The State of New Hampshire
DEPARTMENT OF ENVIRONMENTAL SERVICES

Thomas S. Burack, Commissioner

October 25, 2013

Lutz Loegters
5440 Hydro Inc.
Project Manager
717 Atlantic Avenue
Boston, MA 02111

RE: Water Quality Status of the Ammonoosuc River for the Brooklyn Dam (P-13806) Hydropower FERC License Application

Dear Mr. Loegters:

The New Hampshire Department of Environmental Services (DES) has reviewed the Water Quality Monitoring: Summer 2013 Final Report provided by Gomez and Sullivan Engineers (GSE).

The purpose of this letter is to provide you with our assessment of the data and information received from GSE in response to our letter of April 16, 2013 and our conclusions as to the current status of water quality for the Ammonoosuc River in the vicinity of the Brooklyn Dam.

GSE collected water quality data for dissolved oxygen and water temperature upstream and downstream of the Brooklyn Dam. The two monitoring locations included one site approximately 400 feet upstream of the dam at the deepest section of the impoundment (02D-UAM) and another site 1,500 feet upstream of the Route 3/Main St Bridge and downstream of the dam at the deepest section of the river (02B-UAM). These two monitoring locations were monitored continuously for a 10 day period in August 2013 for water temperature and dissolved oxygen using multi-parameter dataloggers. DES specified that the multi-parameter continuous water quality data should be collected under critical low flow/higher water temperature conditions. The conditions during the monitoring were below the target discharge of 148 cfs (3X7Q10) as outlined by DES in the letter of April 16, 2013. USGS Stream Gage 01130000 Upper Ammonoosuc River was used to determine when flows were at an appropriate level for the dataloggers to be deployed.

DES has assessed the water quality data collected in 2013, and based on this assessment concludes that the water quality in the impoundment and downstream section of the Ammonoosuc River, under the dam's current operating conditions, does not appear to be violating existing water quality criteria or thresholds for dissolved oxygen. In the April 16, 2013 letter DES provided the assessment status for the parameters of concern for the reaches of the Ammonoosuc River upstream and downstream of the Brooklyn Dam. Table 1 provides an update to the current assessment status of the river reaches in question for the parameters collected this summer. Our assessments were based on the methodology described in the DES Consolidated Assessment and Listing Methodology (CALM)[1]. This information will be used in the next Section 305(b)/303(d) Water Quality Assessment report which is expected to be issued by DES in early 2014. Please note that the assessment status listed in Table 1 could change if water quality criteria or thresholds change and/or if additional data collected between now and the 2014 report indicate water quality violations. For example, data collected at lower flows and/or higher temperatures might result in a different assessment.

[1] 2012 Section 305(b) and 303(d) Consolidated Assessment and Listing Methodology. New Hampshire Department of Environmental Services. NHDES-R-WD-10-3. February, 2010. Available at http://des.nh.gov/organization/divisions/water/wmb/swqa/documents/2010calm.pdf.

Table 1. 2012 Assessment Status for Water Quality Monitoring Parameters – Brooklyn Dam

Assessment Unit	Location	Parameter	2012 305(b) Assessment	Projected 2014 Assessment Status Based on 2013 Sampling
NHIMP801010707-03	Brooklyn Dam Impoundment	Dissolved Oxygen (mg/L)	No Data	Fully Supporting
		Dissolved Oxygen (% Saturation)	No Data	Fully Supporting
		Water Temperature	No Data Not Applicable[A]	No Numeric Criteria[A]
NHIMP801010707-04	Downstream of Brooklyn Dam (Weston Dam Impoundment)	Dissolved Oxygen (mg/L)	No Data	Fully Supporting
		Dissolved Oxygen (% Saturation)	No Data	Fully Supporting
		Water Temperature	No Data Not Applicable[A]	No Numeric Criteria[A]

[A] Although there is currently no numerical water quality criteria for water temperature, NHDES is in the process of collecting biological and water temperature data that will contribute to the development of a procedure for assessing rivers and stream based on water temperature and its corresponding impact to the biological integrity of the waterbody.

In summary, based on the current operation of the facility, current water quality standards, and the water quality data collected in 2013 it appears the Ammonoosuc River immediately upstream and downstream of the Brooklyn Dam is attaining water quality standards for dissolved oxygen at this time. As previously noted, however, this assessment could change in the future should a change in operation, water quality criteria or thresholds and/or new data indicate water quality violations.

In addition to dissolved oxygen, please note that there are other potential water quality related issues typically associated with hydropower projects. These include, but are not limited to, impoundment fluctuations, minimum bypass flows and fish passage. These issues will also need to be addressed to obtain 401 Water Quality Certification.

Please continue to consult with DES, other State and Federal Agencies during the FERC licensing process for the Brooklyn Dam to ensure that all pertinent issues have been addressed.

Please do not hesitate to contact me if you have any further questions.

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cc: John Ramer FERC
Melissa Grader (US Fish and Wildlife Service)
Carol Henderson (NH Fish and Game)