



Updated
BOSTON / MASSACHUSETTS

The Site is a Sunoco gas station located at 634 Huntington Avenue in Boston, Massachusetts. The Site is set on the southeasterly side of Huntington Avenue, immediately south of Ward Street. The Site consists of an irregular shaped parcel of land improved by a one-story garage with two bays constructed on slab. Three 6,000-gallon gasoline underground storage tanks (USTs) are located at the Site along with two pump islands. The area surrounding the building and the pump islands is completely paved. On June 12, 2000, the Department of Environmental Protection (DEP) determined that a potential *Condition of Substantial Release Migration* may exist at the Site. This determination was based on identification of reportable concentrations of volatile petroleum hydrocarbons (VPH) in groundwater at an abutting residential property.

Seven butane/air injection wells and nine vertical bioventing wells were installed at the Site under the oversight of GBI personnel in March 2003. The *Butane Biosparging*[™] and *Butane Bioventing*[™] systems were installed at the Site by GBI personnel in August 2003. System startup occurred in April 2004. The subsurface in the area of the injection wells consists of sand and gravel fill materials to a depth approximately eight feet below grade. A clay layer underlies the fill material.

The last groundwater samples were collected by GBI personnel on October 21, 2005. All wells were sampled for VPH with target analytes. The analytical results are summarized in Table 1. Significant concentration decreases have been observed across the Site. MTBE concentration decreases are highlighted below:

In monitoring well GBI-6, the MTBE concentration decreased from 544,000 (background) to 155,000 µg/L. In monitoring well GBI-1, the MTBE concentration decreased from 198,000 (background) to 59,000 µg/L. In monitoring well GBI-2, the MTBE concentration decreased from 550,000 (background) to 93,000 µg/L. In monitoring well K-2, the MTBE concentration decreased from 88,200 (background) to 33,000 µg/L.

BUTANE BIOSTIMULATION TECHNOLOGIES[™]
Site Photos



K-2	9/18/2003	3,860	2,640	792	8,340	88,200	304	<400	<150	8,300
	6/4/2004	3,550	1,180	152	2,800	72,500	163	<10,000*	<3,750*	<13,800*
	10/8/2004	NS	NS	NS	NS	NS	NS	NS	NS	NS
	1/11/2005	3,270	891	64.2	1,187	22,200	220	40,700	1,710	3,120
	7/19/2005	427	209	<100	426	6,580	<500	<2,500	<2,500	<2,500
	10/21/2005	2,350	2,150	<1,000	7,130	33,000	<5,000	<25,000	<25,000	<25,000
GW-2		2,000	30,000	6,000	6,000	50,000	6,000	1,000	1,000	5,000
GW-3		7,000	4,000	50,000	50,000	50,000	6,000	4,000	20,000	4,000

NOTES: All concentrations expressed in ug/L (ppb)

Bold values exceed GW-2 and/or GW-3 Standards

NS = Not Sampled; *Detection limits altered due to increased MTBE concentration

Well K-1 destroyed; Well** = GW-3

REFERENCES

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