



CITY OF NEW BEDFORD
JONATHAN F. MITCHELL, MAYOR

Response to comments received on the *Draft Phase II Comprehensive Site Assessment and Draft Phase III Remedial Action Plan for the Acquired Residential Properties and Nemasket Street Lots, and the Draft Phase II Comprehensive Site Assessment for the Wetland to the west of Keith Middle School*

The following are comments (shown in italics) which were received by the City on the three (3) above-named reports. The City's response follows each comment.

Draft Phase II Comprehensive Site Assessment for the Acquired Residential Properties and Nemasket Street Lots

***Comment 1:** The figures for the Acquired and Nemasket Properties (ANP) Draft Phase II Comprehensive Site Assessment (DCSA) define the site boundaries as the property boundaries. This is inconsistent with the Massachusetts Contingency Plan which defines a site as where contamination has come to be. While this may be acceptable for this submittal, the City needs to consider all of the properties within the Parker Street Waste Site (PSWS) as part of the Site.*

Response: As the draft Phase II Comprehensive Site Assessment states, the Parker Street Waste Site (PSWS) encompasses a large area located in a district of widely distributed historical urban fill that is a background condition in this area and difficult to attribute to a known point source. The City, in consultation with the Massachusetts Department of Environmental Protection (MassDEP), has adopted an approach whereby geographic areas of the PSWS are targeted, assessed, remedied, and closed with partial Response Action Outcomes (RAO-Ps). With an RAO-P as the endpoint, it is implicit that the response actions are targeted and do not encompass the entire Release Tracking Number (RTN) 4-15685 site. In addition, the draft Phase II Comprehensive Site Assessment for the Acquired Residential Properties and the Nemasket Street Lots clearly acknowledges that the report addresses a portion of the larger PSWS (see Section 2.3.1 Site Description as well as the Executive Summary). This approach is consistent with that applied for Walsh Field and the New Bedford High School (NBHS) Campus, where Phase II reports were prepared for distinct geographic areas of the PSWS.

***Comment 2:** With regards to this report, it should be noted that no work has been performed within Ruggles Street, Greenwood Street, and Hathaway Boulevard. The soil and groundwater beneath these roads must be considered as part of the Site.*

Response: Please see the City's response to question 7 from the September 21, 2011 Public Information Plan (PIP) meeting, posted on the City's website. In that response, the City noted that soil sampling has taken place in the City's rights-of-way along portions of Hathaway Boulevard and Ruggles Street. The City is presently evaluating approaches to managing the roadways. The link for the PIP question/comment responses is provided below:

<http://www.newbedford-ma.gov/McCoy/2011/Final%20Sept%2021%20PIP%20response%20summary.pdf>

Comment 3: *The source of contamination should be stated explicitly. This is required by the Massachusetts Contingency Plan (MCP).*

Response: The draft Phase II Comprehensive Site Assessment for the Acquired Residential Properties and the Nemasket Street Lots clearly ascribes the source of site impacts as fill material. For example, please refer to Sections 2.3.2 Site History and 6.1.2 Extent of Impacts. In fact, there are more than forty references to the presence of fill, including its composition and possible sources throughout the 92 pages of text. As noted above in the response to Comment 1, the PSWS encompasses a large area located in a district of widely distributed historical urban fill that is a background condition in this area and difficult to attribute to a known point source.

Comment 4: *Given that volatile organic compounds (VOCs) were detected in the soil and buried drums at the ANP Site, it would have been reasonable for a minimum of one round of groundwater samples to be collected and tested.*

Response: Volatile organic compound (VOC) impacts were only detected, and in a very localized area, at the Nemasket Street Lots, where VOC impacts were shallow and diminished below Massachusetts Contingency Plan (MCP; 310 CMR 40.0000) Method 1 S-1 soil standards with depth (findings corroborated by field screening). At the Acquired Residential Properties, for soil samples collected from the 0 to 3 foot below ground surface (bgs) and from the greater than 3 feet bgs intervals, the analytical results did not indicate the detection of VOCs at concentrations exceeding MCP Method 1 S-1 soil standards. These results are also supported by field screening observations of site soils conducted by senior field personnel. Also note that several years of groundwater monitoring at the adjacent Keith Middle School (KMS), all results for which are posted on the City's website, indicates no significant VOC impacts to groundwater from the fill beneath the cap. Absent a significant source of VOCs in site soil, the monitoring of groundwater for VOCs was not considered necessary or appropriate. However, after further discussion with MassDEP, a round of VOC groundwater sampling has been conducted at the Nemasket Street Lots, and no concentrations were detected above cleanup criteria. The results will be integrated into the final Phase II Comprehensive Site Assessment document.

Comment 5: *The ANP DCSA correctly identified dioxins as contaminants of concern (COCs) at the ANP site. As such, dioxins should be discussed in Section 5 of the DCSA.*

Response: For clarification, the City's technical team assumes the term "dioxins" to refer to the seven polychlorinated dibenzo dioxin congeners, ten polychlorinated dibenzofuran congeners, and twelve dioxin-like polychlorinated biphenyl congeners that have similar chemical structure and a common mechanism of toxicity. In all responses, we will refer to these compounds as "dioxin-like compounds." Dioxin-like compounds are noted in Section 5 of the draft Phase II Comprehensive Site Assessment for the Acquired Residential Properties and the Nemasket Street Lots. Additional text summarizing a general compound class description consistent with those provided in the document for polychlorinated biphenyls (PCBs), polyaromatic hydrocarbons (PAHs), etc., will be included in the final version of the report.

Comment 6: Furthermore, with regard to dioxins, we would like to reiterate that:

- a. *Dioxins must be considered COCs throughout the PSWS, not just the ANP site; and*
- b. *No correlation has been demonstrated between PCB concentrations and dioxin concentrations and, therefore, comprehensive investigations are required throughout the PSWS to properly assess risk to human health and the environment.*

Response: Please see the City’s response to a similar question received during the September 22, 2010 PIP meeting, which is posted on the City’s website. The City did consider the possibility that dioxin-like compounds could be COCs throughout the PSWS and developed and implemented a sampling program to define the extent of dioxin-like compounds at specific portions of the PSWS.

The soil data indicate that PCBs are the only dioxin-like compound precursors at PSWS. These same findings are noted in Section 3.1.3 (page 3-5) of the draft Phase II Comprehensive Site Assessment for the Acquired Residential Properties and the Nemasket Street Lots. Therefore, sample locations for dioxin-like compound analysis were selected using the same approach used for the NBHS:

- **Biased Sampling** – Sampling locations were identified where the highest concentrations of dioxin-like compounds would be expected, i.e., locations with the highest concentration of the only dioxin-like compound precursors at the Site: PCBs. This component of the sampling approach is intended to avoid underestimating risk from exposure to dioxin-like compounds in this area of evaluation.
- **Risk Assessment** – Sample locations were identified to support the evaluation of current and future human health risk under the MCP using dioxin-like compound data that are representative of human exposures that could occur across the site.

This sampling program was intended to efficiently target areas potentially impacted by dioxin-like compounds and was worked out in consultation with MassDEP. A rigorous statistical correlation would require the collection of a large number of additional samples over a wider concentration range to attempt to quantify the quantitative correlation between PCBs and dioxin-like compounds with confidence. TRC chose an efficient approach of targeting areas of potentially elevated dioxin-like compound concentrations instead of a larger sampling program, because TRC did not expect that a greater number of samples would provide significant additional detail to improve the City’s ability to make informed public health and/or regulatory compliance decisions. One observation from the work is that the concentrations of most dioxin-like compounds in site soil were generally consistent with background concentrations for soils in urban areas, even in the presence of PCBs.

Comment 7: *It is unacceptable to state that “no community in the vicinity of the Site is believed to be currently experiencing, or expected to experience, significant adverse impacts as a result of the degradation of public or private resources directly attributable to the soil and groundwater*

impacts at the Site. No other non-pecuniary effects are known to be present, or to be accruing, due to soil and groundwater impacts at this Site.” It is very clear that the community “in the vicinity” including the abutters have been adversely impacted directly as the result of conditions at ANP and the PSWS. The adverse impacts may include health, pecuniary, and non-pecuniary.

Response: The section of the report noted by the reviewer is associated with the Risk to Public Welfare. Per the MCP (310 CMR 40.0994), there are two purposes for characterizing the risk to public welfare: 1) to identify and evaluate nuisance conditions, which may be localized, and 2) to identify and evaluate significant community effects.

The characterization of risk to public welfare considers effects that are or may result from the presence of residual impacts or the implementation of a proposed remedial alternative. Further, per the MCP, the characterization of risk to public welfare is for current and reasonably foreseeable site activities and uses, requiring an understanding of the site, the receptors and exposure information. Per 310 CMR 40.0994, the characterization of risk to public welfare does not consider pecuniary or private resources, and these elements of the text will be corrected in the finalization of the document. The review also focuses on those effects not otherwise addressed in the formal risk characterization.

Factors that the MCP takes into consideration to evaluate nuisance conditions and significant community effects include the following:

- **Nuisance conditions** – The breathing zone of ambient and/or indoor air associated with the Acquired Residential Properties and Nemasket Street Lots is free of persistent, noxious odors (at present and for the reasonably foreseeable future). There are also no impacts from the site on drinking water (noxious taste/odors) or livestock. Per the MCP, a nuisance condition is not present.
- **Loss of active or passive property uses** – None of the properties were previously accessible for active or passive uses. Prior to acquisition, the Acquired Residential Properties were private residential properties, and thus were not available to the public as active or passive use spaces. In addition, the Nemasket Street Lots have been thickly overgrown and practically impenetrable for public active or passive uses, hence no loss of such use has been experienced. Per the MCP, there has been no loss of active or passive property uses experienced.
- **Non-pecuniary effects** – No public resource is known to be impacted by the Acquired Residential Properties or the Nemasket Street Lots. No public water supplies are impacted (odors, etc.), the atmosphere is not impacted by noxious odors, and no other public resource is reduced or diminished (e.g., access to public facilities, such as parks or waterfront).
- **Upper Concentration Limits** – Upper Concentration Limit (UCL) conditions have been identified in site soil at two locations, which is acknowledged in the draft Phase II Comprehensive Site Assessment report. The draft Phase II Comprehensive Site Assessment report acknowledges that response actions are necessary for the UCL conditions to achieve a Condition of No Significant Risk. The UCL conditions have been

identified and are targeted for remediation in the draft Phase III; hence, the community is not expected to experience significant impact from the UCL conditions upon remedy implementation. Text clarifying the impact of the UCL conditions on the conclusions of the risk characterization will be included in the finalized document.

With respect to potential for effects on health, the risk characterization indicates that there is no significant human health risk associated with the fenced properties under current conditions for the scenarios evaluated (that is, trespasser, pedestrian, and groundskeeper). Note that the results from the recently issued Massachusetts Department of Public Health (MassDPH) Study (*Health Consultation Public Comment Release Evaluation of Serum PCB Levels and Cancer Incidence Data Parker Street Waste Site Neighborhood (EPA FACILITY ID: MAN000105955) New Bedford, Bristol County, Massachusetts September 27, 2011*) indicate that PCB concentrations in serum of study participants are within the typical variation seen in the population of the United States.

Draft Phase III for the Acquired Residential Properties and Nemasket Street Lots

Comment 1: The Draft Phase III is unacceptable. It does not provide adequate detail for a reviewer to understand each of the alternatives. For example, the Draft Phase III does not describe in adequate detail where contaminated soils will be excavated, capped with soil, and/or paved. Drawings should be included which show in plain view and cross section each of the alternatives.

Response: Per the MCP (310 CMR 40.0861(1)), the results of a Phase III evaluation “shall support the selection of a remedial action alternative by providing information of sufficient detail on the process by which the recommended remedial action alternative was developed and evaluated.” A Phase III is a conceptual-level document intended to identify, screen, and evaluate remedial technologies so the most feasible remedial action alternative can be designed and implemented at the site. The remedial actions presented in the draft Phase III, while effective, are not complex, and involve a blend of excavation and off-site reuse, recycling, or disposal and two types of exposure barriers depending upon the area (paving and/or soil cap). Each of the technologies is described in detail and screened for effectiveness in Section 3.2.3. Conceptual presentations of the soil and asphalt exposure barrier technologies are provided in cross-sectional drawings. Further, each remedial action alternative is described in extensive detail in Sections 3.3.1 through 3.3.4, and excavation locations are depicted on Figure 3.

As the purpose of the Phase III process is to identify, screen, and evaluate remedial technologies so that the most feasible remedial action alternative can be selected, the MCP does not require detailed design drawings at this phase.

Comment 2: Without a clear understanding of each alternative, it is not possible to provide meaningful comments on the criteria used to compare each alternative. In fact, the Phase III fails to describe each of the comparative criteria to be evaluated in detail.

Response: Section 3 of the draft Phase III document provides an eighteen-page description of the four conceptual approaches advanced through the conceptual engineering analysis.

Per 310 CMR 40.0857(2) of the MCP, and as clearly noted in Section 3.1 of the draft Phase III, a detailed evaluation of remedial action alternatives is not required following the initial screening where:

- The remedial action alternatives are proven to be effective in remediating the types of oil and hazardous materials (OHM) present at the Site;
- The remedial actions will result in the reuse, recycling, destruction, detoxification, and/or treatment of OHM present at the Site;
- The remedial actions can be implemented in a manner that will not pose a significant risk of harm to health, safety, public welfare or the environment; and,
- The remedial actions are likely to result in a reduction and/or control of OHM at the site to a degree and in a manner that a Class A Response Action Outcome will be met.

All or most of the above bulleted criteria apply to the proposed remedial actions evaluated in the draft Phase III, and are in fact quite similar to those remedial actions implemented at the adjacent KMS. The initial screening is presented in Section 3.2.3 of the draft Phase III. Nevertheless, to aid the reader, the draft Phase III does include a comparative evaluation based on key criteria: effectiveness, reliability, difficulty of implementation, implementation risk, and comparative benefits, as well as timeliness. These criteria are listed in the MCP as detailed evaluation criteria (310 CMR 40.0858) and serve to effectively frame the conceptual remedies. These criteria are described and used for comparison between alternatives in Table 1 of the draft Phase III document.

***Comment 3:** The requirements of an MCP Phase III are not met by this document. At a minimum, there is no “detailed, comparative evaluation...of cost”. Without cost information, how can a reasonable selection be made between an alternative that is “moderately effective” (Alternative 3) and an alternative that is “effective” (either Alternative 2 or 4). It is not sufficient to suggest that one alternative “would likely be” the least or most costly option.*

Response: The response to this comment builds upon the responses to Comments 1 and 2. As noted above (response to Comment 2), a detailed evaluation is not required because the requirements of 310 CMR 40.0857(2) of the MCP have been met with the current version of the document. Despite meeting this requirement, the draft Phase III also includes an assessment of evaluation criteria, including effectiveness, reliability, difficulty of implementation, implementation risk, and comparative benefits, as well as timeliness.

Effectiveness, as defined in the MCP (310 CMR 40.0858(1)), is determined for each alternative in terms of:

- Achieving a Permanent or Temporary Solution under 310 CMR 40.1000;
- Reusing, recycling, destroying, detoxifying, or treating oil and hazardous material (OHM) at the site; and
- Reducing levels of untreated OHM at the site to concentrations that achieve or approach background.

The effectiveness of an alternative is independent of cost information.

As noted in the response to Comment 1, the draft Phase III consisted of an evaluation process for selecting the most feasible remedial action alternative for the site. The remedy will be designed for implementation as part of Phase IV under the MCP. The discussion presented in the draft Phase III report is commensurate with the conceptual level of detail necessary to conduct a Phase III evaluation in accordance with the MCP.

***Comment 4:** It is reasonable to expect that the City of New Bedford and its School Department should consider the non-pecuniary benefits to the surrounding community as part of detailed, comparative evaluation of the alternatives. This is particularly true in that the ANP site is part of the larger PSWS which includes properties that are not owned by the City of New Bedford.*

Response: The draft Phase III does address public welfare issues, explicitly targeting the UCL conditions for remedy. The UCL conditions are the only actionable public welfare elements identified in the draft Phase II Comprehensive Site Assessment report. See the response to Comment 7 of the draft Phase II Comprehensive Site Assessment for the Acquired Residential Properties and the Nemasket Street Lots concerning the absence of non-pecuniary impacts.

In addition, the draft Phase III describes public benefits associated with site reuse as greenspace, other aesthetics, parking options, and site access, and provides a comparative discussion (Sections 3.3.2.11, 3.3.3.11, and 3.3.4.9). These benefits are also summarized and compared in Table 1 of the draft Phase III. Note that the site has not been available to the public in the past, and is not available to the public under current conditions.

***Comment 5:** A new Draft Phase III should be prepared and issued for public comment.*

Response: The City respectfully disagrees with this comment.

Draft Phase II Comprehensive Site Assessment for the Wetland to the west of Keith Middle School

***Comment 1:** The Phase II is not complete as it has not considered the presence of dioxins in its determination of nature and extent of contamination and its assessment of human health and ecological risk. Dioxins are documented to be present in the fill material which has caused the contamination at the Keith Middle School Wetlands (KMSW).*

Response: Overall, while dioxin-like compounds have been detected at the site, their presence has not or will not affect the remedial approach. In fact, the majority of the dioxin-like compound results obtained to date, including those from the KMS, are consistent with an urban background signature. Given that the draft Phase II Comprehensive Site Assessment report has already identified that a Condition of No Significant Risk does not exist in the northern wetland based on PCBs, lead, and zinc, dioxin-like compound data are not likely to materially affect the outcome. The data collection performed in the wetland is extensive (over 1,300 samples collected for PCBs alone), sufficient to assess the site, support an evaluation of remedial action alternatives, and design/implement specific remedial actions.

Comment 2: As stated previously, it is unacceptable to state that “no community in the vicinity of the Site is believed to be currently experiencing, or expected to experience, significant adverse impacts as a result of the degradation of public or private resources directly attributable to the soil and groundwater impacts at the Site. No other non-pecuniary effects are known to be present, or to be accruing, due to soil and groundwater impacts at this Site.” It is very clear that the community “in the vicinity” have been adversely impacted directly as the result of conditions at the KMSW and the PSWS. The adverse impacts may include health, pecuniary, and non-pecuniary.

Response: As with the prior Comment 7 regarding the draft Phase II Comprehensive Site Assessment for the Acquired Residential Properties and the Nemasket Street Lots, the section of the report noted by the reviewer is associated with the Risk to Public Welfare. Per the MCP (310 CMR 40.0994), there are two purposes for characterizing the risk to public welfare: 1) to identify and evaluate nuisance conditions, which may be localized, and 2) to identify and evaluate significant community effects.

The characterization of risk to public welfare considers effects that are or may result from the presence of residual impacts or the implementation of a proposed remedial alternative. Further, per the MCP, the characterization of risk to public welfare is for current and reasonably foreseeable site activities and uses, requiring an understanding of the site, the receptors and exposure information. Per 310 CMR 40.0994, the characterization of risk to public welfare does not consider pecuniary or private resources, and these elements of the text will be corrected in the finalization of the document. The review also focuses on those effects not otherwise addressed in the formal risk characterization.

By way of review, the risk characterization shows that the southern unfenced wetland poses no significant risk. The northern wetland is currently safe for maintenance staff and other personnel to work on the land area (mow the grass, etc.) inside the fence, and it is safe for maintenance staff and the public to use the land outside the fence. The potential risks do not represent an impact on public welfare. Benefits to the public, and the good of the general population, are not affected (i.e., a public resource is not impacted, such as a community water supply nor is the local atmosphere impacted by noxious odors).

Factors that the MCP takes into consideration to evaluate nuisance conditions and significant community effects include the following:

- **Nuisance conditions** – The breathing zone of ambient and/or indoor air associated with the wetland to the west of KMS is free of persistent, noxious odors (at present and for the reasonably foreseeable future). There are also no impacts from the site on drinking water (noxious taste/odors), and there are no livestock impacts. Per the MCP, a nuisance condition is not present.
- **Loss of active or passive property uses** – Currently, the northern wetland is not accessible for active or passive uses due to fencing installed as part of a response action, and the fencing was taken into consideration in the current use scenarios for the wetland

human health risk characterization. Prior to fencing, the northern wetland was not utilized, maintained or promoted for use as passive or active recreational space. Although the northern wetland was accessible prior to fencing, any access to the wetland was infrequent. Therefore, while the use may have been lost with the fence installation, the present access restriction was not judged to have a significant community effect.

- **Non-pecuniary effects** – No public resource is known to be impacted by the wetland. No public water supplies are impacted (odors, etc), and the atmosphere is not impacted by noxious odors. While access to the wetland is currently restricted, the wetland is not a significant public facility, such as a park; thus the present access restriction was not judged to have a significant community effect.
- **Upper Concentration Limits** – UCL conditions under the MCP apply only to soil and groundwater. Text clarifying this, and the impact on the conclusions of the risk characterization, will be included in the finalized document.

As noted above, with regard to public health effects, please note the results of the recently issued MassDPH Study (*Health Consultation Public Comment Release Evaluation of Serum PCB Levels and Cancer Incidence Data Parker Street Waste Site Neighborhood (EPA FACILITY ID: MAN000105955) New Bedford, Bristol County, Massachusetts September 27, 2011*). The MassDPH serum results indicate that they are within the typical variation seen in the population of the United States.

Comment 3: The source of contamination should be stated explicitly. This is required by the Massachusetts Contingency Plan (MCP).

Response: Please see the City's response to question 3 from the September 21, 2011 PIP meeting, posted on the City's website and included below.

September 21, 2011 PIP Question 3: *Is sampling location SED-11A-B the source of wider contamination in the wetlands? If not, what is the source of the (re-) contamination?*

Summary of response to PIP Question 3: No, sampling location SED-11A-B does not appear to be the source of impacts detected in the wetland. The draft Phase II Comprehensive Site Assessment (CSA) for the Wetland to the West of the KMS states that the wetland initially became impacted due to the placement of fill material associated with the construction of NBHS (see the Executive Summary and pages 1-1 and 10-1). As also described in the draft Phase II CSA, sediment sampling conducted subsequent to the 2005-2006 sediment remediation detected the presence of polychlorinated biphenyls (PCBs) in sediment above reporting thresholds and cleanup criteria. The potential source(s) of the post-remedy PCB concentrations are not known, but are not thought to be on-going or active conditions. The delineation of the nature and extent of contamination provided in the draft Phase II CSA is suitable for planning and implementing the next phase of response actions.

This information will be included in the finalization of the Phase II Comprehensive Site Assessment report.

Comment 4: The use of the term “non-detect” to describe background is not appropriate. The ability for the laboratory to detect a contaminant is based on many factors.

Response: For sediment and surface water, MassDEP has not developed background concentrations to serve as a basis of comparison. Therefore, background concentrations for sediment and surface water for VOCs, PCBs, semivolatile organic compounds (SVOCs), pesticides and metals are assumed to be non-detect. This is not an unreasonable assumption. For groundwater, MassDEP has published background concentrations for select metals (arsenic, cadmium, chromium, lead, mercury, and silver), which have been used in this risk characterization. Groundwater background concentrations for all other analytes are considered to be non-detect, again because MassDEP has not developed or adopted background concentrations to serve as a basis of comparison. For the same reasons, soil background concentrations for VOCs, PCBs, SVOCs (other than PAHs), pesticides, and herbicides are also considered to be non-detect. The ecological risk assessment has been vetted by United States Environmental Protection Agency (EPA) Region 1 ecological risk specialists, and EPA has not disputed these reasonable assumptions.

Comment 5: No basis is provided to demonstrate that the 2010 zinc concentrations in surface water will remain unchanged. Furthermore, discussions of zinc in groundwater being “background” should be reexamined in light of the data throughout the PSWS.

Response: The draft Phase II Comprehensive Site Assessment report states that a Condition of No Significant Risk does not exist for surface water at the KMS wetland due to zinc concentrations above the Massachusetts surface water standard (see the Executive Summary for instance). This statement is provided despite the fact that the ecological risk characterization has demonstrated that aquatic organisms are not at risk from surface water concentrations of zinc based on site-specific testing. There is no guarantee that zinc concentrations in surface water will remain consistent with the concentrations detected in 2010, and no conclusions regarding risk or potential future remedial actions have been made.

Zinc levels in soil and groundwater throughout the PSWS have been evaluated. One elevated zinc concentration was detected in a soil/fill sample collected at the 129 Hathaway Boulevard church property, which is most likely attributable to a zinc-containing product (e.g., battery, galvanized metal) in the sample location. Zinc concentrations in PSWS soil are generally below the MCP S-1/GW-1 soil standard of 2,500 milligrams per kilogram (mg/kg). Over 99-percent of the soil samples collected from the PSWS have zinc concentrations below the MCP S-1/GW-1 standard.

Total zinc has only been identified above the applicable MCP GW-3 groundwater standard in a sample of water obtained from a seep in the floor of the boiler room at NBHS, which is attributed to zinc associated with galvanized metal objects and/or paint on the floor of the boiler room and not considered a reflection of actual groundwater conditions. Dissolved zinc has not been identified above the MCP GW-3 standard in any of the 36 PSWS groundwater samples collected by TRC that have been analyzed for dissolved zinc.

The fact that PSWS soil/fill generally contains zinc levels below the MCP S-1/GW-1 soil

standard coupled with the fact that dissolved zinc levels in PSWS groundwater are below the MCP GW-3 standard further suggests that the zinc levels identified in surface water at the KMS wetland may be a “background condition.”

Comment 6: *An explanation as to how the SED-11 area has become re-contaminated is appropriate. The discussion should describe what mechanisms (and their bases) were determined to not be feasible explanations for the re-contamination.*

Response: See response to Comment 3 on page 9 of this response summary.

Comment 7: *Further analysis of the groundwater-surface water hydrology may be important. The report says that groundwater is discharging to the Keith Wetlands. However, Figure 3-2 indicates that groundwater is flowing away from the Keith wetlands which would appear to indicate that surface water is discharging to the groundwater.*

Response: Section 3.2.2 of the draft Phase II Comprehensive Site Assessment report states that “Based on the results of the April 2010 synoptic round, which also included surface water level measurements collected from staff gauges SG-A thru SG-C, it appears that shallow groundwater at the Site discharges to the wetland surface water.” During that event, groundwater elevations in monitoring wells located adjacent to the wetland (i.e., monitoring wells MW-2, MW-9, and MW-10) were greater than the water levels at adjacent staff gauge locations indicating groundwater discharge to the wetland. Note that during the early part of May 2010, the water level in the wetland was higher than the groundwater elevation on either side of the wetland indicating that there are times (e.g., during periods of runoff/snowmelt) when the wetland may discharge to groundwater. However, these conditions are not considered significant for the following reasons: 1) with the exception of lead attributed to turbidity in one groundwater sample, analytical results for PCBs, PAHs, VOCs, and metals in groundwater adjacent to the wetland are well below the applicable MCP groundwater criteria for the area of the wetland; 2) the primary constituent of interest in the wetland (PCB Aroclors) is hydrophobic and tends to adsorb to organic carbon (which is abundant in wetland sediments) rather than be transported in groundwater; and 3) concentrations of the constituent of interest detected in surface water in the wetland (i.e., zinc) are more than 10 times below the applicable groundwater criteria indicating that surface water is not adversely impacting groundwater. Additional clarification based on this response will be added to the document as part of finalization.

Comment 8: *The KMSW site boundaries are not defined and it is implied in the report that contamination from KMSW has migrated to the wetlands and properties north of Durfee Street (see Section 5.2.1). Based on the fact that contamination from KMSW extends onto other properties, the KMSW site has not been defined and the requirements of the Phase II CSA have not been met. Furthermore, the risk characterizations are incomplete and a Phase III cannot be performed.*

Response: As noted in the response to Comment 1 for the draft Phase II Comprehensive Site Assessment for the Acquired Residential Properties and the Nemasket Street Lots, the City has adopted an approach whereby geographic areas of the PSWS are targeted, assessed, remedied, and closed with RAO-Ps. With an RAO-P as the endpoint, it is implicit that the response actions

are targeted and do not encompass the entire RTN 4-15685 site. The draft Phase II Comprehensive Site Assessment report, in the Executive Summary, Introduction, and in Section 1.1, acknowledges that the wetland is part of the PSWS, noting that response actions are conducted under the Special Project Designation under RTN 4-15685, the PSWS tracking number. In the Executive Summary, Introduction and Section 2.3.3, the draft Phase II Comprehensive Site Assessment report further notes that the fill material is attributable to historical waste disposal activities associated with the RTN 4-15685 disposal site. The Introduction to the draft Phase II Comprehensive Site Assessment report also clearly states that it focuses on the post-remedial impacts to the KMS wetland tracked under RTN 4-21300. The other properties associated with the RTN 4-15685 disposal site have been, or will be, addressed in separate reports (the adjacent Nemasket Street Properties, for example). This approach is consistent with that applied for Walsh Field and the NBHS Campus and has met with MassDEP's concurrence.

The area noted in the comments to the north of Durfee Street is under evaluation by EPA as location codes P-025 A-D, and further downstream the Potter Street wetland as P-034 and P-035. The City is not a participant in the P-025/P-034/P-035 undertaking.

The reviewer's comments on the risk characterization are not substantiated. As noted above in Comment 4, the ecological risk assessment has been thoroughly vetted by the EPA and found to be a sound document. In addition, the human health risk characterization was performed per the requirements of the MCP.