CASE STUDY

In Situ Aerobic Bioremediation of Gasoline Constituents
Fueling station, Florida

Type of Project:	In Situ Bioremediation (TPH)
Contaminants Treated:	BTEX, MTBE, Naphthalene
Concentration:	Maximum of 12,000 ppb total BTEX observed
Technology Applied:	Multi-phase extraction with aerobic bioremediation via GW augmentation, oxygenation & recirculation
Geology:	Fine sand
Average % Reduction:	>98% reduction of BTEX in the on- and off-site area
Timeframe:	24 months

DESCRIPTION

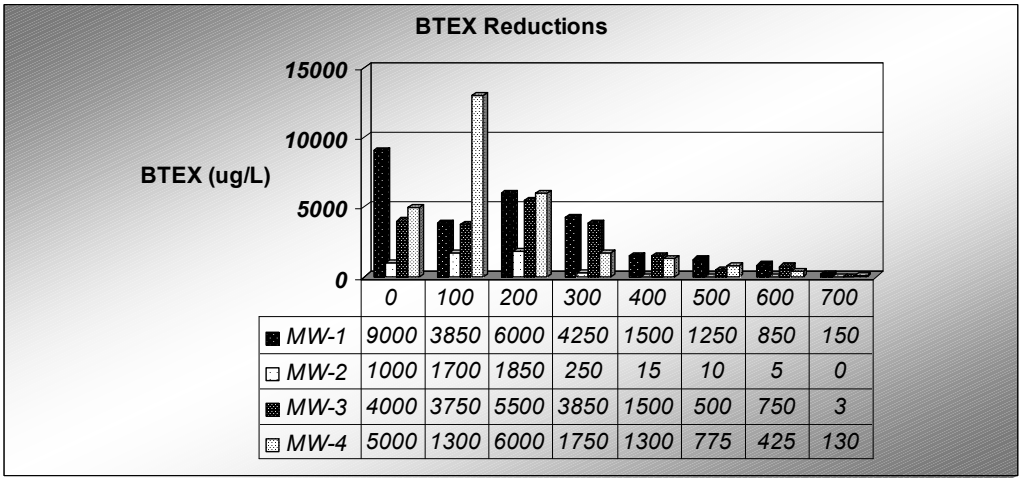
BioRem-2000 Oil Digester was used at a former fueling station to treat gasoline contaminated soil and groundwater. The full-scale location is the source area and has the dimensions of 90-feet wide by 300-feet long, and a saturated thickness of 10 feet (total volume of 10,000 cubic yards). Re-circulated over 10 million gallons of groundwater over a 24-month timeframe. The re-circulation groundwater was amended with (BioRem-2000 Products) biological enhancements, nutrients and oxygenated.

Groundwater was extracted from 5 recovery wells. Following extraction, biological amendment and oxygenation, the treatment water was redistributed into injection points. Groundwater samples were analyzed for regulated fuel constituents, nutrients and other water quality parameters (pH, DO, etc.) during the 24-month treatment. This data was used to modify the treatment to maximize efficiency.

RESULTS & DISCUSSION

Results and observations include the following:

- BTEX concentrations onsite were reduced by greater than 88% within 12 months
- Benzene concentrations were reduced by more than 99%
- Total impacted area was reduced by 90% within 24 months



	0	100	200	300	400	500	600	700
MW-1	9000	3850	6000	4250	1500	1250	850	150
MW-2	1000	1700	1850	250	15	10	5	0
MW-3	4000	3750	5500	3850	1500	500	750	3
MW-4	5000	1300	6000	1750	1300	775	425	130

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