Quafisi, Dimitri

From: Monroe, Jill <Jill.Monroe@dep.nj.gov>
Sent: Friday, June 12, 2020 4:13 PM
To: Quafisi, Dimitri
Cc: Robert Hare P. E. (rhare@racertrust.org); Putz, Daniel; Murphy, Amy
Subject: Re: RACER - Ewing NJ PBR Extension Request

The September 26, 2019 permit by rule discharge authorization extension and modification request as described in the June 5, 2020 email proposal and attachments, and with the June 12, 2020 email agreement to include pH as a parameter in the Discharge Related CEA and evaluated in discharge and/or performance monitoring data, is approved.

Please let me know if you have any questions.

Thank you, Jill Monroe

BGWPA
SRWMP-DETFS
NJDEP
the agreed inclusion of pH in the discharge related CEA.

From: Quafisi, Dimitri <DQuafisi@haleyaldrich.com>
Sent: Friday, June 12, 2020 3:35 PM
To: Monroe, Jill <Jill.Monroe@dep.nj.gov>
Cc: Robert Hare P. E. (rhare@racertrust.org) <rhare@racertrust.org>; Putz, Daniel <DPutz@haleyaldrich.com>; Murphy, Amy <amurphy@haleyaldrich.com>
Subject: [EXTERNAL] RE: RACER - Ewing NJ PBR Extension Request

Hello Jill,

Thank you for your response below and the call to discuss my questions today. We agree with the addition of pH to table 3 of the approved PBR which lists the constituents included in the discharge CEA. We will continue to monitor pH as part of the field parameters during sampling activities and will note any changes in values. Please let me know if you have any additional questions or concerns regarding the PBR modification/extension.

Thanks,

Dimitri Quafisi P.G. (PA)
Technical Specialist - Geologist

Haley & Aldrich, Inc.
6500 Rockside Road | Suite 200
Independence, OH 44131

T: (216) 706.1309
C: (937) 470.2292

From: Monroe, Jill <Jill.Monroe@dep.nj.gov>
Sent: Friday, June 12, 2020 9:45 AM
To: Quafisi, Dimitri <DQuafisi@haleyaldrich.com>
Cc: Robert Hare P. E. (rhare@racertrust.org) <rhare@racertrust.org>; Putz, Daniel <DPutz@haleyaldrich.com>; Murphy, Amy <AMurphy@haleyaldrich.com>
Subject: Re: RACER - Ewing NJ PBR Extension Request

CAUTION: External Email

Good Morning,

BGWPA requests that pH be added to the discharge related CEA based on the addition of sodium bicarbonate to the discharge media. This addition may cause exceedance of GWQS for the Class IIA pH range in the treatment area as a result of the discharge.

After receipt of that addition, or concurrence that it is not needed, BGWPA will be able to approve the extension and modification of the September 26, 2019 permit by rule discharge authorization as described in the June 5, 2020 email proposal and it's attachments.

Please let me know if you have any questions.

Thank you, Jill Monroe

BGWPA
SRWMP-DETFS
NJDEP

From: Quafisi, Dimitri <DQuafisi@haleyaldrich.com>
Sent: Friday, June 5, 2020 3:04 PM
To: Monroe, Jill <Jill.Monroe@dep.nj.gov>
Cc: Robert Hare P. E. (rhare@racertrust.org) <rhare@racertrust.org>; Putz, Daniel <DPutz@haleyaldrich.com>; Murphy, Amy <amurphy@haleyaldrich.com>
Subject: [EXTERNAL] RACER - Ewing NJ PBR Extension Request

Hello Jill,

As we discussed on May 15th, 2020, RACER would like to request an extension to our current permit by rule (PBR) which was approved on September 26th, 2019 (PBR and approval attached). This extension would be for up to a three month period planned to begin during the middle to end of July 2020. During this time period, we will recirculate the system and add additional substrate to the aquifer within the RW-207 to RW-208 target area. The current approved PBR provided for injection of up to 100,000 pounds of substrate, of which approximately 22,000 pounds of substrate have been injected prior to shutting the system down for the winter last year due to freezing temperatures. In addition to substrate, the current PBR includes the option to inject as much as 300 liters of bioaugmentation, of which 10 liters were injected during the recirculation efforts in October 2019. The modification to the current PBR includes the following changes:

- Extend the current PBR timeframe to cover up to 2 additional months of recirculation and substrate addition. This time will begin when recirculation begins, which is tentatively scheduled for the middle to end of July.

- During this event, it is anticipated that 28,000 pounds of substrate will be injected. Additional injection of substrate will cumulatively be less than the 100,000 pounds of substrate in the current PBR, so a modification for mass of substrate will not be necessary.
- During this event, it is anticipated that 30 liters of bioaugmentation will be injected along with the carbon substrate. This additional injection in conjunction with the previously injected bioaugmentation will not exceed the previously approved 300 liters.
- In addition to substrate, during this round of injections the addition of methane inhibitor is requested to aid in focusing the use of the carbon for TCE degradation. The methane inhibitor will be a vendor-proprietary blend of red yeast rice extracts and other compounds such as essential oils. The anticipated amount of methane inhibitor will be 1,680 pounds, or approximately 6% of the remedial amendment.
- To maintain a pH range suitable for dechlorination activities, a buffer solution will be included with the substrate injection. The buffer solution will consist of 550 pounds of a sodium bicarbonate buffer.

During this recirculation activity, water levels will be monitored in the nearby monitoring well network. While we expect water level elevation changes in the pilot study area, should an increase in water level result in head reversal from the current natural flow conditions, the system will be stopped and reassessed to determine how the pumping influence has affected the aquifer. This was not observed during the October recirculation effort and it is not anticipated during this event. As part of the existing PBR, two additional monitoring events are scheduled for this year one in July and one in October (table attached). To capture the effects of this recirculation and substrate boost, the July groundwater sampling event will be postponed to August to allow time for degradation to occur.

Upon receiving approval for this PBR modification, field activities will be scheduled for implementation. Please let me know if you have any questions or concerns.

Thanks,

Dimitri Quafisi P.G. (PA)
Technical Specialist - Geologist

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