

## Response to Comments on Nemasket St Properties Phase III Report

### CLEAN

#### ***Comment 1 - A Phase III is inappropriate for the Nemasket Street Lots.***

**Response:** Under the Massachusetts Contingency Plan (MCP; 310 CMR 40.0000), a Phase III - Identification, Evaluation and Selection of Comprehensive Remedial Alternatives (Phase III) shall be conducted for any disposal site for which a Phase II Comprehensive Site Assessment has been completed and a Permanent Solution in accordance with 310 CMR 40.1000 has not yet been achieved. This is precisely the path the City is pursuing for the Nemasket Street lots. The next step is a Phase IV - Implementation of the Selected Comprehensive Remedial Alternative (Phase IV). A Phase IV is appropriate because of the scale and scope of the anticipated remedial actions, and is consistent with the Massachusetts Department of Environmental Protection's (MassDEP's) expectations for response actions at these properties.

As a matter of Bureau of Waste Site Cleanup (BWSC) policy, and consistent with prior MassDEP regulatory concurrence on the Parker Street Waste Site (PSWS), significant remedial actions have already been accomplished by the City for the PSWS and nearby environs through "partial" submittals. This is analogous to the Area of Concern (AOC) or Operable Unit (OU) approach employed by environmental regulatory agencies such as the United States Environmental Protection Agency (EPA).

Under this approach, a site can be divided into a number of distinct areas depending on the complexity of the problems associated with the site. These areas, called OUs, may address geographic regions of a site, different site problems, or areas where a specific action is required. This approach recognizes that a number of separate activities are undertaken as part of a site investigation and cleanup, and these activities can be broken down into manageable components. Examples include the Keith Middle School (KMS), Walsh Field, New McCoy Field, private properties, Liberty Street Slim parcel, and the anticipated Permanent Solution with Conditions for New Bedford High School (NBHS).

The Permanent Solution Statement that will eventually be filed for the Nemasket Street Lots will also be a Permanent Solution-Partial Statement. The City is fully cognizant that a final Permanent (or Temporary) Solution Statement for the PSWS will need to reference all Permanent or Temporary Solution-Partial Statements previously submitted under the Release Tracking Number (RTN) and, if applicable, cover any remaining conditions not addressed by the Permanent or Temporary Solution-Partial Statements. Given the regulatory, logistical, geographic, and technical complexities of the work undertaken by the City, the "partial" assessment and solution implementation approach has been logical, productive, and manageable, and will continue as the administrative model for the foreseeable future.

***Comment 2 - This is not a separate site. The Nemasket Street Lots are a portion of the larger Parker Street Waste Site (PSWS) and as such should not be managed in a piecemeal fashion. Simply because a Phase II was submitted for this area previously, this does not mean that this error should be continued. CLEAN commented on this prior to the filing of the Phase II for the Nemasket Street Lots.***

**Response:** The City rejects the description of response actions undertaken by the City (and EPA/MassDEP) as "piecemeal" and in "error", and stands by the methodical approach. As noted above in the City's response to Comment 1, the assessment and heretofore successful remediation (i.e.,

Permanent Solutions or Class A or B Response Action Outcomes) by the City at a half dozen locations has been thoughtful, methodical, and productive despite considerable regulatory, technical and logistical challenges. The City’s approach has been conducted in a technically competent manner with both MassDEP and EPA concurrence, and the City anticipates continuing along this pathway in the future.

***Comment 3 - The selection of any remedy must consider the boundaries of the site. The draft Phase III ignores that there are three private properties (2 properties to the west and one property to the south across Ruggles Street) that about the Nemasket Street Lots that were investigated by EPA/MassDEP and found to have elevated concentrations of PCBs and other PSWS contaminants. Contaminant concentrations on these properties were high enough for EPA to take Removal Actions. Based upon the detected concentrations on these residential properties, they should be considered in MCP Response Actions for the Nemasket Street Lots.***

**Response:** As noted above, the City is conducting response actions in a thoughtful, methodical, and successful manner. The City has no knowledge to suggest that these private properties warrant accelerated action per the MCP or other applicable environmental regulations. Also, matters pertaining to private properties require a higher level of sensitivity and discretion, which takes a significantly greater degree of coordination, and ultimately, requires more time. As the commenter is no doubt aware, the City has been actively reviewing matters related to properties where EPA recently exercised its involvement. As that process occurs, the City continues to pursue response actions at properties owned by the City.

***Comment 4 - The Phase III must be revised to consider the energy costs of the remedial alternatives as required by the MCP (40.0858(4)(c)).***

**Response:** The City respectfully notes that the Phase III does consider the energy costs of the remedial alternatives per the MCP in accordance with the regulations. The core elements articulated in MassDEP WSC #14-150, the RAPS elements of 310 CMR 40.0191(3)(e), and the 310 CMR 40.0848(4)(c) amendment language as follows:

<b>Phase III Conceptual Remedial Alternative</b>	<b>Location in Phase III Document</b>
<i>Alternative No. 2 - Maintenance of Existing Site Controls</i>	Page 3-8, seventh paragraph
<i>Alternative No. 3 – Installation of Clean Utility Corridors, Construction of Exposure Barriers (Containment/Capping), and Institutional Controls</i>	Page 3-13, fourth paragraph
<i>Alternative No. 4 – Targeted Excavation/Disposal of Soil with PCB Concentrations Greater than 100 mg/kg, Construction of Exposure Barriers (Containment/Capping), and Institutional Controls</i>	Page 3-18, last paragraph
<i>Alternative No. 5 – Targeted Excavation/Disposal of Soil with PCBs greater than 10 mg/kg, Construction of Exposure Barriers (Containment/Capping), and Institutional Controls</i>	Page 3-23, last paragraph Page 3-24, first paragraph

Please consider the following:

- **As a component of the detailed evaluation of alternatives** - Under the MCP, 310 CMR 40.0848(4)(c) requires that the relative total consumption of energy resources in the implementation and operation of the alternatives, and externalities associated with the use of

those resources, including greenhouse gases and other air pollutants be addressed in the detailed evaluation presented in the Phase III. These provisions to address “core elements” in support of Commonwealth’s energy and emission reduction mandates of 2008, and were included in the April 2014 Regulatory Amendment to the MCP.

- **In response to the Response Action Performance Standards (RAPS)** - In a related part of the MCP (310 CMR 40.0191(3)(e)) not cited by the commenter, the application of the Response Action Performance Standard (RAPS) shall be protective of health, safety, public welfare and the environment and shall include, without limitation, in the context of meeting the requirements of the MCP, consider eliminating or reducing, to the extent practicable and consistent with response action requirements and objectives, total energy use, air pollutant emissions, greenhouse gases, water use, materials consumption, and ecosystem and water resources impacts resulting from the performance of response actions through energy efficiency, renewable energy use, materials management, waste reduction, land management, and ecosystem protection. As with 310 CMR 40.0848(4)(c) discussed above, these provisions to address “core elements” in support of Commonwealth’s energy and emission reduction mandates of 2008, and were included in the April 2014 Regulatory Amendment to the MCP.
- **In response to MassDEP Greener Cleanups Guidance (WSC #14-150)** - In related MassDEP guidance not cited by the commenter, the focus of such approaches includes addressing five core elements or factors for reducing the environmental footprint of a cleanup: 1) Minimizing total energy use while maximizing the use of renewable energy; 2) Minimizing emissions of greenhouse gases and other air pollutants; 3) Minimizing water use and impacts to water resources; 4) Reducing, reusing and recycling materials and waste; and 5) Avoiding or reducing adverse impacts to ecosystems and land resources.

***Comment 5 - The O&M costs for alternatives 3, 4, and 5 do not consider the costs for the required replacement of the turf field approximately every 10 years at a likely cost of >\$400,000.***

**Response:** All three alternatives (3, 4, and 5) include the same turf system, hence the comparison remains relative.

***Comment 6 - Will the replacement of the turf field require approval from EPA as it may be considered a disturbance of the “cap”?***

**Response:** Permitted and unpermitted activities and continuing obligations will be set forth in the Activity and Use Limitation (AUL) implemented for the property as part of the remedy. Relying on the example of the KMS remedy, which also fell within EPA’s jurisdiction, and subject to EPA review and concurrence, the City anticipates that the AUL will outline future management requirements including soil management, soil management planning, health and safety planning, maintenance/disturbance of exposure barrier components, inspections and associated documentation, etc.

***Comment 7 - Has the City of New Bedford considered the health concerns regarding exposure to children of the components of turf fields that have been reported in the news? Should these health concerns represent an incremental cancer risk that should be included in the selection of this type of cap?***

**Response:** There have been numerous studies conducted by Environmental and Public Health Agencies evaluating the potential human health risks from exposure to crumb rubber infill used in synthetic turf

fields (e.g., Connecticut Department of Environmental Protection, Connecticut Department of Public Health, University of Connecticut Health Center, California Office of Environmental Health Hazard Assessment (OEHHA), New York State Department of Environmental Conservation, New York State Department of Health, New York City Department of Health and Mental Hygiene, Consumer Product Safety Commission, USEPA)

These studies have measured concentrations of particulate matter (PM 2.5) and chemicals of concern (metals, PAHs, SVOCs, VOCs) found in crumb rubber infill in the breathing space above the fields. Results of the sampling were incorporated into conservative (i.e. health protective) human health risk assessment models to calculate potential cancer and non-cancer risks to the users of the fields. Each of the studies concluded that there was no elevated health risk and that air concentrations measured at the fields were no different than what was measured in “background” areas away from the fields. A number of these studies also evaluated the risk from the potential ingestion of the crumb rubber particulates and found that there was no association with elevated health risk.

***Comment 8 - Given the large cost of the “turf field” cap, should alternative caps be considered such as soil and paving? Furthermore, if a less expensive cap alternative was selected and a \$4.2M cost was retained, additional contamination could be removed from the Nemasket Street Lots and the abutting properties.***

**Response:** Both soil and pavement based exposure barriers carry considerable capital and Net Present Value (NPV) cost elements that, in the end, allow an exposure barrier utilizing a synthetic turf covering to be reasonably financially competitive.

Recall that creating a new paved surface introduces significant environmental impacts in terms of storm water management and environmental permitting/mitigation, and associated engineering and infrastructure (which the City’s recommended approach will incrementally reduce through the removal of a portion of the southern KMS paved parking lot).

Also note that the City desires the higher level of service and usability offered by a synthetic turf field, a level of performance that even the most highly maintained natural grass surface cannot match. In addition, a living grass field, created and maintained for use as an athletic facility and utilized to its highest potential level of service, has significant associated maintenance costs (water, soil conditioning/fertilization, over seeding, coring, dethatching, top dressing, event preparation, repair, etc.) and a significant maintenance-related labor cost element as compared to a synthetic turf field. This is not the City’s first investment in turf fields and the incremental costs of the specialized equipment needed to maintain the turf field have already been expended and the equipment can be used at this new facility.

Also, a synthetic turf field eliminates the need for the addition of fertilizers, pesticides, and herbicides. Natural grass sports fields can require up to 1.5 million gallons of water per acre per year. The frequent mowing required for natural grass lawns and fields also results in emissions of hydrocarbons and carbon monoxide (up to 5% of such emissions in the United States, according to the Environmental Protection Agency).

In short, while a synthetic turf field may be more expensive than natural grass, the costs are comparable and a natural grass surface cannot approach the performance envelope offered by a turf field that is desired by the City as an investment in this neighborhood and school zone.

***Comment 9 - Do the costs for alternatives 3, 4, and 5 include areas beyond the Nemasket Street Lots? If the inclusion of these additional costs is appropriate, should alternatives focused only on the areas "where contamination has come to be located" (including the abutting residential properties) be considered? Would this result in additional contamination being removed from the Nemasket Street Lots and the impacted abutting residential properties for the same cost? Could these costs achieve a permanent solution without restrictions?***

**Response:** Please see the City's response to Comments 2 and 3.

***Comment 10 - CLEAN continues to recommend that public participation and discussion of alternatives prior to the preparation of reports is the best course of action for community support and cost effectiveness.***

**Response:** The City remains unreservedly committed to the public participation process set forth in the June 2012 Public Involvement Plan, which was offered to the public for review and comment prior to its finalization and implementation.

#### **Mass Department OF HEALTH**

***Comment 11 - Most of the remedial action alternatives discussed involve some excavation, which has the potential to generate fugitive dusts. As the parcels in question are adjacent to sensitive receptors (e.g., nearby residents and/or children going to and from the Keith Middle School), MDPH/BEH recommends developing a detailed dust control plan prior to commencing remedial work. To limit potential exposures to fugitive dusts, the plan should detail dust suppression methods to be used and specify dust concentrations that will trigger increased dust suppression efforts and, if necessary, work stoppage.***

**Response:** The Department of Environmental Stewardship, and the City's consultant TRC Environmental Corporation, have historically taken an aggressive approach to fugitive dust monitoring and mitigation. No monitoring data to date for work performed during TRC's period of performance have indicated an excursion approaching, or beyond, an acceptable level. In addition, during TRC's period of performance, we have received no complaints regarding fugitive dust emissions associated with any of the investigative and remedial work at the Parker Street Waste Site for worked performed by or for the City.

The following excerpt from the August Release Abatement Measure Plan Modification for Soil Excavation and Removal at the Acquired Residential Properties outlines the typical approach used for dust monitoring and mitigation.

##### ***"6.4.1 Instrumented Air Monitoring for Dust***

***Air monitoring will be performed using a combination of real-time dust monitoring upwind and downwind of the work area, and at a point near the closest receptor.***

***When impacted soils are encountered during RAM-related soil excavation and management activities, real-time field screening of breathing zone dust levels will be conducted using direct reading instruments that are designed to monitor air quality on a real-time basis. A second instrument will be used to monitor dust levels downwind of the excavation. A third dust monitor will be placed towards the nearest receptor, regardless of wind direction.***

*The dust monitoring units will be TSI Dustrak™ units, or equivalent, equipment with size-selective inlet for particles of 10 micrometers in diameter or less (PM10). Background samples will be collected for at least 15 minutes at each location prior to the start of excavation activities. The continuous dust monitor uses a light scattering photometer to quantify particles and converts the counts to a concentration in units of milligrams per cubic meter (mg/m<sup>3</sup>). This instrumentation has an accuracy of 0.001 mg/m<sup>3</sup>. The dust monitoring instruments will be placed in weatherproof cases with an omni-directional probe to minimize wind interference. The dust monitoring instruments will be zeroed daily before use and at the end of the day. Data will be logged at 60-second intervals and will be monitored periodically by field personnel during RAM-related excavation activities. Data will be downloaded daily.*

*If sustained ambient dust levels exceed the EPA National Ambient Air Quality Standard of 150 µg/m<sup>3</sup> at downwind sampling locations (a sustained reading would consist of a reading lasting 15 minutes or longer), dust suppression activities will be increased with a greater usage of water sprays. Monitoring levels are subject to change and may be made more stringent as additional soil data are obtained and evaluated.*

*As noted above in Section 4.2.3, during activities that involve the movement or other disturbance of potentially impacted soils, dust suppression consisting of water sprays will be routinely implemented, and potential fugitive dust emissions will be monitored simultaneously. Increased water sprays (e.g., additional hoses and/or water volume) will be utilized as needed based on visual observations of effectiveness and instrument monitoring. Where wind conditions are present that render dust suppression ineffective based on instrument readings and/or visual observations (based on the professional judgment of environmental oversight personnel), those activities will be suspended until favorable wind conditions resume/return or dust suppression techniques suitable for the conditions can be reliably implemented.”*

The above-described approach for dust monitoring and mitigation will also be utilized during implementation of the remedy at the Nemasket Street Lots.