



State of New Jersey

DEPARTMENT OF ENVIRONMENTAL PROTECTION

Site Remediation Waste Management Program
Bureau of Ground Water Pollution Abatement

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Commissioner

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Lt. Governor

May 21, 2020

Jeremy Fultz

Retail/Service Station Operations, a series of Evergreen Resources Group, LLC
2 Righter Parkway, Suite 120
Wilmington, Delaware 19803

Re: Discharge to Ground Water Authorization
Former Sunoco Service Station #0006-9898
49 South Avenue West and Lincoln Avenue West
Cranford, Union County
Program Interest Number: 016450
Subject Item ID: DGWD0000034034

Dear Mr. Fultz,

This New Jersey Pollutant Discharge Elimination System/Discharge to Ground Water (NJPDES/DGW) authorization is hereby issued under the authority of the New Jersey Water Pollution Control Act, N.J.S.A. 58:10A-1 et seq. and the implementing regulations, N.J.A.C. 7:14A-1 et seq. N.J.A.C. 7:14A-7.5 authorizes the discharge described below which will allow the implementation of in-situ injections of an activated carbon solution and electron acceptors for the remediation of dissolved contaminants in ground water at the above referenced site.

Pursuant to N.J.A.C. 7:14A-22.4(b)5, a Treatment Works Approval is not required for discharges to ground water authorized pursuant to N.J.A.C. 7:14A-7.5 or 8.5 and a licensed operator is not required pursuant to N.J.A.C. 7:10A-1.10(c)1. The discharge approved through this authorization will be to injection points described below. The discharge shall be conducted as proposed in the April 17, 2020 Discharge to Groundwater Permit-by-Rule Authorization Request, received on April 30, 2020. The document was submitted on your behalf by LSRP David Jones of Envirotrac, Ltd.

Consistent with N.J.A.C. 7:14A-7.5(b) and N.J.A.C. 7:26E-5.6(c), the duration of the approved discharge to ground water is not to exceed 180 calendar days. Be advised that the time-period for the discharge begins on the day the discharge first occurs, not on the date this discharge approval letter is issued or received.

The Department shall be notified of the date when the discharge begins as instructed in section IV of this letter. Only the discharge described in Section I below is authorized. The discharge shall be

conducted in conformance with the DGW proposal and shall comply with the requirements of Sections II, III, and IV, farther below.

Regardless of whether the approved discharge is ever initiated and regardless of the date when the discharge first occurs, pursuant to N.J.A.C. 7:14A-2.7 NJDEP authorization for the permittee to initiate and conduct this approved discharge does not extend beyond five years from the date of this letter. If the approved discharge has not been initiated or completed after five years from the date on this letter, a new discharge proposal must be submitted and a new authorization letter obtained if the permittee still intends to initiate or conduct any type of discharge into or onto the ground that is subject to N.J.A.C. 7:14A-7.5(b) and N.J.A.C. 7:26E-5.6(c).

I. DISCHARGE DESCRIPTION

The authorized discharge is the in-situ injections of Regenesis PetroFix and Regenesis PetroFix Electron Acceptor Blend. PetroFix is a dual functioning activated carbon solution consisting of micron-scale activated carbon and calcium sulfate dihydrate. PetroFix Electron Acceptor Blend consists of ammonium sulfate and sodium nitrate. When mixed together, these products remove petroleum hydrocarbons from the dissolved phase by desorbing them to activated carbon particles and then stimulating biodegradation through the electron acceptors.

The treatment area is approximately 700 ft² near the western corner of the site where monitoring wells MW-2. Up to twenty-four (24) injection points will be installed to deliver the remediation products. The vertical treatment interval is from 12 to 22 feet below ground surface (bgs). A total of 125 gallons of concentrated PetroFix, 60 pounds of PetroFix Electron Acceptor Blend and 2,350 gallons of potable water will be injected.

The authorized discharges are designed to remediate dissolved petroleum hydrocarbons that have contaminated site ground water.

II. SYSTEM OPERATION AND MONITORING

The area of discharge shall be monitored for evidence of malfunction. Said evidence shall include, but is not limited to: breakout, wet areas, ponding, odors, and elevated PID readings in the nearby work area or building.

The discharge shall not cause any of the following negative impacts: adversely impact the behavior of free product or the plume; adversely impact a water supply well or have a long term adverse impact on ground water quality; create an unpermitted discharge to any surface water of the State or violation of Surface Water Quality Standards; create a persistent standing, ponded or surface-flowing fluid condition, or cause adverse vapor intrusion to occur.

Pursuant N.J.A.C. 7:14A-6.2(a)5 and 11, if free product in ground water, vapors or odors in any building, or any malfunction resulting in a potential impact to a receptor are detected and are a result of the discharge authorized by this approval, the discharger will immediately: (1) cease the discharge or make necessary adjustments to the discharge rate or system operation; and (2) repair or mitigate any negative impacts.

After completion of the discharge, the property should be returned to its previous condition, or as agreed to with property owner if the permittee is not the property owner. All UIC-Class V injection wells shall be properly abandoned in accordance with N.J.A.C. 7:14A-8.16(d)1 as applicable. The permittee will comply with any applicable provisions of the Additional Conditions Applicable to Class I, II, III and V UIC Permits of the NJPDES regulations, N.J.A.C. 7:14A-8.9, et seq. when UIC-Class V injection well units (i.e., injection points) are used.

III. GROUND WATER MONITORING REQUIREMENTS

The Permittee shall perform the following ground water sampling as was specified in the DGW proposal (including all addendums and modifications) for the purpose of complying with this Discharge to Ground Water Permit-By-Rule authorization.

Baseline Sampling:

Monitoring wells MW-2, MW-5, MW-8 and MW-13 will be sampled and analyzed for BTEX, TCL VOC TICs, sodium, nitrate, ammonia and sulfate. All wells will also be sampled and analyzed for field parameters (oxidation reduction potential, dissolved oxygen, pH, specific conductance, temperature).

Post Injection Sampling:

Monitoring wells MW-2, MW-5, MW-8 and MW-13 will be sampled 60 days, 180 days and 360 days after injections are completed. Analytical parameters are BTEX, TCL VOC TICs, sodium, nitrate, ammonia and sulfate. All wells will also be sampled and analyzed for field parameters (oxidation reduction potential, dissolved oxygen, pH, specific conductance, temperature).

Pursuant to the Tech Regs, the Permittee shall measure ground water elevations at all sampled wells upon each sampling event and shall construct ground water flow maps with the water elevation data to document the direction of ground water flow. Any product observed, including sheen, shall be documented. If measurable product is observed, injections shall be suspended until all of the recoverable product is removed from the treatment area.

All sampling shall be performed as proposed and consistent with the methods specified in the most current edition of the Department's Field Sampling Procedures Manual. All samples shall be analyzed by a New Jersey Certified Laboratory certified for the methods being used to analyze groundwater samples. Analytical method MDLs shall be less than or equal to the ground water quality standards (N.J.A.C. 7:9C-1.7). Parameters determined in the field (pH, specific conductance, dissolved oxygen, temperature) are to be measured by a certified contractor or laboratory.

Comparison to the vapor intrusion (VI) screening levels is necessary in order to monitor whether or not the discharge activities have the potential to cause VI issues within any nearby structures by means of adversely impacting the behavior of the ground-water contaminants (e.g., unexpected contaminant movement). If there are any exceedances of the VI screening levels caused by the authorized discharge, a VI evaluation shall be conducted of any potentially impacted structures.

Compliance with N.J.A.C. 7:26E-5.7(b) requires that the Permittee satisfy the post-injection ground water monitoring requirements that are set forth in this letter before applying for any Remedial Action Permit for Ground Water. If a Remedial Action Permit application is submitted before the required ground water sampling has been completed, the application will be denied.

Additionally, contingency compliance ground water sampling is required if ground water sampling results indicate that ground water quality criteria (GWQC) have been contravened because of the authorized discharge (e.g., the GWQC for sodium is exceeded as a result of sodium persulfate injection, or the GWQC for iron is exceeded as a result of pH change), or that ground water quality has not returned to baseline conditions (when baseline concentrations are greater than GWQC) in the expected timeframe. Ground water sampling must continue until it can be demonstrated that the GWQC have been met or until the ground water quality has returned to baseline conditions. To demonstrate either of these conditions, a minimum of two consecutive ground water sampling events spaced far enough apart to account for seasonal fluctuations, must be conducted.

Furthermore, if the Permittee is planning to apply for a Ground Water Remedial Action Permit for Natural Attenuation in the future, and exceedances of the GWQC that are due to the discharge remain, those exceedances must be treated similarly to any other site related contaminants (i.e., a sufficient number of samples are required and a decreasing concentration trend must be evident) consistent with the Department's Remedial Action Permits for Ground Water Guidance.

IV. REPORTING REQUIREMENTS AND INFORMATION SUBMITTALS

All information, including a detailed summary of the discharge and ground water sampling results, as well as the QA/QC package specified at N.J.A.C. 7:26E-2.1(a)15 shall be submitted with the next key document due following completion of the discharge monitoring program.

Consistent with N.J.A.C. 7:14A-2.11(a) and 6.2(a)14, within 14 days after initiation of the discharge, notify the Department of the "start date" of the discharge. To report this date, send an email to daryl.clark@dep.nj.gov stating the start date of the discharge.

Consistent with N.J.A.C. 7:14A-2.11(a) and 6.2(a)14, any malfunctions or non-compliance should be reported by telephone within 24 hours to the Bureau of Ground Water Pollution Abatement at (609) 292-8427 and in writing within seven days. Written submissions must include the facility name and PI Number. Failure to report this information is a violation of N.J.A.C. 7:14A and the permit-by-rule.

If you have any questions or concerns associated with this Discharge Authorization, please contact Daryl Clark at daryl.clark@dep.nj.gov or (609) 292-1955.

Sincerely,



Mary Anne Kuserk, Chief
Bureau of Ground Water Pollution Abatement

Attachment

c: David Jones, LSRP, Envirotrac, Ltd.

