TRC
Wannalancit Mills
650 Suffolk Street
Lowell, MA 01854

Main 978.970.5600
Fax 978.453.1995

Memorandum

To:	Cheryl Henlin, City of New Bedford, Department of Environmental Stewardship
From:	Diane Silverman, TRC Environmental Corporation
Through:	David M. Sullivan, LSP, TRC Environmental Corporation
Subject:	Tree Stump Removal – New Bedford High School
Date:	May 4, 2011
CC:	S. Alfonse, City of New Bedford, Department of Environmental Stewardship; J. Saunders, D. Peterson, TRC Environmental Corporation

The purpose of this memorandum is to provide guidance related to stump grinding proposed for the New Bedford High School (NBHS) campus. TRC Environmental Corporation (TRC) understands that the three areas where the stump removal is proposed include the following based on known soil data points: (1) HD-19, HD-20 and HD-21; (2) SB-270; and (3) HB-23. Exposure associated with stump grinding activities is primarily a soil fugitive dust pathway as soil is disturbed / liberated during this activity. It is unlikely that the wood dust exposure pathway would be significant.

TRC understands that the grinding operation will be confined to the top foot of ground surface. TRC reviewed the soil data for the top foot for these areas. The following summarizes related observations and recommendations by area.

HD-19, HD-20 and HD-21

The 0-1 foot soil data available for this area indicates that polyaromatic hydrocarbons (PAHs), polychlorinated biphenyls (PCBs) and metals concentrations are less than Method 1 soil standards except for a single detection of lead at 540 mg/kg and benzo(a)pyrene at 4.1 mg/kg at location HD-21C. These concentrations would be associated with a hazard quotient of 0.5 for the worker and a cancer risk of 1E-07, assuming exposures via ingestion, dermal contact and dust inhalation for 5 days/week for 6 months. Exposure to fugitive dust for daycare children (90 days per year for 2 years), adolescent students (90 days per year for 8 years) and adult staff (150 days per year for 27 years) would be associated with a hazard quotient of between 0.003 and 0.004 and a cancer risk between 8E-10 and 4E-08. Therefore, assuming worst-case exposures, the stump grinding activities at this area would not be associated with a significant risk and can be performed. Nonetheless, TRC recommends minimizing fugitive dust generation to reduce the likelihood of complaints related to this activity.

SB-270

The 0-1 foot soil data available for this area indicates lead is present in soil at concentrations up to 580 mg/kg. No other concentrations above Method 1 soil standards are noted. This lead concentration would be associated with a hazard quotient of 0.6 for the worker, assuming exposures via ingestion, dermal contact and dust inhalation for 5 days/week for 6 months. Exposure to fugitive dust for daycare children (90 days per year for 2 years), adolescent students (90 days per year for 8 years) and adult staff (150 days/year for 27 years) would be associated with a hazard quotient of between 0.003 and 0.004. Therefore, assuming worst-case exposures, the stump grinding activities at this area would not be associated with a significant risk and can be performed. As noted above, TRC recommends minimizing fugitive dust generation to reduce the likelihood of complaints related to this activity.

HB-23

The 0-1 foot soil data available for this area indicates the presence of total PCBs at concentrations up to 4.7 mg/kg. No other concentrations above of Method 1 soil standards are noted. This total PCB concentration would be associated with a hazard quotient of 0.3 and a cancer risk of 2E-07 for the worker, assuming exposures via ingestion, dermal contact and dust inhalation for 5 days per week for 6 months. Exposure to fugitive dust for daycare children (90 days per year for 2 years), adolescent students (90 days per year for 8 years) and adult staff (150 days/year for 27 years) would be associated with a hazard quotient of between 0.01 and 0.03 and a cancer risk of between 3E-09 and 3E-07. Therefore, assuming worst-case exposures, the stump grinding activities at this area would not be associated with a significant risk and can be performed. As noted above, TRC recommends minimizing fugitive dust generation to reduce the likelihood of any complaints related to this activity.

Please call or write if you have any questions or comments.