

March 30, 2018

National Grid LNG, LLC  
c/o Mr. William Howard  
40 Sylvan Road  
Waltham, MA 02451

**RE: Request for Additional Information  
Proposed National Grid LNG Facility; 642 Allens Avenue, Providence  
Plat 56/Lots 5, 316 and 317; Plat 101/Lot 1  
WQC File No. 16-171; RIPDES RIR101477**

Dear Mr. Howard

The RIDEM-Office of Water Resources (OWR) has reviewed the above-referenced application for a Water Quality Certificate (WQC) and Rhode Island Pollution Discharge Elimination System (RIPDES) Permit for compliance with the State Water Quality Regulations (WQR) and RIPDES Regulations, respectively.

After a review of the submission, as well as a review of comments received from the public during the Public Notice period, in accordance with Rule 15 C. (1) of the WQR, the Department is requiring that you provide a response to the following comments and a submittal of the required amended application materials or supporting analysis:

- (1) Please ensure that the submitted stormwater management analysis, calculations and the Stormwater Management Plan are stamped by a R.I. professional engineer. Please describe how the calculations of percent (%) impervious were derived to compute the overall % impervious of the site relative to the definition of Redevelopment in the Rhode Island Stormwater Design and Installation Standards Manual (RISDISM). Please indicate the accuracy of the methods used and if the data was field verified.
- (2) Please provide a stormwater analysis of the proposed design for the 1.2” 24-hour Type III storm event (water quality storm) using the modified curve number method found in Section 3.3.3.2 of the RISDISM. Please also provide an analysis for the 10-year storm event.
- (3) Please include an existing and proposed condition sub-watershed map following the guidance in Appendix K of the RISDISM. Please clearly depict all new impervious areas. Also, clearly depict and separately identify all existing impervious cover to be redeveloped. Please note that all areas of gravel and crushed stone are to be considered impervious and require water quality treatment based on the RISDISM. Please depict sufficient grading detail to substantiate flow directions.

Mr. William Howard  
National Grid/LNG Facility  
WQC 16-171; RIPDES RIR101477  
March 30, 2018

- (4) Provide water quality treatment for all areas of new gravel and crushed stone cover. If any areas of crushed stone cover can be demonstrated to be low traffic areas which will not be subject to long-term compaction by vehicles, provide a technical justification that will support not providing these areas with the required water quality treatment.
- (5) Please explain why the proposed impervious area within drainage areas 12 and 2 are not directed to the proposed water quality management practice.
- (6) Please provide a drainage diagram (node diagram) as part of the submitted drainage analysis. Please include the flow split node in the diagram.
- (7) Please refer to Appendix H.3: Water Quality Goals and Pollutant Loading Analysis Guidance for Discharges to Impaired Waters, “Stormwater Compensation Method”. The receiving waters are mapped as having impairments for fecal coliform, dissolved oxygen, and total nitrogen. The proposed design involves a proposed sand filter that will be lined and under-drained, with a discharge to the receiving waters.
  - To adequately address fecal coliform impacts in instances where total infiltration of the water quality volume associated with new impervious cover is not being proposed, the “Stormwater Compensation Method” calls for treatment of 100% of the new or increased impervious cover plus a compensatory treatment on a 1:1 basis. Therefore, to adequately treat for fecal coliform, the proposed sand filter must be sized for a water quality volume of 343 cf to account for the redevelopment area, 4,538 cf to account for the new impervious area, plus an additional 4,538 cf to account for a 1:1 compensation area. Therefore, the required design water quality volume for treatment of runoff to the fecal coliform-impaired waters would be 9,419 cubic feet (cf).
  - To adequately address total nitrogen impacts in instances where total infiltration of the water quality volume associated with new impervious cover is not being proposed, the “Stormwater Compensation Method” calls for treatment of 100% of the new or increased impervious cover plus a compensatory treatment on a 1.5:1 basis. Therefore, to adequately treat for total nitrogen, the proposed sand filter must be sized for a water quality volume of 343 cf to account for the redevelopment area, 4,538 cf to account for the new impervious area, plus an additional 6,807 cf to account for a 1.5:1 compensation area. Therefore, the required design water quality volume for treatment of runoff to the total nitrogen-impaired waters would be 11,688 cf.
- (8) Address the elevation of the proposed outfall and how the drainage of the system is impacted by tidal influences, including impacts to roadway drainage and function of the sand filter with consideration of conveyance of large storms (e.g. 10-year and greater), the precipitation data used in the modeling, evaluation of various peak tides and how future considerations for sea level rise may or may not have been accounted for. Hydraulic Model outputs submitted must indicate the hydraulic capacity of the system under large storm scenarios across the range of outfall/tidal influences.

Mr. William Howard  
National Grid/LNG Facility  
WQC 16-171; RIPDES RIR101477  
March 30, 2018

- (9) With respect to the submitted long-term Operation and Maintenance (O&M) Plan, please provide an 8.5" x 11" or 11" x 17" (no larger) map that depicts the location of all the proposed stormwater practices to be maintained.
- (10) With respect to the submitted long-term O&M Plan, please revise the document to include mandatory language (i.e., use "shall" vs. "should") for all required elements of the O & M Plan.
- (11) With respect to the submitted long-term O&M Plan, please include a section on long-term pollution prevention items. Please refer to Appendix G of the RISDISM for guidance with preparation of this section. Please incorporate project-specific items only (e.g. identify all waste products generated as part of process proposed such as tank bottoms, condensate, truck fueling or cleaning, by-products of the liquefaction process). Identify all storage of hazardous or waste materials, and all wastewaters generated by on-site activities.
- (12) Please identify how the measures in the proposed soil erosion and sediment control plan will ensure that disturbed areas will be phased and minimized to prevent exposure of disturbed soils to precipitation, and how measures will be implemented during intense rain events to ensure sediment is not discharged off-site or to a Water of the State. Please provide an updated SESC Plan. The current plan does not propose phasing of the amount of disturbed area and that the project will be completed within 6 months. However, given the project is directly adjacent to the River and will be managing contaminated soils under the RI DEM Office of Waste Management (OWM) approved Short Term Response Action Plan (STRAP), the Department is requiring that the phasing and stabilization plan is revisited to address a phasing sequence that minimizes the area disturbed and sequences temporary or permanent stabilization prior to disturbing more area. In addition, consideration should be given to the need for temporary sediment traps or basins for control of volumes and velocities of larger storms that may overwhelm simple perimeter sediment controls. Please provide a better description of how the contractor will implement Section 2.5 of the SESC Plan. Please explain why temporary erosion controls will not be utilized in areas in the interim where the site will be covered with asphalt or crushed stone.
- (13) The SESC plan indicates that on-site catch basins will be protected with silt sacks during construction. For catch basins that serve a significant drainage area, the plan preparer should consider raising the existing structures during construction to ensure stormwater from the open construction or un stabilized areas does not enter the drainage system. In addition, the Department recommends external inlet protection techniques as they are easier to maintain and are less prone to blinding, preventing flow from entering the system to prevent ponding/flooding. All storm drains that receive drainage from this site and roadways within close proximity to the construction site should be protected by an inlet protection device, including storm drains in gravel areas. This measure shall be used where the drainage area to an inlet is disturbed and is not to be used in place of sediment trapping devices. Please specifically refer to and reference the RI SESC Handbook Section 6 part 1 pages 1-8 for practice selection criteria.

Mr. William Howard  
National Grid/LNG Facility  
WQC 16-171; RIPDES RIR101477  
March 30, 2018

- (14) Section 2.7 of the SESC Plan indicates that during construction a sediment forebay will be used and will function as a sediment trap. Please provide the calculations for sizing this practice and its effectiveness at removing sediment during construction, as well as and how the outlet or discharge will be protected and routed to prevent the discharge of sediment to a Water of the State.
- (15) Please provide a narrative discussion and associated engineering calculations to indicate the outfall is designed to prevent erosive flows at the point of discharge.
- (16) Section 2.9 of the SESC Plan speaks to stockpile containment. Please revise as necessary to be consistent with and with proper references to the approved STRAP that addresses the management of contaminated soil storage and disposal practices.
- (17) Section 3.2 of the SESC Plan discusses construction dewatering. It is our understanding that all contaminated groundwater or construction dewatering will be containerized for off-site transport and disposal. Please revise the SESC plan accordingly. Please also modify Section 3.6 of the SESC Plan accordingly.
- (18) Sheet 6 of 14 entitled Erosion and Sedimentation Plan should be updated to include the following:
  1. Phasing and sequencing
  2. Where temporary or permanent erosion control blankets will be applied
  3. Areas where soil stockpiling will be allowed
  4. Areas where construction washout practices will be installed
- (19) Section 3.8 discusses methods of dust control. Please make a direct correlation to the phasing of the project and the amount of soil disturbed and not stabilized at any time. The SESC Plan and the construction plans should contain notes that when water is used for dust suppression, no runoff will be allowed to enter a water of the State or the drainage system that will continue to discharge to a water of the State.
- (20) Please complete Section 7 and submit with this re-submittal. Additional signatures may be submitted once the contractor/operator is selected and before any sub-contractors are brought on-site.
- (21) Please resubmit the following plan sheets at a scale no greater than 1" = 40' in order to conform with Appendix A requirements:
  1. Existing Sheet 2 of 14, existing Conditions Plan dated 3/27/17 (currently at 1" = 80').
  2. Proposed Final Conditions Drawing No. Figure 13 (currently at 1" = 50').
- (22) Predominant vegetation in pervious areas is not described on Sheet 2 of 14 nor within the report. Please provide this information as required by Appendix A.

Mr. William Howard  
National Grid/LNG Facility  
WQC 16-171; RIPDES RIR101477  
March 30, 2018

- (23) The Existing Conditions sheet(s) of the plan set does not identify any buffer zone(s) or mandated setbacks. Please update the plans to include all resource buffer and/or setback lines associated with any resources and/or regulations.

Please respond to the above in writing as well as making any changes to plans and/or reports as necessary. All correspondence or other information should reference WQC File #16-171. Should you have any questions or require additional information, please do not hesitate to contact me at (401) 222-4700 ext. 7610.

Sincerely,

Neal Personeus  
Senior Environmental Scientist/Project Manager  
Federal 401/State WQC Program  
Office of Water Resources

ec: Dave Reis, CRMC  
Taylor Bell, US ACOE  
Nick Pisani, RIDEM OWR  
Joe Martella, RIDEM OWM  
Eric Beck, RIDEM OWR  
Susan Forcier, RIDEM OLS  
Igor Runge, GZA