA5 levels are below MCLs.
    - Distribution system - TOC, DOC, Iron, pH, chlorine residuals, TTHM and HAA5 will be conducted at five separate representative points as determined in conjunction with distribution system analysis and FDEP. These samples will be conducted weekly and reduced to monthly once TTHM and HAA5 levels have been determined to be in control.

Once the weekly sampling results consistently show the TTHM and HAA5 levels have been stabilized below the MCL for a period of 4 consecutive samples, Pluris staff will then begin monthly

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sampling. After four consecutive monthly samples remain below the MCL, Pluris will resume standard compliance sampling.

- Pluris along with FDEP representatives will amend the current IDSE sampling plan to include a more representative cross section for future sampling. Pluris will conduct compliance sampling for TTHMs and HAA5s each quarter for a minimum of four quarters to demonstrate ongoing compliance with TTHM and HAA5 levels.

- Pluris purchased and installed six automatic flushing devices on May 26th, 2016. The flushing devices have been strategically placed throughout the distribution system to maximize water age reduction. The hydraulic distribution model was used to identify water flow in the distribution system in two ways – using the current flow patterns and for future flow patterns once the new Wedgefield K-8 school opens. When the Wedgefield K-8 school water main piping is put into operation, the flushing devices will be re-located to the areas identified to maximize water age reduction. This effort will be coordinated with the TTHM/HAA formation potential testing to create a flushing program that will keep the water age as low as possible while conserving as much water as possible to preserve this important natural resource. Steve Romano with Kimley-Horn has been tasked with performing this hydraulic modeling and assisting Pluris staff to develop flushing strategies to achieve these goals.

- Pluris has purchased and installed, at the water treatment plant, a flow paced chlorination system managed by the onsite SCADA system on May 26th, 2016. This is expected to efficiently inject, on a continual flow demand basis, proper amounts of chlorine to better control point of entry and remote chlorine residuals. In addition, Pluris staff will conduct multiple and thorough remote chlorine residual readings to assure proper chlorine residuals throughout the distribution system.

- Pluris in cooperation with the Wedgefield Home Owners Association President, Mike Nolan and Steve Romano have held two public meetings to date with interested customers to inform and provide facts on the status of the ongoing evaluation of the TTHM & HAA5 issue. In addition, a blast email information piece was sent out to Wedgefield residents. Additional meetings will be held accordingly. Pluris will continue to inform customers on an ongoing basis by holding public meetings, emailing and bill inserts.

- Pluris will submit to FDEP monthly updates on progress with the terms of this POA.

6-9-2016

Joseph M. Kuhns Pluris Wedgefield, Inc.

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