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RIZZO
ASSOCIATES
A TETRA TECH COMPANY

One Grant Street
Framingham, MA 01701-9005
(508) 903-2000
(508) 903-2001 *fax*
www.rizzo.com

March 17, 2006

U.S. Environmental Protection Agency
EPA-NE
RGP-NOC Processing
Municipal Assistance Unit (CMU)
One Congress Street, Suite 1,100
Boston, Massachusetts 02114-2023

Re: Notice of Intent
NPDES Remediation General Permit
Greenbush/North Scituate Station
MADEP RTN 3-22582

Dear Sir or Madam:

On behalf of the Massachusetts Bay Transportation Authority (MBTA), the owner of the above referenced project, and Jay Cashman, Inc./Balfour Beatty Construction, Inc., JV (CBB), the operator of the proposed construction groundwater dewatering, treatment and discharge system located at the Greenbush/North Scituate Station construction site in North Scituate, Massachusetts (the Site), Rizzo Associates, Inc. (RAI) is submitting this Notice of Intent (NOI) to be covered by the National Pollutant Discharge Elimination System (NPDES) Remediation General Permit (RGP). For the purpose of this NOI, CBB is considered the sole permittee with full design and operational control of the dewatering, treatment and discharge system. This NOI has been prepared in accordance with the provisions of the NPDES RGP (Federal Register Volume 70, No. 174) and related guidance documentation provided by the U.S. EPA.

Introductory Site Information

The Site comprises a portion of the construction area of the MBTA Greenbush Commuter Rail line in the North Scituate Station vicinity (intersection of Country Way, Gannet Road and Henry Turner Bailey Road). We have attached a general Site Locus map, an aerial photograph of the Site vicinity, and the Grade Crossing General Plans (Sheet 1 & 2) for proposed construction work. Work relevant to this NOI includes dewatering activities related to utilities installation and/or relocation, and rail construction. Details of proposed dewatering activities and discharge locations are provided in the following sections. There are no buildings located in the proposed construction right-of-way.

This NOI was precipitated by the observation of petroleum-contaminated groundwater during borings advanced for the purpose of installing utility poles. Detailed descriptions of observed conditions are provided in the following sections.

Facility Permitting Information

As part of general construction activities the construction general contractor (CBB) has obtained and operates a U.S. EPA Construction Storm Water General Permit (CSWGP). General construction activities undertaken at the Site are covered by the CSWGP. CBB has also implemented a Storm Water Pollution Prevention Plan (SWPPP) in accordance with the CSWGP. The SWPPP prepared for the Site includes measures to mitigate potential impacts caused by storm water run-off at the construction site to nearby receptors including surface water bodies, wetlands and other sensitive areas.

Work within the Construction Corridor related to handling of materials impacted by Oil or Hazardous Materials (OHM) are being conducted under a Release Abatement Measure (RAM) implemented in accordance with the provisions of the Massachusetts Contingency Plan (MCP), and are tracked under Massachusetts Department of Environmental Protection (DEP) by Release Tracking Number (RTN) 3-22582.

Proposed Discharge Information

This NPDES RGP will cover discharges from remedial construction dewatering activities. Dewatering will be conducted from one or more locations at the construction site. The wastewater will be pumped from the excavation(s) via a dewatering system to an on-site treatment system described below. The dewatering system may include sumps, well points or trenches with wrapped collection structures to minimize the amount of suspended sediment pumped to the treatment system, or equivalent technologies. This discharge is expected to be intermittent, with maximum flows during initial dewatering of the excavations and limited flows to maintain the dewatered state during completion of excavation and construction activities. Due to the proposed large scale of the project, several potential discharge locations have been identified. The discharge locations identified for the project include: a small municipal separate storm sewer system which subsequently discharges to Bound Brook or Musquashcut Brook; and direct discharges to Bound Brook. The locations of the proposed discharges (Longitude and Latitude) are identified in the attached NOI form.

Sources of intake water will include groundwater encountered within the construction site. No process wastewater or other sources of intake water will contribute to inflows to the dewatering and treatment system discharging to Bound Brook or Musquashcut Brook.

Contaminant Information

Three water samples representing the proposed influent stream to the wastewater dewatering and treatment system were collected by GZA GeoEnvironmental, Inc. (GZA) and submitted for laboratory analysis at Phoenix Environmental Laboratories of Manchester, Connecticut for parameters required to be analyzed under the NPDES RGP. We have attached a table summarizing the laboratory analysis results, a site plan showing sample locations, and Laboratory Certificates of Analysis.

The results of laboratory analysis of indicated that the following compounds may be present in the remedial discharge waters at the following maximum concentrations:

- Total Suspended Solids (TSS) (360,000mg/l)
- Total Petroleum Hydrocarbons (TPH) (160mg/l)
- BTEX (26,200µg/l)
- Naphthalene (6,200µg/l)
- Total metals including: antimony (23µg/l), arsenic (14µg/l), copper (5µg/l), lead (52µg/l), iron (49,200µg/l), lead (106µg/l), nickel (2µg/l), and zinc (19µg/l).

The detected influent concentrations for TSS, TPH, BTEX, Naphthalene, and metals exceed the NPDES RGP effluent limitations listed in Appendix III of the NPDES RGP. Concentrations of some detected metals (antimony, arsenic, copper, lead, selenium, silver, and iron) have the potential to exceed the NPDES RGP effluent limits at a zero dilution factor. In accordance with the guidance documentation, a dilution factor was calculated for discharge to the Bound Brook and/or Musquashcut Brook and the dilution range applicable to the Site was determined to be 10-50. Following determination of the appropriate dilution factor lead and iron have the potential to exceed the NPDES RGP effluent limits at the calculated dilution factor.

In addition, laboratory analysis for several compounds resulted in elevated detection limits (exceeding NPDES minimum levels) due to dilutions necessary because of elevated target compounds.

Treatment System Information

The water removed from the excavations will require treatment using readily available technologies such as settlement, filtration and adsorption in order to achieve effluent concentrations below the NPDES discharge limitations prior to discharge to the receiving waters. The proposed wastewater treatment train developed by CBB and its agents will consist of a minimum of one 21,000 gallon fractionation (frac) tank to allow adequate retention time for solids to settle and separate. If residence time within the fractionation tanks is not sufficient to allow for adequate settlement of solids within one fractionation tanks prior to discharge

additional frac tanks or additional treatment including the addition of filtration units (sand filters, bag filters and/or cartridge filters) may be used to remove or drop-out suspended solids. The frac tanks will be pumped via pumps capable of pumping up to 50 gallons per minute (gpm) or 0.11 cubic feet per second (CFS) through the entire treatment train. The pumps will direct water through, a minimum of two BF-200 bag filter units equipped with filters with minimum filter size of 50 microns connected in parallel. A contingency will be included for the addition of additional bag filters equipped with disposable bag filters or cartridge filter units with smaller filter sizes should metals or suspended solids be detected at concentrations exceeding the NPDES RGP discharge limits or at levels that may expend the downgradient filters (carbon filters). Following solids removal the water will be pumped through a minimum of two 2,000 pound liquid phase granular activated carbon (GAC) filters connected in series. A contingency will be included for additional carbon vessels should VOCs, TPH, or other contaminants be detected at concentrations exceeding the NPDES RGP discharge limits. The treatment system will have sample ports to collect water samples from the system influent (prior to frac tanks), system midpoint (between carbon units) and system effluent (downstream from carbon units). A schematic of the proposed treatment system train has been attached to the NOI form included with this letter.

The design maximum flow of the proposed treatment system is approximately 50 gpm (0.11 CFS). This design maximum flow is primarily restricted by the filter units including: bag filters, and liquid phase GAC filters. We estimate the average flow through the treatment system to be approximately 40 gpm (0.09 CFS).

Following treatment, the effluent water will be discharged to the storm drainage system for subsequent discharge to Bound Brook and/or Musquashcut Brook or discharges will be directed to Bound Brook (or their adjacent wetlands). Energy dissipation measures will be implemented as needed to prevent erosion of the banks, water course and sediments of the surface water bodies. The energy dissipation feature(s) will include one or a combination of the following: perforated hoses, spillway, vertical direction of the discharge into the water column of the surface water, or discharge within existing rip-rap structures or storm sewer outfalls, or equivalent technologies.

Receiving Surface Water Information

Effluent from the remedial system discharge will be directed to one or more discharge pipe(s) which direct the discharge(s) to the municipal storm drainage system via underground piping for eventual discharge to Bound Brook or Musquashcut Brook, or discharges will be direct to Bound Brook (or their adjacent wetlands) following flow through the energy dissipation feature. It is estimated that the continuous flows of Musquashcut Brook are likely influenced by tides (increased outflow during low tide).

Both Bound Brook and Musquashcut Brook flow into "The Gulf" which comprises an estuary system which extends along the coast of Massachusetts Bay and the Atlantic Ocean (South Shore Coastal Drainage Area) and eventually drains into Cohasset Harbor. This estuary area includes tidal marshes and wetland areas with a mixture of fresh and salt water (brackish water). The Massachusetts State surface water quality classification for The Gulf is SB (designated as habitat for fish (shellfish), other aquatic life and wildlife and for primary and secondary contact recreation). This area is also designated as suitable for restricted shellfish harvesting (shellfishing restricted in accordance with the Massachusetts Division of Marine Fisheries pursuant to M.G.L. c. 130 §75).

The Gulf is not used as a drinking water supply and is classified as a Class SB surface water body. The State classifications for Bound Brook and Musquashcut Brook are not listed. The seven day-ten year low flow (7Q10) of both the receiving water was estimated since no gauging stations or stream-stats data are available for these waters. The 7Q10 of the receiving water is estimated to range from approximately 1 cubic feet per second (CFS) to 5 CFS based on physical observations of the water bodies, available topographic maps, and documented flows of similar drainage areas. The maximum flows of Musquashcut Brook are likely greater than those of Bound Brook, however for the purpose of dilution calculations the lower of these estimated flows has been used for both potential receiving bodies.

The Bound Brook (listing ID#9456100) and The Gulf (listing ID#9456075) water bodies are listed as Massachusetts Category 3 Waters (no uses assessed) and do not currently have a total maximum daily load (TMDL).

Endangered and Threatened Species and/or Critical Habitat

There are currently no endangered and/or threatened species and/or critical habitats of concern located at the Site as identified under the NPDES RGP listed in Part I A(4) including the: shortnose sturgeon, dwarf wedge mussel, bog turtle, and the northern redbelly cooter. Plymouth County is listed as critical habitat for the northern redbelly cooter; however the habitat of this species does not include the Site. No consultation with federal and/or state wildlife officials was determined to be necessary since the Site is not located within an area where listed endangered and/or threatened species exist nor is the Site located at or near a federally designated critical habitat.

Impacts to Locations of Historic Significance

In order to determine whether the discharge to Bound Brook or Musquashcut Brook will have the potential to affect a property that is either listed or eligible for listing on the National Register of Historic Places research was completed identifying locations listed on the National Register of

Historic Places and properties listed by the Massachusetts Historical Commission using Massachusetts Geographic Information System data.

The results of our research did not identify properties listed on the National Register of Historic Places located in the path of the discharge or within the construction limits required for the discharge. The Greenbush project and associated construction activities are currently reviewed in accordance with a Programmatic Agreement developed between state and federal agencies and the project in association with the issuance of the U.S. Army Corps of Engineers Individual Permit pursuant to Section 404 of the U.S. Clean Water Act.

Since the discharge will occur within areas of construction that have already been reviewed in accordance with the Programmatic Agreement or through existing storm water outfall it is our opinion that the proposed discharge will not adversely affect historic resources.

Request for Coverage Under NPDES RGP

On behalf of the MBTA and CBB, Rizzo Associates hereby requests coverage under the NPDES Remediation General Permit for discharges of remedial waste water to above referenced discharge points, from remedial dewatering and treatment operations at the Site. Sampling and laboratory analysis of the remedial influent waters has indicated the likely presence of the following compounds in the remedial wastewater: TSS, TPH, BTEX, VOCs, naphthalene, and metals. The attached NOI form provides additional information pertaining to this NOI letter and appropriate signatures of the treatment system Operator and sole permittee (CBB). Discharge of remedial wastewater is anticipated to begin in March 2006 or April 2006 and be completed by March 2007. Upon receipt of notification from EPA and mobilization of the appropriate treatment system components, the remedial dewatering operations, treatment, and discharge will commence under the NPDES RGP in accordance with sampling and monitoring requirements determined by the EPA.

Please contact me at (508) 903-2000 or contact Mr. Jamie Doyle of CBB at (781) 335-5001 if you have any questions.

Very truly yours,

Michael E. Billa

Michael E. Billa, P.E., P.G., L.S.P.
Senior Project Manager

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