**Questions Regarding Potential Use of BWD Plant 4 Treatment System for Treatment of RW-21 Area Groundwater**

**December 9, 2019**

**Purpose and Understanding**

The Town of Oyster Bay (TOB) has requested that Northrop Grumman consider using existing BWD Plant 4 to treat groundwater associated with the RW-21 Project Area remedy. This consideration is premised on Northrop Grumman's utilization of three existing remedial wells (RW-20, RW-21, and RW-22) specifically installed for the extraction of RW-21 Project Area groundwater and its existing South Recharge Basins for the recharge of treated groundwater. Currently, the RW-21 treatment building is proposed to be approximately 14,400 square feet and would be situated on a Northrop Grumman-owned parcel, adjacent to the South Recharge Basins. The parcel is approximately one acre in size to account for code requirements (including parking and fire department equipment access requirements). The proposed RW-21 Treatment Plant is being designed to treat 2,400 gallons per minute on a continuous basis. Primary constituents of concern to be addressed by the groundwater treatment equipment are volatile organic compounds (including 1,4-Dioxane), and iron.

Answers to the questions below are necessary in order to: (a) evaluate the technical feasibility of using BWD Plant 4 as the treatment system for RW-21 groundwater, and (b) compare the schedules to complete construction of the new on-site treatment plant versus use of BWD Plant 4 buildings, equipment and property.

1. **Concept:**
    i. Based on modeling and quantitative pre-design studies of nine existing proximal recharge basins, three proposed proximal locations for shallow or deep injection wells, and four proximal locations for proposed recharge basins or injection wells, Northrop Grumman's South Basins are the most viable option for the recharge of treated groundwater. Does BWD possess information or data that indicates otherwise?
    ii. Would BWD vacate the property and cease use of the treatment facility and the existing public supply wells located at BWD Plant 4 (Wells 4-1 and 4-2)?
    iii. What are BWD's plans for Plant 4 after the RW-21 remediation is concluded?
    iv. Does BWD intend to maintain a mothballed infrastructure in place and, if so, how would it maintain their mothballed infrastructure, specifically Supply Wells 4-1 and 4-2?
    v. Would Northrop Grumman be permitted to modify an on-site building(s) and either supplement or by-pass the current BWD treatment process to install Northrop Grumman's proposed treatment process for the treatment of RW-21 Area groundwater (i.e., AOP [via ozone and hydrogen peroxide], iron removal, and LPGAC)?
    vi. How would BWD guarantee isolation of Plant 4 from its potable water distribution system, when would that occur during this process, and how long would that process require to complete?
    vii. Would Northrop Grumman be allowed to operate, maintain and monitor the treatment plant and surrounding BWD Plant 4 property for its sole purpose of remediating RW-21 Area groundwater?
    viii. Who would be responsible for site control and security?

ix. If BWD does vacate the site, for potential Northrop Grumman use, will there be any remaining equipment in operation, and/or requiring period maintenance / inspection by BWD?

**2. Access/Use:**

i. What are your proposed terms of use? Note that Northrop Grumman can use its own land free of charge and without any landlord interference in its activities.
ii. How much of the Plant 4 property or infrastructure would be made available for RW-21 use? Would unused infrastructure remain in place or be removed/mothballed/reused by BWD?
iii. What is the duration expected to be required to negotiate and enter into an agreement between BWD and Northrop Grumman for use of the property?
iv. What would be Northrop Grumman's obligation to BWD, if any, after remediation of the RW-21 Area is concluded?
v. Are there any existing code waivers, use limitations or restrictions, or other "grandfathered" conditions related to property occupancy or use that may transfer to Northrop Grumman should they choose to construct the RW-21 Treatment facility at the BWD Plant 4 site?
vi. Has an Environmental Site Assessment (ESA) been completed in the last three years; if not, when was the most recent ESA prepared (if one was prepared)?
vii. Would BWD have any objection to an ESA Phase I and Phase II being performed?
viii. Would BWD object to the installation of video surveillance and installation of RW 21 dedicated telephone and computer data lines and equipment?
ix. Would BWD have any objection to NG Security DeTex coverage during all off work hours, weekends and holidays?

**3.Design:**

i. Can BWD provide a list of process equipment and infrastructure (along with flow/treatment capacity) currently in use that may be considered for use by Northrop Grumman (e.g., liquid phase GAC, transfer pumps, chemical bulk storage tanks, aboveground storage tank, air strippers)?
ii. Would BWD manage disposition or recycling of unused equipment?
iii. Is an AOP unit available or on order for the treatment of 1,4-Dioxane? If so, can the specifications be provided to Northrop Grumman? Is there treatment for Iron or other metals already in place?
iv. What is the timeline for the AOP unit delivery?
v. What is the current electrical service capacity in Kilowatts?

**4.Regulatory Agency Approval:**

i. What regulatory agency approval(s) is required to either (a) locate the RW-21 treatment facility within the same building previously used for public supply, or (b) locate the RW-21 treatment facility on same land parcel(s)or building(s) supporting public supply infrastructure?

**5.Community Outreach:**

i. Would community input be sought on this proposed change of use for the BWD Plant 4 property, as it involves a switch from public water supply to groundwater remediation, and the associated change in the treatment process would result in additional chemical bulk storage/use on the property and an increase in vehicle traffic associated with routine and non-routine OM&M, bulk chemical deliveries and removal of iron sludge from the iron treatment process?

ii. What additional time should be assumed to complete public notice/comment and response, if required?

**6. Timeline**

i. When would BWD make a final decision to proceed with Northrop Grumman's use of Plant 4 as described above and how long after that decision (assuming it is affirmative) would the plant be available, if desired, for Northrop Grumman use?