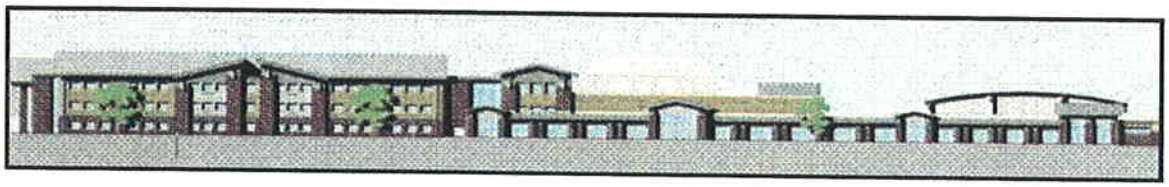
IMMEDIATE RESPONSE ACTION STATUS REPORT

Walsh Field – Soccer Field Soil Removal
Parker and Hunter Streets, New Bedford, Massachusetts
Release Tracking Number 4-21823



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TRC Project Number: 115058

May 10, 2009

Massachusetts Department of Environmental Protection
Southeast Regional Office
20 Riverside Drive
Lakeville, Massachusetts 02347

RE: **Immediate Response Action Plan (IRA) Status Report – Soccer Field Soil Removal**
Walsh Field
Parker and Hunter Streets, New Bedford, Massachusetts
Release Tracking Number (RTN) 4-21823

To Whom It May Concern:

Consistent with the requirements of the Massachusetts Contingency Plan (MCP; 310 CMR 40.0000), specifically 310 CMR 40.0425, attached please find an Immediate Response Action (IRA) Status Report for the above-referenced IRA condition in New Bedford, Massachusetts.

If you have any questions concerning the IRA Status Report or transmittal forms, please do not hesitate to contact me at 978-656-3565 or via e-mail at dsullivan@trcsolutions.com.

Sincerely,

David M. Sullivan, LSP, CHMM
Senior Project Manager

Attachment

cc. D. Fredette, S. Alfonse; Department of Environmental Stewardship
M. Cote, G. Martin; MassDEP Southeast Regional Office

L2009-236

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Immediate Response Action Status Report

Walsh Field – Soccer Field Soil Removal

Parker and Hunter Streets, New Bedford, Massachusetts

Release Tracking Number (RTN) 4-21823

TRC Project Number: 115058

July 10, 2009

TRC Environmental Corporation (TRC) is submitting this Immediate Response Action Status Report (IRA Status Report) to the Massachusetts Department of Environmental Protection (MassDEP) on behalf of the City of New Bedford (City). This IRA Status Report addresses the risk reduction measures that have been undertaken by the City at the Walsh Field property located adjacent to the intersection of Parker and Hunter Streets in New Bedford, Massachusetts, specifically relative to the Soccer Field (the "Site"). RTN 4-21823 has been assigned to the Site, and is related to an Imminent Hazard (IH) condition associated with the Soccer field that triggered a 2-hour regulatory reporting obligation to the MassDEP in accordance with 310 CMR 40.0311(7). The IH condition was reported to the MassDEP by TRC via telephone in conjunction with the City of New Bedford on March 4, 2009. MassDEP orally approved IRA assessment and removal activities at the Site, and assigned RTN 4-21823.

This IRA Status Report is organized as follows: Section I (Background) briefly summarizes information on TRC's involvement with the Site, the circumstances of the release, and the response actions conducted at the Site under MassDEP oral approval. Section II (IRA Status Report) provides the information required for an IRA Status Report under the MCP, specifically 310 CMR 40.0425. Section III (References) lists information sources relied upon in the preparation of this IRA Status Report.

I. BACKGROUND

The IH condition was discovered during additional investigation to delineate the extent of previously detected concentrations of lead, cadmium and polycyclic aromatic hydrocarbons (PAHs) in soil at the Soccer Field area and to determine the extent of potential soil removal necessary to achieve a condition of no significant risk for the top three feet of soil within this area. The WFE-5 sampling location had been identified as one of three areas requiring further delineation sampling to support remedial planning in the soccer field area.

The contamination at WFE-5 and the rest of Walsh Field subsurface contamination is associated with historical landfilling activities. Boring logs included in TRC's May 2009 IRA Plan (TRC, 2009) indicate the presence of fill material containing ash, glass, and clinkers. The contaminated fill at Walsh Field is associated with the Parker Street Waste Site (PSWS) that is tracked under RTN 4-15685.

Investigation History

On February 23, 2009, TRC conducted soil sampling at the Soccer Field area of Walsh Field to delineate the extent of previously detected concentrations of lead, cadmium and polycyclic aromatic hydrocarbons (PAHs) in soil and to support remedial planning in this area. This work was conducted in accordance with a TRC-prepared scope of work approved by the City for addressing data gaps identified in the delineation of the PSWS.

The protocol for the delineation sampling called for the collection of four "inner ring" soil samples (0 to 1 foot and 1 to 3 feet in depth) four feet away from the original WFE-5 sampling location to the north, east, south and west (designated "A" through "D"; see Figure 2). The protocol further called for the collection of four additional "outer ring" samples eight feet from the original WFE-5 sampling location (designated "E" through "H") that would be authorized for analysis at the laboratory as needed to delineate the contamination. "Outer ring" samples were also collected from the 0 to 1 and 1 to 3 feet intervals. All samples were collected on February 23, 2009 and the "inner ring" samples were authorized for lead, cadmium and PAH analysis. The "outer ring" samples were held at the laboratory, pending the results of the "inner ring" sample analysis.

Cadmium and PAH concentrations in the four "inner ring" surface soil samples were below the MassDEP background concentration for natural soil. Lead concentrations were below the Method 1 S-1/GW-2 and S-1/GW-3 standards (300 mg/kg) at three of the four "inner ring" surface soil locations (WFE5-B through WFE5-D). However, at location WFE5-A, a concentration of 3,360 mg/kg was detected in the 0 to 1 foot interval. Due to the detection of lead at a level more than 10-fold the Method 1 S-1 standard at the WFE5-A location, TRC performed a preliminary IH analysis and determined than an IH condition was likely to be present. The IH condition was reported and the "outer ring" samples were immediately authorized for analysis to determine the extent of the elevated surficial lead.

Lead concentrations in 0 to 1 foot samples WFE5-E through WFE5-H, reported by the laboratory on March 6, 2009, were less than the Method 1 S-1 standard of 300 mg/kg, with a maximum detected concentration of 220 mg/kg. Four additional locations were sampled to the north of WFE5-E at two foot step-out intervals (WFE5-I through WFE5-L) on March 11, 2009, primarily to delineate lead in the 1 to 3 foot interval. However, lead concentrations in the four 0 to1 foot samples were also below Method 1 S-1 standards, confirming that the extent of the surficial lead had been delineated.

As noted in the IH evaluation for the Soccer Field included in TRC's May 2009 IRA Plan, the estimated cancer risk for the young child recreational user did not exceed the MCP risk limits for an IH of an excess lifetime cancer risk (ELCR) of 1E-05. However, the noncarcinogenic hazard quotient of 20 exceeded the MCP hazard index (HI) of 10. The IH was identified at the Soccer Field primarily due to the exposure pathway of the ingestion of lead-containing surface soil.

Lead Concentrations at the Soccer Field

The WFE-5 sampling location had been identified as an area requiring further delineation sampling within the Soccer Field, based on prior analytical results. The laboratory analytical results for the soil samples collected to delineate documented contamination are summarized in Table 1. One soil sample collected on February 23, 2009 at boring WFE-5A from 0-1 foot below ground surface (bgs) contained lead at a concentration of 3,360 mg/kg, which prompted a preliminary IH evaluation and regulatory reporting. None of the additional samples analyzed following the observation of the high lead result at WFE-5A contained lead above the TRC calculated IH threshold. TRC's risk analysis determined that the removal of a rectangular area within the Soccer Field, with approximate dimensions of 23.5 feet (north-south) by 15.1 feet (east-west) by 3 feet deep (see Figure 3) would be sufficient to address the IH condition and reduce risk. The lateral extent of the excavation area was defined by lead samples WFE-5B to the east, WFE-5G to the south, WFE-5H to the west, and WFE-5L to the north. TRC identified the excavation area to conservatively remove soil contaminated with lead in the vicinity of the IH condition.

Release Reporting

RTN 4-21823 has been assigned to the Site, and is related to a potential IH condition associated with the Soccer field that triggered a 2-hour regulatory reporting obligation to the MassDEP in accordance with 310 CMR 40.0311(7). The potential IH condition was reported to the MassDEP by TRC via telephone in conjunction with the City of New Bedford on March 4, 2009. MassDEP assigned RTN 4-21823 and orally approved the following response action as an IRA:

- Assessment and Monitoring
- Soil Removal

Imminent Hazard Analysis

An IH evaluation, which was provided in TRC's May 2009 IRA Plan, was initiated within 14 days of obtaining knowledge of the potential IH condition. For the Soccer Field, TRC's risk assessment specialist conducted the IH calculations using the maximum detected concentration (3,360 mg/kg) as the Exposure Point Concentration (EPC) for lead, and also used maximum detected concentrations as EPCs for other contaminants of potential concern such as cadmium and polycyclic aromatic hydrocarbons (PAHs). TRC also used site-specific exposure assumptions that were more health-protective than used by MassDEP for a park visitor scenario, and default MassDEP toxicity criteria. TRC completed the IH analysis on March 16, 2009, satisfying the IH evaluation initiation timeline under the MCP. The risk assessment calculations indicate an IH existed at the Soccer Field, but does not exist presently, following the soil excavation and removal.

Soil Excavation and Removal

Analytical results of soil samples collected in the vicinity of WFE-5A were used in the delineation of an approximate 23.5 ft by 15.1 ft area to be excavated and removed. The lateral extents of the soil excavation area were identified by sample locations evidencing concentrations

of lead below the applicable Method 1 cleanup standard. The locations of all TRC sampling points were surveyed by Land Planning, Incorporated of Hanson, Massachusetts (Land Planning). Land Planning field staked TRC's delineation sampling locations prior to excavation to guide soil removal.

Soils in the Soccer Field that were determined to contain elevated lead concentrations were excavated on March 13, 2009 following receipt of verbal approval from MassDEP on March 11, 2009. Approximately 41 cubic yards of excavated soils were loaded directly into roll-off containers lined with 10-mil polyethylene sheeting. All soils were excavated up to the staked excavation boundaries and down to 3 feet bgs. The dimensions of the excavation area were intended to be protective of potential soil exposure, consistent with the assumptions in TRC's IH evaluation.

During IRA-related contaminated soil excavation and management activities, TRC conducted real-time field screening of dust levels using direct reading instruments that are designed to monitor air quality on a real-time basis at locations upwind and downwind of excavation and soil moving activities. The dust monitoring units were TSI Dustrak™ units with size-selective inlet for particles of 10 micrometers in diameter or less (PM_{10}). The dust monitoring instruments were zeroed before use and at the end of the day. Data was logged at 60-second intervals and monitored periodically by field personnel during IRA-related excavation activities. Data was downloaded daily. The upwind sample was intended to provide a measurement of background ambient dust levels; however, this unit malfunctioned and did not record dust concentrations throughout the day. There were no exceedances of TRC's prescribed action level, 150 ug/m^3 sustained for 15 minutes, during soil excavation and loading.

The excavated area was backfilled on March 13, 2009 using a contaminant-free source (stone dust). Future grounds keeping activities are expected at the area to restore turf growth.

Waste Characterization Analysis

A waste characterization soil sample (WFE-5W) was collected from the excavated soils, and submitted for laboratory analysis of volatile organic compounds (VOCs), total poly-chlorinated biphenyls (PCBs), polycyclic aromatic hydrocarbons (PAHs), total petroleum hydrocarbons (TPH), and Resource and Conservation Recovery Act (RCRA) 8 metals. Additional volume was collected for Toxicity Characteristic Leaching Procedure (TCLP) metals analysis, contingent upon total metals results.

The roll-off containers containing the excavated soils were transported under a Bill of Lading (BOL) to the Shawmut Avenue Transfer Station, owned by the City of New Bedford, for temporary storage. A copy of the BOL was provided in TRC's May 2009 IRA Plan.

Soil sample WFE-5W exhibited a lead concentration of 655 mg/kg (Table 2). Since this concentration is greater than 20-times the allowable aqueous lead leachate level, the sample was analyzed for TCLP lead. Based on TCLP analysis, the extract from the soil contained a lead concentration of 8.04 mg/L (Table 3). This concentration exceeds the 5.0 mg/L concentration identified as the regulatory level for lead by MassDEP in 310 CMR 30.125: Table 1 (characteristic hazardous waste). The soil at the Shawmut Avenue Transfer Station in New

Bedford, Massachusetts is scheduled for lead stabilization treatment on July 13, 2009. Final soil disposition will be determined following treatment

II. IMMEDIATE RESPONSE ACTION STATUS REPORT (310 CMR 40.0425)

This IRA Status Report is organized according to the minimum information needs set forth under 310 CMR 40.0425(3)(a) through (e) of the MCP.

(a) The Status of Assessment and/or Remedial Actions

IRA activities relating to RTN 4-21823 are complete; however, an IRA Completion Report cannot be filed until all remediation waste has been properly disposed (see Section C below).

(b) New Site Information and Data

No new Site information or data has been generated since TRC's May 2009 IRA Plan, other than that soils removed from the Site are scheduled fro lead stabilization treatment on July 13, 2009. See Section C and Attachment A for further information.

(c) Plans for the Management of Remediation Waste

The soil excavated from the Soccer Field area of Walsh Field remains in lined and covered roll-off containers at the Shawmut Avenue Transfer Station in New Bedford, Massachusetts awaiting treatment and disposal.

The City has procured Triumvirate Environmental, Incorporated of Somerville, Massachusetts (Triumvirate) to treat the lead-containing soil with Free Flow Technologies® FF-100 chemical reagent that binds the lead to the soil, thereby inhibiting the leaching of lead from the soil. Triumvirate will empty the roll-off containers onto minimum 6-mil polyethylene sheeting at the Shawmut Avenue Transfer Station and apply the chemical reagent to the soil at the manufacturer recommended ratio and mix the soil and reagent in accordance with manufacturers' instructions. The scheduled date for soil treatment is July 13, 2009.

Once the soil has been treated, Triumvirate will collect a composite sample of the soil for TCLP lead analysis to assess the effectiveness of the chemical reagent, and the treated soil will be loaded back into lined and covered roll-off containers. If the result of TCLP lead analysis indicates that the soil is no longer a characteristic hazardous waste, the soil will be immediately transported to an appropriately licensed landfill for reuse. TRC will maintain BOLs for the shipment and disposal of the soil.

The removal of the lead-containing soil from the Soccer Field area of Walsh Field mitigated the IH condition previously identified. Once the soil has been properly disposed, IRA activities relating to RTN 4-21823 will be complete.

(d) Mass DEP-Required Information

An IH evaluation was performed and submitted with the IRA Plan. No additional information has been requested by MassDEP.

(e) LSP Opinion

The objective of this IRA was to delineate and remove soil containing lead at concentrations posing an imminent hazard from the Soccer Field area of Walsh Field. The removal of the lead-containing soil from the Soccer Field area of Walsh Field mitigated the IH condition. Once the soil has been properly disposed, immediate response actions relating to RTN 4-21823 will be complete.

This IRA Status Report has been prepared in accordance with 310 CMR 40.0425 as set forth in the MCP.

_____ _____

David M. Sullivan, LSP, CHMM **Date**
TRC Environmental Corporation
Licensed Site Professional No. 1488

_____

Stamp

III. REFERENCES

TRC, 2009 — Immediate Response Action Plan, Walsh Field – Soccer Field Soil Removal, Parker and Hunter Streets, New Bedford, Massachusetts. Prepared for: City of New Bedford, 133 William Street, New Bedford, Massachusetts. Prepared by: TRC Environmental Corporation, Lowell, Massachusetts. May 4, 2009.

TABLES

Table 1: Summary of Analytical Results for Soil Samples - 2006 and 2009
Immediate Response Action Plan
Walsh Field - Soccer Field
New Bedford, Massachusetts

Analysis	Analyte	S-1/GW-2	S-1/GW-3	S-2/GW-2	S-2/GW-3	RC S-1	TSCA	Sample Location: WFE-5	WFE-5-A		WFE-5-B			WFE-5-C		WFE-5-D		WFE-5-E		WFE-5-F	
								Sample Date: 2/23/2006	0-1 2/23/2009	1-3 2/23/2009	0-1 2/23/2009	1-3 2/23/2009	1-3 2/23/2009 Field Dup	0-1 2/23/2009	1-3 2/23/2009	0-1 2/23/2009	1-3 2/23/2009	0-1 02/23/09	1-3 02/23/09	0-1 02/23/09	1-3 02/23/09
								Sample Depth (ft.): 1.75-2.5													
PAHs / Dibenzofuran																					
(mg/kg)	Dibenzofuran	NS	NS	NS	NS	100	N/A	0.065 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	2-Methylnaphthalene	80	300	80	500	0.7	N/A	0.065 U	0.236 U	0.225 U	0.202 U	0.233 U	0.222 U	0.212 U	0.212 U	0.229 U	0.238 U	NA	NA	NA	NA
	Acenaphthene	1,000	1,000	3,000	3,000	4	N/A	0.065 U	0.236 U	0.225 U	0.202 U	0.233 U	0.222 U	0.212 U	0.212 U	0.229 U	0.238 U	NA	NA	NA	NA
	Acenaphthylene	600	10	600	10	1	N/A	0.065 U	0.236 U	0.225 U	0.202 U	0.233 U	0.222 U	0.212 U	**0.305**	0.229 U	0.238 U	NA	NA	NA	NA
	Anthracene	1,000	1,000	3,000	3,000	1,000	N/A	0.065 U	0.236 U	0.225 U	0.202 U	0.233 U	0.222 U	0.212 U	**2.00**	0.229 U	0.238 U	NA	NA	NA	NA
	Benzo(a)anthracene	7	7	40	40	7	N/A	**0.140**	0.236 U	**0.233**	0.202 U	0.233 U	**0.283**	**0.260**	**4.03**	**0.245**	0.238 U	NA	NA	NA	NA
	Benzo(a)pyrene	2	2	4	4	2	N/A	**0.170**	0.236 U	0.225 U	0.202 U	0.233 U	**0.254**	**0.235**	**3.27**	0.229 U	0.238 U	NA	NA	NA	NA
	Benzo(b)fluoranthene	7	7	40	40	7	N/A	**0.110**	0.236 U	**0.237**	0.202 U	0.233 U	**0.281**	**0.263**	**3.77**	**0.231**	0.238 U	NA	NA	NA	NA
	Benzo(g,h,i)perylene	1,000	1,000	3,000	3,000	1,000	N/A	**0.077**	0.236 U	0.225 U	0.202 U	0.233 U	0.222 U	0.212 U	**0.978**	0.229 U	0.238 U	NA	NA	NA	NA
	Benzo(k)fluoranthene	70	70	400	400	70	N/A	**0.210**	0.236 U	0.225 U	0.202 U	0.233 U	0.222 U	0.212 U	**1.36**	0.229 U	0.238 U	NA	NA	NA	NA
	Chrysene	70	70	400	400	70	N/A	**0.130**	0.236 U	**0.296**	0.202 U	0.233 U	**0.338**	**0.290**	**3.93**	**0.293**	0.238 U	NA	NA	NA	NA
	Dibenz(a,h)anthracene	0.7	0.7	4	4	0.7	N/A	0.065 U	0.236 U	0.225 U	0.202 U	0.233 U	0.222 U	0.212 U	**0.291**	0.229 U	0.238 U	NA	NA	NA	NA
	Fluoranthene	1,000	1,000	3,000	3,000	1,000	N/A	**0.270**	0.236 U	**0.489**	0.202 U	0.233 U	**0.488**	**0.443**	**6.48**	**0.371**	0.238 U	NA	NA	NA	NA
	Fluorene	1,000	1,000	3,000	3,000	1,000	N/A	0.065 U	0.236 U	0.225 U	0.202 U	0.233 U	0.222 U	0.212 U	**0.617**	0.229 U	0.238 U	NA	NA	NA	NA
	Indeno(1,2,3-cd)pyrene	7	7	40	40	7	N/A	0.065 U	0.236 U	0.225 U	0.202 U	0.233 U	**0.223**	0.212 U	**1.28**	0.229 U	0.238 U	NA	NA	NA	NA
	Naphthalene	40	500	40	1,000	4	N/A	0.065 U	0.236 U	0.225 U	0.202 U	**0.524**	0.222 U	0.212 U	0.212 U	0.229 U	**0.763**	NA	NA	NA	NA
	Phenanthrene	500	500	1,000	1,000	10	N/A	**0.160**	0.236 U	**0.484**	0.202 U	0.233 U	**0.514**	**0.389**	**7.96**	**0.342**	0.238 U	NA	NA	NA	NA
	Pyrene	1,000	1,000	3,000	3,000	1,000	N/A	**0.360**	0.236 U	**0.622**	**0.257**	**0.289**	**0.748**	**0.604**	**8.15**	**0.630**	**0.314**	NA	NA	NA	NA
Metals, total																					
(mg/kg)	Mercury	20	20	30	30	20	N/A	**0.420**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Arsenic	20	20	20	20	20	N/A	**9.31**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Barium	1,000	1,000	3,000	3,000	1,000	N/A	**224**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Cadmium	2	2	30	30	2	N/A	**61.0**	**0.750**	**0.830**	0.310 U	**0.880**	**0.710**	**0.560**	**1.93**	**0.550**	**0.950**	NA	NA	NA	NA
	Chromium	30	30	200	200	30	N/A	**22**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Lead	300	300	300	300	300	N/A	**562**	**3,360**	**1,830**	**40.7**	**268**	**254**	**214**	**654**	**253**	**1,040**	**91**	**2,500**	**4.83**	**839**
	Selenium	400	400	800	800	400	N/A	1.69 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Silver	100	100	200	200	100	N/A	0.85 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes:
All units in mg/kg unless otherwise specified.
mg/kg - milligrams per kilogram (dry weight) or parts per million (ppm).
mg/L - milligrams per liter
NA - Sample not analyzed for the listed analyte.
N/A - Not applicable.
U - Compound was not detected at specified quantitation limit.
Values in **Bold** indicate the compound was detected.
Values shown in Bold and shaded type exceed one or more of the listed Method 1 standards or TCLP standard, as applicable.
VOCs - Volatile Organic Compounds.
PAHs - Polynuclear Aromatic Hydrocarbons.
PCBs - Polychlorinated Biphenyls.
RC - Reportable Concentration.
TSCA - Toxic Substances Control Act criteria.
2006 data are based on the "Summary of Analytical Data, Walsh Field" dated June 9, 2006. BETA Group, Inc.
(1) - MassDEP Method 1 standards and RC for C9-C10 aromatics used.
(2) - MassDEP RC for Dichloropropane used.
(3) - MassDEP RC for Dichloropropene used.
(4) - SW-846 Chapter 7, Table 7-1, *Maximum Concentration of Contaminants for Toxicity Characteristic*.

Table 1: Summary of Analytical Results for Soil Samples - 2006 and 2009
Immediate Response Action Plan
Walsh Field - Soccer Field
New Bedford, Massachusetts

Analysis	Analyte	Sample Location:						WFE-5-G		WFE-5-H		WFE-5-I			WFE-5-J		WFE-5-K		WFE-5-L	
		Sample Date:						0-1	1-3	0-1	1-3	0-1	0-1	1-3	0-1	1-3	0-1	1-3	0-1	1-3
		Sample Depth (ft.):						2/23/2009	2/23/2009	02/23/09	02/23/09	03/11/09	03/11/09 Field Dup	03/11/09	03/11/09	03/11/09	03/11/09	03/11/09	03/11/09	03/11/09
		S-1/GW-2	S-1/GW-3	S-2/GW-2	S-2/GW-3	RC S-1	TSCA													
PAHs / Dibenzofuran																				
(mg/kg)	Dibenzofuran	NS	NS	NS	NS	100	N/A	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	2-Methylnaphthalene	80	300	80	500	0.7	N/A	0.243 U	0.214 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Acenaphthene	1,000	1,000	3,000	3,000	4	N/A	0.243 U	0.214 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Acenaphthylene	600	10	600	10	1	N/A	0.243 U	0.214 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Anthracene	1,000	1,000	3,000	3,000	1,000	N/A	0.243 U	0.214 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Benzo(a)anthracene	7	7	40	40	7	N/A	0.243 U	0.214 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Benzo(a)pyrene	2	2	4	4	2	N/A	0.243 U	0.214 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Benzo(b)fluoranthene	7	7	40	40	7	N/A	0.243 U	0.214 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Benzo(g,h,i)perylene	1,000	1,000	3,000	3,000	1,000	N/A	0.243 U	0.214 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Benzo(k)fluoranthene	70	70	400	400	70	N/A	0.243 U	0.214 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Chrysene	70	70	400	400	70	N/A	0.243 U	**0.214**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Dibenz(a,h)anthracene	0.7	0.7	4	4	0.7	N/A	0.243 U	0.214 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Fluoranthene	1,000	1,000	3,000	3,000	1,000	N/A	0.243 U	**0.334**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Fluorene	1,000	1,000	3,000	3,000	1,000	N/A	0.243 U	0.214 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Indeno(1,2,3-cd)pyrene	7	7	40	40	7	N/A	0.243 U	0.214 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Naphthalene	40	500	40	1,000	4	N/A	0.243 U	0.214 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Phenanthrene	500	500	1,000	1,000	10	N/A	0.243 U	**0.249**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Pyrene	1,000	1,000	3,000	3,000	1,000	N/A	0.243 U	**0.412**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Metals, total																				
(mg/kg)	Mercury	20	20	30	30	20	N/A	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Arsenic	20	20	20	20	20	N/A	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Barium	1,000	1,000	3,000	3,000	1,000	N/A	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Cadmium	2	2	30	30	2	N/A	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Chromium	30	30	200	200	30	N/A	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Lead	300	300	300	300	300	N/A	**100**	**303**	**220**	**267**	**217**	**239**	**1,250**	**108**	**1,490**	**142**	**482**	**219**	**277**
	Selenium	400	400	800	800	400	N/A	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Silver	100	100	200	200	100	N/A	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes:
All units in mg/kg unless otherwise specified.
mg/kg - milligrams per kilogram (dry weight) or parts per million (ppm).
mg/L - milligrams per liter
NA - Sample not analyzed for the listed analyte.
N/A - Not applicable.
U - Compound was not detected at specified quantitation limit.
Values in Bold indicate the compound was detected.
Values shown in Bold and shaded type exceed one or more of the listed Method 1 standards or TCLP standard, as applicable.
VOCs - Volatile Organic Compounds.
PAHs - Polynuclear Aromatic Hydrocarbons.
PCBs - Polychlorinated Biphenyls.
RC - Reportable Concentration.
TSCA - Toxic Substances Control Act criteria.
2006 data are based on the "Summary of Analytical Data, Walsh Field" dated June 9, 2006, BETA Group, Inc.
(1) - MassDEP Method 1 standards and RC for C9-C10 aromatics used.
(2) - MassDEP RC for Dichloropropane used.
(3) - MassDEP RC for Dichloropropene used.
(4) - SW-846 Chapter 7, Table 7-1, *Maximum Concentration of Contaminants for Toxicity Characteristic* .

Table 2: Summary of Analytical Results for Waste Characterization Soil Sample - March 2009
Immediate Response Action Plan
Walsh Field - Soccer Field
New Bedford, Massachusetts

Analysis	Analyte	Sample Location:					WFE-5-W
		Sample Depth (ft.):					0-3
		Sample Date:					3/13/2009
		Reuse Level*		Soil Recycling Facility Summary Levels**			
		Lined Landfills	Unlined Landfill	Hot Mix Asphalt Plants	Thermal Processing Plant	Cold Mix Emulsion Plant	
VOCs							
(mg/kg)	Acetone	NA	NA	NA	NA	NA	0.11 U
	tert-Amylmethyl Ether	NA	NA	NA	NA	NA	0.002 U
	Benzene	NA	NA	NA	NA	NA	0.003 U
	Bromobenzene	NA	NA	NA	NA	NA	0.003 U
	Bromochloromethane	NA	NA	NA	NA	NA	0.003 U
	Bromodichloromethane	NA	NA	NA	NA	NA	0.003 U
	Bromoform	NA	NA	NA	NA	NA	0.011 U
	Bromomethane	NA	NA	NA	NA	NA	0.011 U
	2-Butanone (MEK)	NA	NA	NA	NA	NA	0.043 U
	n-Butylbenzene	NA	NA	NA	NA	NA	0.003 U
	sec-Butylbenzene	NA	NA	NA	NA	NA	0.003 U
	tert-Butylbenzene	NA	NA	NA	NA	NA	0.003 U
	tert-Butylethyl Ether	NA	NA	NA	NA	NA	0.002 U
	Carbon Disulfide	NA	NA	NA	NA	NA	0.007 U
	Carbon Tetrachloride	NA	NA	NA	NA	NA	0.003 U
	Chlorobenzene	NA	NA	NA	NA	NA	0.003 U
	Chlorodibromomethane	NA	NA	NA	NA	NA	0.011 U
	Chloroethane	NA	NA	NA	NA	NA	0.022 U
	Chloroform	NA	NA	NA	NA	NA	0.005 U
	Chloromethane	NA	NA	NA	NA	NA	0.011 U
	2-Chlorotoluene	NA	NA	NA	NA	NA	0.003 U
	4-Chlorotoluene	NA	NA	NA	NA	NA	0.003 U
	1,2-Dibromo-3-Chloropropane	NA	NA	NA	NA	NA	0.003 U
	1,2-Dibromoethane	NA	NA	NA	NA	NA	0.002 U
	Dibromomethane	NA	NA	NA	NA	NA	0.003 U
	1,2-Dichlorobenzene	NA	NA	NA	NA	NA	0.003 U
	1,3-Dichlorobenzene	NA	NA	NA	NA	NA	0.003 U
	1,4-Dichlorobenzene	NA	NA	NA	NA	NA	0.003 U
	Dichlorodifluoromethane	NA	NA	NA	NA	NA	0.022 U
	1,1-Dichloroethane	NA	NA	NA	NA	NA	0.003 U
	1,2-Dichloroethane	NA	NA	NA	NA	NA	0.003 U
	1,1-Dichloroethylene	NA	NA	NA	NA	NA	0.005 U
	cis-1,2-Dichloroethylene	NA	NA	NA	NA	NA	0.003 U
	trans-1,2-Dichloroethylene	NA	NA	NA	NA	NA	0.003 U
	1,2-Dichloropropane	NA	NA	NA	NA	NA	0.003 U
	1,3-Dichloropropane	NA	NA	NA	NA	NA	0.002 U
	2,2-Dichloropropane	NA	NA	NA	NA	NA	0.003 U
	1,1-Dichloropropene	NA	NA	NA	NA	NA	0.003 U
	cis-1,3-Dichloropropene	NA	NA	NA	NA	NA	0.011 U
	trans-1,3-Dichloropropene	NA	NA	NA	NA	NA	0.011 U
	Diethyl Ether	NA	NA	NA	NA	NA	0.022 U
	Diisopropyl Ether	NA	NA	NA	NA	NA	0.002 U
	1,4-Dioxane	NA	NA	NA	NA	NA	0.11 U
	Ethyl Benzene	NA	NA	NA	NA	NA	0.003 U
	Hexachlorobutadiene	NA	NA	NA	NA	NA	0.003 U
	2-Hexanone	NA	NA	NA	NA	NA	0.022 U
	Isopropylbenzene	NA	NA	NA	NA	NA	0.003 U
	p-Isopropyltoluene	NA	NA	NA	NA	NA	0.003 U
	MTBE	NA	NA	NA	NA	NA	0.005 U
	Methylene Chloride	NA	NA	NA	NA	NA	0.022 U
	MIBK	NA	NA	NA	NA	NA	0.022 U
	Naphthalene	NA	NA	NA	NA	NA	0.011 U
	n-Propylbenzene	NA	NA	NA	NA	NA	0.003 U
	Styrene	NA	NA	NA	NA	NA	0.011 U
	1,1,1,2-Tetrachloroethane	NA	NA	NA	NA	NA	0.003 U
	1,1,2,2-Tetrachloroethane	NA	NA	NA	NA	NA	0.002 U
	Tetrachloroethylene	NA	NA	NA	NA	NA	0.003 U
	Tetrahydrofuran	NA	NA	NA	NA	NA	0.011 U
	Toluene	NA	NA	NA	NA	NA	0.003 U
	1,2,3-Trichlorobenzene	NA	NA	NA	NA	NA	0.011 U
	1,2,4-Trichlorobenzene	NA	NA	NA	NA	NA	0.005 U
	1,1,1-Trichloroethane	NA	NA	NA	NA	NA	0.003 U
	1,1,2-Trichloroethane	NA	NA	NA	NA	NA	0.003 U
	Trichloroethylene	NA	NA	NA	NA	NA	0.003 U
	Trichlorofluoromethane	NA	NA	NA	NA	NA	0.011 U
	1,2,3-Trichloropropane	NA	NA	NA	NA	NA	0.003 U
	1,2,4-Trimethylbenzene	NA	NA	NA	NA	NA	0.003 U
	1,3,5-Trimethylbenzene	NA	NA	NA	NA	NA	0.003 U
	Vinyl Chloride	NA	NA	NA	NA	NA	0.011 U
	m + p Xylene	NA	NA	NA	NA	NA	0.005 U
	o-Xylene	NA	NA	NA	NA	NA	0.003 U
	Total VOCs	10	4	30 to 1,800			ND
SVOCs							
(mg/kg)	Acenaphthene	NA	NA	NA	NA	NA	0.233 U
	Acenaphthylene	NA	NA	NA	NA	NA	0.233 U
	Acetophenone	NA	NA	NA	NA	NA	NA
	Aniline	NA	NA	NA	NA	NA	NA
	Anthracene	NA	NA	NA	NA	NA	0.233 U
	Benzo(a)anthracene	NA	NA	NA	NA	NA	**0.303**
	Benzo(a)pyrene	NA	NA	NA	NA	NA	**0.287**
	Benzo(b)fluoranthene	NA	NA	NA	NA	NA	**0.381**
	Benzo(g,h,i)perylene	NA	NA	NA	NA	NA	0.233 U
	Benzo(k)fluoranthene	NA	NA	NA	NA	NA	0.233 U
	Bis(2-chloroethoxy)methane	NA	NA	NA	NA	NA	NA
	Bis(2-chloroethyl)ether	NA	NA	NA	NA	NA	NA
	Bis(2-chloroisopropyl)ether	NA	NA	NA	NA	NA	NA
	Bis(2-ethylhexyl)phthalate	NA	NA	NA	NA	NA	NA

Table 2: Summary of Analytical Results for Waste Characterization Soil Sample - March 2009
Immediate Response Action Plan
Walsh Field - Soccer Field
New Bedford, Massachusetts

Analysis	Analyte	Sample Location:					WFE-5-W
		Sample Depth (ft.):					0-3
		Sample Date:					3/13/2009
		Reuse Level*		Soil Recycling Facility Summary Levels**			
		Lined Landfills	Unlined Landfill	Hot Mix Asphalt Plants	Thermal Processing Plant	Cold Mix Emulsion Plant	
	4-Bromophenyl phenyl ether	NA	NA	NA	NA	NA	NA
	Butylbenzylphthalate	NA	NA	NA	NA	NA	NA
	4-Chloroaniline	NA	NA	NA	NA	NA	NA
	2-Chloronaphthalene	NA	NA	NA	NA	NA	NA
	2-Chlorophenol	NA	NA	NA	NA	NA	NA
	Chrysene	NA	NA	NA	NA	NA	**0.336**
	Dibenzofuran	NA	NA	NA	NA	NA	NA
	Dibenz(a,h)anthracene	NA	NA	NA	NA	NA	0.233 U
	1,2-Dichlorobenzene	NA	NA	NA	NA	NA	NA
	1,3-Dichlorobenzene	NA	NA	NA	NA	NA	NA
	1,4-Dichlorobenzene	NA	NA	NA	NA	NA	NA
	3,3'-Dichlorobenzidine	NA	NA	NA	NA	NA	NA
	2,4-Dichlorophenol	NA	NA	NA	NA	NA	NA
	Diethylphthalate	NA	NA	NA	NA	NA	NA
	2,4-Dimethylphenol	NA	NA	NA	NA	NA	NA
	Dimethylphthalate	NA	NA	NA	NA	NA	NA
	Di-n-butylphthalate	NA	NA	NA	NA	NA	NA
	Di-n-octylphthalate	NA	NA	NA	NA	NA	NA
	2,4-Dinitrophenol	NA	NA	NA	NA	NA	NA
	2,4-Dinitrotoluene	NA	NA	NA	NA	NA	NA
	2,6-Dinitrotoluene	NA	NA	NA	NA	NA	NA
	Azobenzene	NA	NA	NA	NA	NA	NA
	Fluoranthene	NA	NA	NA	NA	NA	**0.521**
	Fluorene	NA	NA	NA	NA	NA	0.233 U
	Hexachlorobenzene	NA	NA	NA	NA	NA	NA
	Hexachlorobutadiene	NA	NA	NA	NA	NA	NA
	Hexachloroethane	NA	NA	NA	NA	NA	NA
	Indeno(1,2,3-cd)pyrene	NA	NA	NA	NA	NA	0.233 U
	Isophorone	NA	NA	NA	NA	NA	NA
	o-cresol	NA	NA	NA	NA	NA	NA
	m & p-cresol(s)	NA	NA	NA	NA	NA	NA
	2-Methylnaphthalene	NA	NA	NA	NA	NA	0.233 U
	Naphthalene	NA	NA	NA	NA	NA	0.233 U
	Nitrobenzene	NA	NA	NA	NA	NA	NA
	2-Nitrophenol	NA	NA	NA	NA	NA	NA
	4-Nitrophenol	NA	NA	NA	NA	NA	NA
	Pentachlorophenol	NA	NA	NA	NA	NA	NA
	Phenanthrene	NA	NA	NA	NA	NA	**0.558**
	Phenol	NA	NA	NA	NA	NA	NA
	Pyrene	NA	NA	NA	NA	NA	**0.646**
	1,2,4-Trichlorobenzene	NA	NA	NA	NA	NA	NA
	2,4,5-Trichlorophenol	NA	NA	NA	NA	NA	NA
	2,4,6-Trichlorophenol	NA	NA	NA	NA	NA	NA
	Total SVOCs	100	100	NA	NA	NA	*3.032*
PCBs							
(mg/kg)	Aroclor 1016	NA	NA	NA	NA	NA	0.14 U
	Aroclor 1221	NA	NA	NA	NA	NA	0.14 U
	Aroclor 1232	NA	NA	NA	NA	NA	0.14 U
	Aroclor 1242	NA	NA	NA	NA	NA	0.14 U
	Aroclor 1248	NA	NA	NA	NA	NA	0.14 U
	Aroclor 1254	NA	NA	NA	NA	NA	0.14 U
	Aroclor 1260	NA	NA	NA	NA	NA	0.14 U
	Aroclor 1262	NA	NA	NA	NA	NA	0.14 U
	Aroclor 1268	NA	NA	NA	NA	NA	0.14 U
	Total PCBs	< 2	< 2	< 2	< 2	< 2	ND
Metals, total							
(mg/kg)	Mercury	10	10	10	3	10	**0.349**
	Arsenic	40	40	30	30	30	**15.7**
	Barium	NA	NA	NA	NA	NA	**278**
	Cadmium	80	30	30	11	30	**1.59**
	Chromium	1,000	1,000	500	500	500	**16.7**
	Lead	2,000	1,000	1,000	1,000	1,000	**655**
	Selenium	NA	NA	NA	NA	NA	6.99 U
	Silver	NA	NA	NA	NA	NA	0.70 U
Total Petroleum Hydrocarbon							
(mg/kg)	TPH	5,000	2,500	5,000 to 60,000			**240**

Notes:
mg/kg - milligrams per kilogram (dry weight) or parts per million (ppm).
NA - No listed Massachusetts criteria exist for this compound.
ND - Not detected.
U - Compound was not detected at specified quantitation limit.
Values in Bold indicate the compound was detected.
VOCs - Volatile Organic Compounds.
SVOCs - Semi-Volatile Organic Compounds.
PCBs - Polychlorinated Biphenyls.
* - MassDEP - *Reuse and Disposal of Contaminated Soil at Massachusetts Landfills, Policy # COMM 97-001.*
** - MassDEP - *Interim Remediation Waste Management Policy for Petroleum Contaminated Soils, #WSC-94-400*

Table 3: Summary of Analytical TCLP Results for Soil Sample - March 2009
Immediate Response Action Plan
Walsh Field - Soccer Field
New Bedford, Massachusetts

Analysis	Analyte	Sample ID: / Sample Date: / Maximum Concentration for Toxicity Characteristic	WFE-5-W 3/13/2009
Metals, TCLP (mg/L)	Lead	5.00*	**8.04**

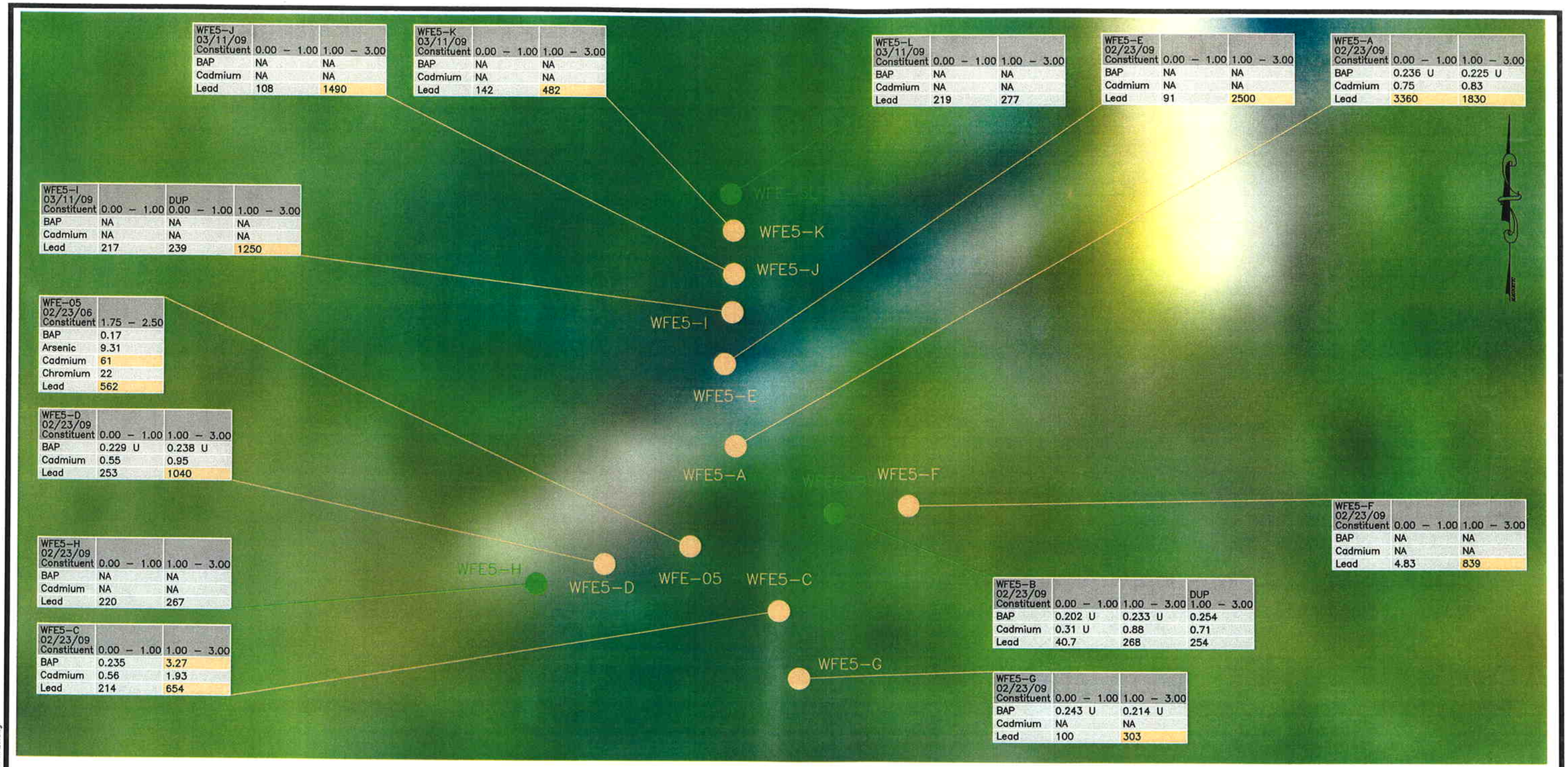
Notes:
ug/L - micrograms per liter.
TCLP - Toxicity Characteristic Leaching Procedure.
*SW-846 Chapter 7, Table 7-1, *Maximum Concentration of Contaminants for Toxicity Characteristic.*
Values shown in Bold and shaded type exceed the listed TCLP standard

FIGURES

TRC
650 Suffolk St.
Wannalancit Mills
Lowell, MA 01854

FIGURE 1
SITE AERIAL PHOTOGRAPH
WALSH FIELD
NEW BEDFORD, MASSACHUSETTS

R:\Projects\GIS_2007\54634_NBedford\FIG2_walsh_field4.mxd



Summary of Regulatory Comparison Criteria for Soil (mg/kg)						
Contaminant Names	S-1/GW-2	S-1/GW-3	S-2/GW-2	S-2/GW-3	RCS-1	TSCA
Benzo(a)pyrene (BAP)	2	2	4	4	2	N/A
Arsenic	20	20	20	20	20	N/A
Cadmium	2	2	30	30	2	N/A
Chromium	30	30	200	200	30	N/A
Lead	300	300	300	300	300	N/A

NOTES:
ALL UNITS IN MG/KG UNLESS OTHERWISE SPECIFIED.
MG/KG - MILLIGRAMS PER KILOGRAM (DRY WEIGHT).
NA - SAMPLE NOT ANALYZED FOR THE LISTED ANALYTE.
N/A - NOT APPLICABLE.
RCS - REPORTABLE CONCENTRATIONS.
TSCA - TOXIC SUBSTANCES CONTROL ACT.
U - COMPOUND WAS NOT DETECTED AT SPECIFIED QUANTITATION LIMIT.

VALUES SHOWN IN PEACH BACKGROUND EXCEED ONE OR MORE OF THE LISTED MASSDEP METHOD 1 STANDARDS.

● SOIL BORING ✦ SOIL BORING THAT HAS CONCENTRATION WITH EXCEEDANCE

SAMPLE LOCATION / SAMPLE DATE

WFE-05 02/23/06 Constituent	1.75 – 2.50
BAP	0.17
Arsenic	9.31
Cadmium	61
Chromium	22
Lead	562

CONTAMINANT NAME /ABBREVIATION

SAMPLE DEPTH (DEPTH RANGE) IN FEET

APPROXIMATE GRAPHIC SCALE
0' 5' 7.5' 10'

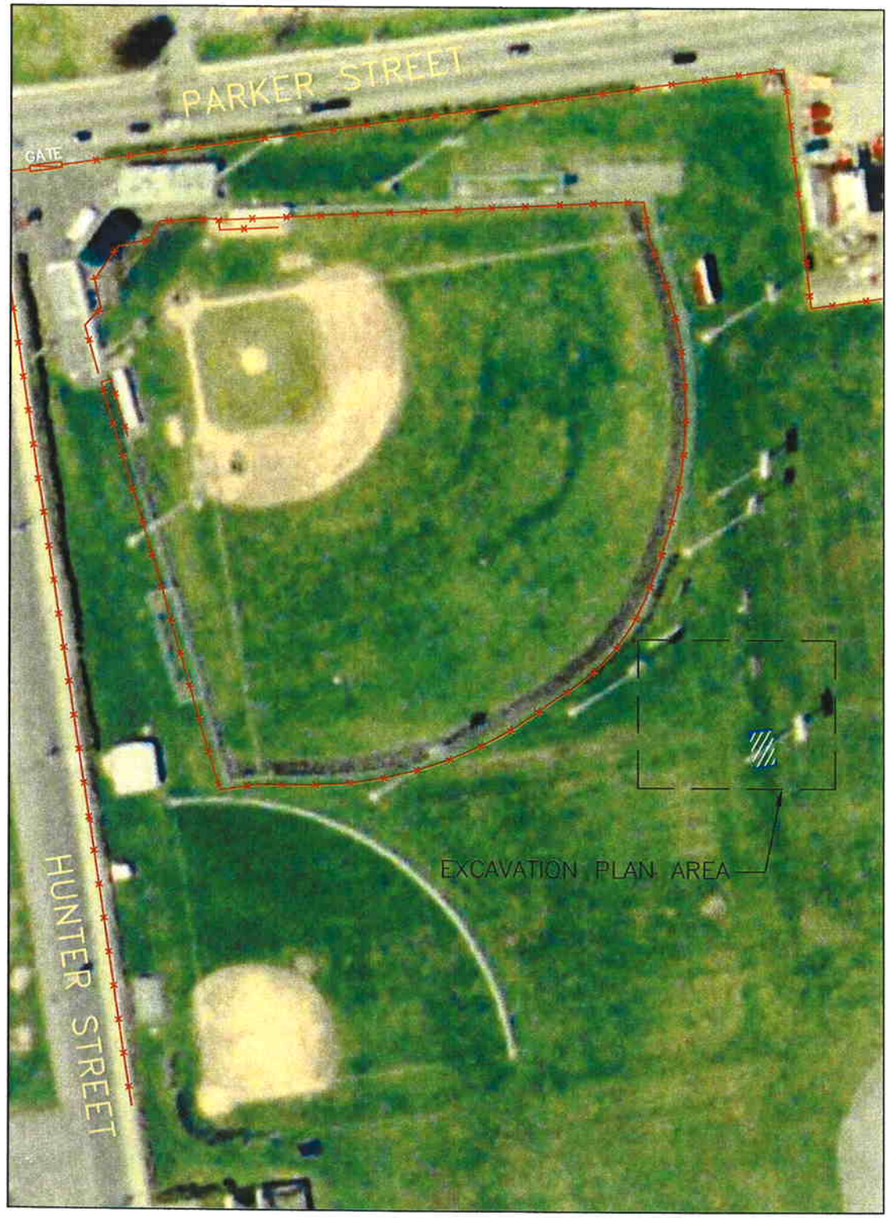
WALSH FIELD - SOCCER FIELD
NEW BEDFORD, MASSACHUSETTS
ANALYTICAL RESULTS SUMMARY MAP

TRC
Wannalancit Mills
650 Suffolk Street
Lowell, MA 01854
(978) 970-5600

DRAWN BY: PZ
CHECKED BY: DMS
DATE: MAY 2009

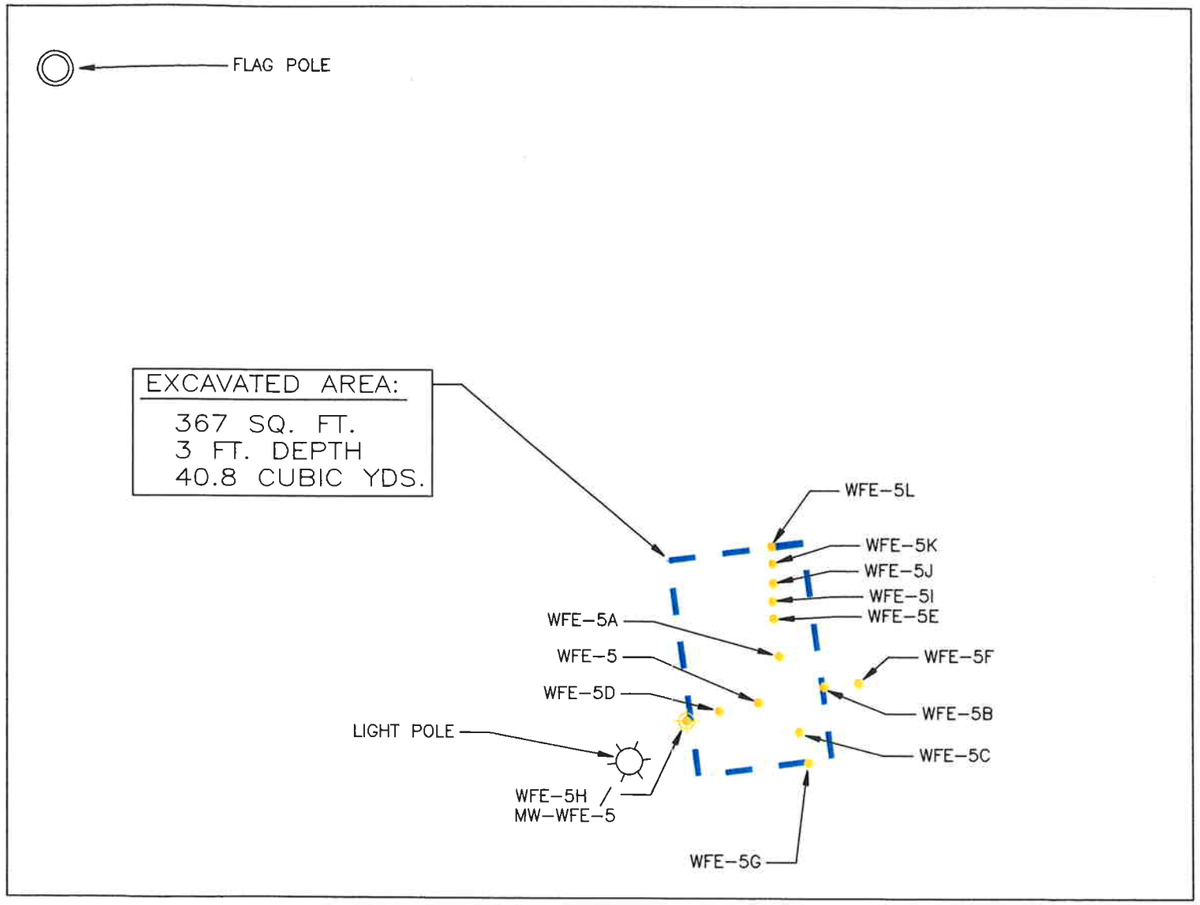
FIGURE 2

FILE: Q:\GEOSCI\GISKEY\Projects\NewBedford\WALSH-WFE5.dwg



AREA PLAN

APPROXIMATE SCALE: 1" = 90'



EXCAVATION PLAN

APPROXIMATE GRAPHIC SCALE

0' 7.5' 15' 30'

LEGEND:

- SOIL EXCAVATED ON MARCH 13, 2009
- EXTENT OF EXCAVATION LINE
- FENCE
- SOIL SAMPLE LOCATION
- SOIL SAMPLE AND MONITORING WELL LOCATION

NOTE:

FIGURE IS APPROXIMATE AND IS CONCEPTUAL.

WALSH FIELD - SOCCER FIELD
NEW BEDFORD, MASSACHUSETTS

EXCAVATION PLAN

TRC
Wannalancit Mills
650 Suffolk Street
Lowell, MA 01854
(978) 970-5600

DRAWN BY: **DMP**
CHECKED BY: **RSN**
DATE: **APRIL 2009**

FIGURE **3**

FILE: T:\E_CAD\115058\WALSH SOCCER EXCAVATION.dwg

ATTACHMENT A

TEI Working Agreement for Stabilization, Transportation & Disposal

June 03, 2009

Mr. David Fredette
EH&S Manager
City Of New Bedford
330 Collette St
New Bedford, MA 02746
David.Fredette@newbedford-ma.gov

Re: Working Agreement 8837
Stabilization, Transportation and Disposal of Lead Contaminated Soil
City Of New Bedford
New Bedford, MA

Dear Fredette,

Triumvirate Environmental is pleased to provide our Working Agreement for the above referenced project to City Of New Bedford. It is our understanding that there is approximately 40 cubic yards of soil contaminated with lead at a facility owned/operated by the City of New Bedford. Due to the Toxicity Characteristic Leaching Procedure (TCLP) analytical results, it has been determined that the soil will need to be stabilized prior to removal from the site. Our Working Agreement has been prepared based upon our site visit, subsequent conversations, and our experience with many similar projects.

SCOPE OF WORK

Mobilization

- Develop a Health and Safety Plan (HASP) with all the necessary requirements set forth in OSHA, RCRA, NFPA, and DOT regulations. The Health and Safety Plan will be completed by Triumvirate prior to the start of work.
- Utilizing characterization data supplied by the Engineer, prepare soil disposal profile. Profiles will be submitted to the Engineer for review and the Client for generator signature. Profiles and laboratory analytical data will be supplied to the intended disposal facilities for review and approval prior to mobilization.
- Mobilize labor and equipment as necessary to execute the scope of work identified herein.

Chemical Application and Soil Stabilization

- Triumvirate will apply Free Flow Technologies FF-100 chemical reagent to the contaminated soil currently stockpiled on site. The chemical re-agent is intended to stabilize lead contaminated soil to bring the TCLP wo within the universal treatment standard.
- Material will be applied at the manufacturer recommended ratio and mixed in accordance with manufacturers' instructions.
- Upon completion of mixing operations, soil will be placed in a stockpile in a location directed by the Client. Soil will be covered with 6 mil polyethylene sheeting.

Characterization Analysis

- Upon completion of the chemical stabilization reagent installation, Triumvirate will collect a composite stockpile sample of the treated soil. Sample will be brought to a MA certified analytical testing laboratory and analyzed per the requirements of the intended disposal facility, including lead TCLP.

Option - Loading, Transportation and Disposal of Treated Soil

- Following receipt of laboratory analytical data, Triumvirate will submit a landfill acceptance package to the intended disposal facility, including Generator and/or LSP signed profile documents.
- Upon facility acceptance, Triumvirate will load, transport and dispose of contaminated soil via dump trailers at a MA unlined landfill.
- Triumvirate will prepare a project summary package, including copies of facility signed shipping documents and weight tickets.

ASSUMPTIONS AND EXCLUSIONS

- It is assumed that material requiring stabilization is currently stockpiled. Volume of re-agent and duration of stabilization activities have been based on estimated soil quantities provided.
- Stabilization activated will be performed in accordance with manufacturers' instructions. Should analytical data exhibit TCLP concentrations in excess of universal treatment standard, an alternate disposal outlet may be required.
- Disposal pricing is contingent upon receipt of a singed waste profile and facility acceptance of the material. Following treatment and re-analysis, material must meet the Comm 97-001 re-use standards. Should the material not meet the re-use standards, and alternate facility will need to selected.
- LSP signed / stamped shipping documents and/or opinion letters, if required by disposal facility, shall be provided by the Client.
- Site restoration has not been included herein.
- Remediation, testing, engineering and/or management of groundwater have not been considered under this proposal.
- Triumvirate will have unlimited access to excavation locations and space to stage equipment and/or materials.

COST OF SERVICES

Item	Est Qty	Units	Rate	Extension
Mobilization & Site Preparation	2	Each	[redacted]	
Soil Stabilization Activities	1	LS		
Soil Characterizaiton Analysis	1	Each		
Option - Loading of Contaminated Soil	1	LS		
Transportation of Treated Soil to a MA Unlined Landfill	50	Tons		
Disposal of Treated Soil in a MA Unlined Landfill	50	Tons		
Estimated Project Total:				[redacted]

ACCEPTANCE

Please sign our Working Agreement indicating your acceptance and return it to our office: 61 Inner Belt Road, Somerville, MA 02143 with a Purchase Order. All work performed under this Working Agreement and subsequent Working Agreements will be conducted in accordance with the terms and conditions established in the Master Agreement for Environmental Services.

Sincerely,

Jason Atwood
Field Service Manager

Ross Hartman
Corporate Service Director

Working Agreement approval by Authorized Representative

Signature: _____

Printed Name: _____

Title: _____

Company: _____

Date: _____

Working Agreement Number: 8837

Purchase Order _____

Free Flow Technologies, Inc.
*** * * MATERIAL SAFETY DATA SHEET * * * ***

Free Flow 100®

*** * * * SECTION 1 – CHEMICAL PRODUCT AND COMPANY IDENTIFICATION * * * ***

MSDS Name:	Free Flow 100	
Product CAS:	None	
Company Identification:	Free Flow Technologies, Inc.	
Address:	9918 N. Alpine Road Machesney Park, Illinois 61115	
For Information call:	815-636-0166 or 866-677-0166	
Emergency Contact:	Mike Slattery	
MSDS Effective:	02/07/2007	08/11/08
Supercedes:	02/10/2006	11/20/08
	03/28/2005	
	05/13/2003	
	01/03/2003	
	04/20/2001	
	07/01/2000	
	09/04/1998	
	08/01/1998	

Mix Design Reference: #1, 2, 3, 4, 5, 6, 8, 9

*** * * * SECTION 2 – COMPOSITION, INFORMATION ON INGREDIENTS * * * ***

Chemical Name	CAS	Approximate % (w/w)
Silicon Dioxide	60676-86-0	5-10
Calcium Oxide	1305-78-8	10-60
Aluminum Oxide – Non-fibrous	1344-28-1	1-5
Sulfur	7704-34-9	10-25
Iron Oxide	1309-37-1	1-5
Phosphate Compounds	7758-23-8	10-80

Free Flow Technologies, Inc.
*** * * MATERIAL SAFETY DATA SHEET * * * ***

Free Flow 100®

*** * * * SECTION 3 – HAZARDS IDENTIFICATION * * * ***

Hazards Ratings	HMIS
Health	1
Fire	0
Reactivity	1
Special Protection	0

POTENTIAL HEALTH EFFECTS

Target Organs:	Eyes, respiratory passages, skin, digestive tract. Pre-existing respiratory diseases including asthma and emphysema may also be aggravated.
Eye:	May cause irritation/inflammation and tissue damage.
Skin:	May cause irritation to moist skin.
Ingestion:	May cause ulceration to the digestive tract.
Inhalation:	May cause irritation/inflammation to nasal and upper respiratory passages.

*** * * * SECTION 4 – FIRST AID MEASURES * * * ***

Eye:	Flush eyes with water while lifting lids. Get medical attention.
Skin:	Wash skin with soap and water, remove contaminated clothing and shoes. If irritation develops, get medical attention.
Ingestion:	Dilute with water, fruit juice or vinegar. Get medical attention.
Inhalation:	Remove to fresh air. If irritation develops, get medical attention.

Free Flow Technologies, Inc.
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Free Flow 100®

*** * * * SECTION 5 – FIRE FIGHTING MEASURES * * * ***

Unusual Fire and Explosion Hazards:	Free Flow 100 is noncombustible.
Special Fire Fighting Procedures:	Do not use water on adjacent fires. Extinguish adjacent fires with dry chemical or CO2.
Extinguishing Media:	N/A
Flash Point:	N/A
Flammable Limits	Lower Limit: N/A Upper Limit: N/A
Autoignition Temperature:	N/A

*** * * * SECTION 6– ACCIDENTAL RELEASE MEASURES * * * ***

Disposal:	Dispose as a non-hazardous solid waste in accordance with all Local, State and Federal regulations.
Spills/Leaks:	Use appropriate protective equipment while using dry cleanup methods (sweep/shovel) which minimize dusting. Reclaim in watertight containers. Small amounts may be flushed with water to drain.

*** * * * SECTION 7– HANDLING AND STORAGE * * * ***

Handling:	Swells when wet, may burst containers. Keep eyewash bottles available throughout work area.
Storage:	Store away from water or acids.

*** * * * SECTION 8 – EXPOSURE CONTROLS, PERSONAL PROTECTION * * * ***

Engineering Controls:	Use general and local exhaust to keep dust levels within acceptable limits.
Eyes:	Wear tight fitting goggles.
Skin:	Wear long sleeves, gloves, and pant cuffs over shoes to minimize skin contact.
Respirators:	Use NIOSH approved dust respirator when exposure limits exceeded.

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*** * * * SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES * * * ***

Appearance/Odor:	White-gray powder. No odor.
pH:	6.0-12.0
Vapor Pressure:	N/A
Vapor Density:	N/A
Evaporation Rate:	N/A
Viscosity:	N/A
Boiling Point:	N/A
Freezing/Melting Point:	N/A
Decomposition Temp.:	N/A
Molecular Formula:	Mixture
Density:	80-85 # per cu.ft.

*** * * * SECTION 10 - STABILITY AND REACTIVITY * * * ***

Chemical Stability: Stable. keep dry.

Conditions to Avoid: Extreme temperatures.

Incompatibilities with Other Materials: Free Flow 100 contains calcium oxide and may react with water or acid to produce sufficient heat to ignite combustible materials.

Hazardous Decomposition Products: Could possibly release minor amounts of irritating fluoride if heated to extreme temperatures.

Hazardous Polymerization: No.

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*** * * * SECTION 11 - TOXICOLOGICAL INFORMATION * * * ***

Toxicological Information:

Component	Formula	% Wt.	CAS	PEL	TLV
Calcium Oxide	CaO	10-60	1305-78-8	5 mg/M3	2 mg/M3
Silicon Dioxide	SiO2	5-10	60676-86-0	0.1 mg/M3*	0.1 mg/M3*
Aluminum Oxide	Al2O3	1-5	1344-28-1	10 mg/M3+	10 mg/M3+
Sulfur	SO3	10-25	7704-34-9	15 mg/M3+	10 mg/M3+
Iron Oxide	Fe2O3	1-5	1309-37-1	15 mg/M3	5 mg/M3
Phosphate Compounds	$Ca(H_2PO_4)_2H_2O$	10-80	7758-23-8	Not established	Not established

* Respirable Dust
+ 5 mg/M3 as Respirable Fraction

Silicon Dioxide and Iron Oxide are listed by IARC as potential carcinogens.

*** * * * SECTION 12 - ECOLOGICAL INFORMATION * * * ***

Ecological Information: None available

*** * * * SECTION 13 - OTHER PRECAUTIONS * * * ***

Other Precautions: None

*** * * * SECTION 14- TRANSPORT INFORMATION * * * ***

DOT Label No: N/A

Free Flow Technologies, Inc.
*** * * MATERIAL SAFETY DATA SHEET * * * ***

Free Flow 100®

*** * * * SECTION 15 - REGULATORY INFORMATION * * * ***

SARA Title III – Section 311/312 – Hazard Categories:
Fire Hazard – No
Sudden Release of Pressure – No
Reactivity Hazard – Yes
Immediate Health Hazard – Yes
Delayed Health Hazard – Yes

SARA Section 302 Extremely Hazardous Material – none

SARA Section 313 Toxic Chemicals – none

*** * * * SECTION 16 – ADDITIONAL INFORMATION * * * ***

Information herein is based on data believed to be accurate at the time of the preparation. No warranty or representation, express or implied, is made to the accuracy or completeness of the MSDS. No responsibility can be assumed by vendor for any damage or injury resulting from misuse, failure to follow recommended practices, or from any hazards inherent in the nature of the product.