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November 25, 2020  
FILE NO. 03.0033554.60

Neal Personeus  
Office of Water Resources  
Rhode Island Department of Environmental Management  
235 Promenade Street  
Providence, Rhode Island

Re: RIPDES RIR101477 / WQC 16-171 Unanticipated Bypass Notification  
Fields Point Liquefaction Project  
642 Allens Avenue/121 Terminal Road  
Providence, Rhode Island

Dear Mr. Personeus:

We are providing this written notification of an unanticipated bypass of sediment and erosion controls at the Fields Point Liquefaction Project (FPLP) that occurred on the morning of Monday 11/23/2020. Per the requirements of Section V.P.2 of the Rhode Island Pollutant Discharge Elimination System (RIPDES) Construction General Permit (CGP), National Grid provided a verbal notification to RIDEM (within 24-hours) of the bypass on 11/24/2020 at 9:30 am.

GZA personnel performed a Soil Erosion and Sedimentation Control (SESC) inspection on Monday 11/23/2020 during a rain event. According to the NOAA weather observations for Providence, RI (available at <https://w1.weather.gov/data/obhistory/KPVD.html>), that rain event generated 1.37 inches of rain between 2:00 AM and 1:00 PM, which triggered the SESC inspection. The NOAA data also indicate that the most intense period of the storm event was between 9:00 am and 12:00 pm (0.95 inches over 3 hours).

GZA first discovered the unanticipated bypass at approximately 10:30 am on 11/23/2020 during the SESC inspection. The unanticipated bypass occurred on the northern boundary of the project area. The perimeter controls along this northern boundary consist of filtrex soxx placed on both sides (north and south sides) of the access road that runs along the northern boundary of the project area. During the time of the inspection the filtrex soxx were observed to be in good condition. The bypass consisted of turbid water that was able to flow underneath the filtrex soxx due to a preferential pathway that likely developed from a temporary electrical conduit trench running across the access road (refer to the photos below). This turbid water was able to reach the cove area, resulting in a turbid plume. The plume was contained within the cove area by the existing containment boom and did not appear to impact the water beyond the boom (refer to the photo below).



*Photo 1: Unanticipated bypass of the perimeter controls on the northern boundary of the Site.*



*Photo 2: Turbid plume contained within the existing boom in the cove area north of the Project Area.*

Upon discovery, GZA notified National Grid and Kiewit of the issue and requested that additional controls be installed. Kiewit responded by adding two (2) additional rows of filtrex soxx along the northern perimeter, which was completed by 11:00 am (refer to photo below). GZA observed that once the two additional rows of filtrex soxx were installed, the volume of stormwater runoff leaving the site was significantly reduced and the clarity of the runoff was significantly improved. At that point, the project was placed under a safety stand-down due to lightening in the area.





*Photo 3: Additional filtrexx soxx installed in response to the unanticipated bypass.*

Representatives from National Grid, GZA and Kiewit met the following morning (11/24/2020) to further investigate the cause of the bypass and discuss additional response actions. The project team determined that the bypass was most likely caused by the following factors:

- Protective steel plates were placed over the temporary electrical conduit trench running across the access road. The row of filtrexx soxx on the southern side of the access road was placed on top of the steel plates, which allowed sediment laden stormwater runoff to flow underneath the steel plates and bypass the row of filtrexx soxx on the southern side of the access road.
- A 5-foot section of filtrexx soxx along the northern side of the access road had been placed over crushed stone, which was used to stabilize the surface of the temporary electrical conduit trench. The crushed stone underneath this section of filtrexx soxx along the northern side of the access road allowed a preferential pathway underneath the filtrexx soxx.
- A significant grade change in the area immediately south of where the unanticipated bypass occurred over the past several months. This grade change resulted in steeper slopes that temporarily direct overland stormwater flow towards the area of the temporary electrical trench. The steep slopes will be mitigated during future construction phases and overland storm water flow will be directed to the sand filter that will be built as part of the project.

In response to these observations, on 11/24/2020 Kiewit added a second row of filtrexx soxx on the north side of the access road, refer to photo below. On 11/25/2020 Kiewit installed additional filtrexx soxx and filter fabric along the southern side of the access road, and specifically south of the steel plates, to prevent stormwater runoff from flowing underneath the steel plates, refer to photos below. A small trench (6-inches deep, 1-foot wide, and 15-feet long) was excavated south of the steel plates, the trench was lined with filter fabric and a 15-foot section of filtrexx soxx was placed in the trench over the filter fabric. Also, on 11/25/2020, Kiewit spread crushed stone over select areas south of the electrical conduit trench within the Project Area to stabilize soils. Lastly, Kiewit will add crushed stone to the driving paths



in the project area immediately south of where the bypass occurred to stabilize soils and reduce stormwater runoff velocity. Kiewit will also install a second layer of filtrex soxx on top of the 15-foot section placed in the trench south of the steel plates and will extend the filtrex soxx on the south side of the access road.



*Photo 4: Second row of filtrex soxx on the north side of the access road*



*Photo 5: Trench south of steel plates with filter fabric and filtrex soxx, crushed stone added to the area south of the electrical conduit trench.*





*Photo 6: Filtrexx soxx along the south side of the access road to be extended.*

Please let us know if you have any questions or require any additional information.

Very truly yours,

GZA GEOENVIRONMENTAL, INC.

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