



February 14, 2019

Honorable Mayor and Council
Borough of Upper Saddle River
376 West Saddle River Road
Upper Saddle River, N.J. 07458

Re: Summary of Surface Water Sampling
Borough of Upper Saddle River
Bergen County, New Jersey
Our File No. USR-470

Dear Mayor Minichetti and Members of Council,

Please allow this correspondence to summarize a Borough initiative to conduct surface water sampling for arsenic on several watercourses in the Borough. The sampling was performed following remediation activities on the former Apple Ridge Golf Course. The former use of this property as an apple orchard resulted in a need to remediate concentrations of lead and arsenic above allowable limits prior to redeveloping the site for single-family housing. The remediation was conducted under the direction of a Licensed Site Remediation Professional (LSRP) who then submitted a Remedial Action Report to the NJDEP.

NJDEP representatives issued multiple emails during 2018 concluding the remediation work was successfully completed as of December 22, 2017.

The remediation and redevelopment of this site involved extensive disturbance and soil movement. The majority of the existing vegetation was removed in connection with the remediation and there was significant soil movement associated with both the remediation and installation of site improvements. In addition to these disturbances, NJDEP permits for the project required the removal of multiple dams and structures along the Pleasant Brook in order to restore this watercourse to its natural condition. The construction activities associated with the site improvements and restoration of the Pleasant Brook are in partial winter shutdown and will reactivate in the spring.

The redevelopment of this tract resulted in multiple instances of discolored water exiting the property via the Pleasant Brook during 2018. In response to instances of muddy water exiting the property, municipal, county and state representatives conducted numerous site inspections. These inspections resulted in directives to the developer to install additional water quality measures until permanent measures are established. The measures have reduced, but have not eliminated, instances of discolored water exiting the site during rainstorms.

NJDEP representatives involved in the initial remediation activities on this property were consulted to confirm the discolored water did not warrant further environmental study. These representatives advised the remediation concern was successfully terminated in 2017 and the only remaining concerns were of a land use nature relating to soil erosion and stabilization.

The Upper Saddle River Mayor and Council sought further assurances regarding water quality within the Pleasant Brook and instituted a Borough initiative to conduct surface water sampling in late 2018. Our office identified five (5) potential sampling locations within the Pleasant Brook and Saddle River. Two (2) of these locations were selected to establish background arsenic levels while the remaining three (3) locations were within the Pleasant Brook downstream of the Apple Ridge tract. The downstream Pleasant Brook locations were located at Meadowbrook Road, Lake Street and the confluence of the Pleasant Brook and the Saddle River. These locations are situated immediately, 0.8 miles and 1.6 miles downstream.

The sampling locations were reviewed with NJDEP representatives and trained technicians then sampled five locations for both total and dissolved arsenic. Total (unfiltered) samples include suspended particles while the dissolved samples are filtered prior to testing. Arsenic is a naturally occurring contaminant. Background sampling was conducted to distinguish between naturally occurring arsenic and identify potential impacts associated with the remediation work performed on the former Apple Ridge tract.

Sampling was performed on 10/16/18, 10/29/18 11/12/18 and 12/21/18. A sixth location was added during the 12/21/18 sampling round on Ripplewood Drive. Copies of the sampling results and a map depicting the six (6) sampling locations is attached for your reference.

The first round of sampling was not timed to coincide with any storm event. The sampling performed on the last three rounds was timed to coincide with high water conditions in order to secure arsenic concentrations during these periods.

We forwarded each round of the test results to the NJDEP as we received them from the laboratory. Each transmittal was accompanied by a request to advise if further measures were appropriate to confirm the remediation was successfully completed. In each instance we received written confirmation that the newly received results did not affect their prior position noting the remediation was successfully completed in 2017. In addition to commenting on the remediation, the NJDEP representatives noted the applicable standards to evaluate the sample results.

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At no point did our office either recommend a particular standard or reach a conclusion regarding the sampling results. The evaluation of these results was performed solely by NJDEP representatives. Our office reported their findings accordingly.

In late January, 2019 we contacted the Borough to discuss the sampling protocol. The last three rounds of sampling were performed during the high water flow periods. This methodology has provided a database for these periods but is not indicative of the average flow conditions. The Borough is amending the sampling protocol to sample on a specified date each month. This will allow the Borough to establish a database of the average conditions.

We will keep you informed of all future developments regarding this matter.

Very truly yours,

BOSWELL ENGINEERING



Kevin J. Boswell, P.E.
Borough Engineer

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