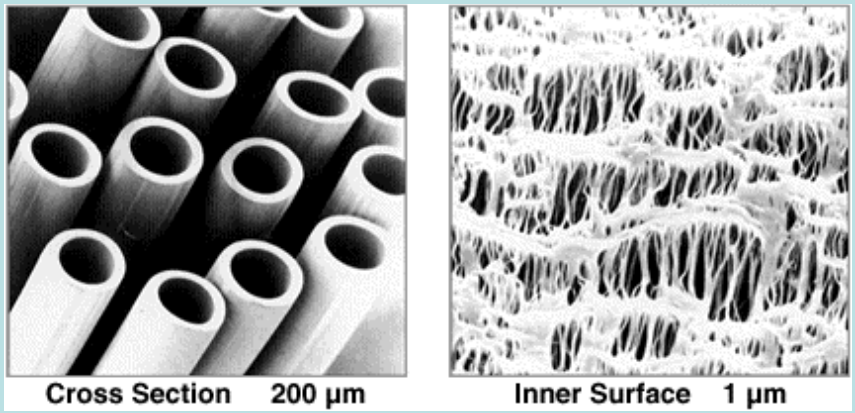
iSOC Case Study
Enhanced Attenuation of Residual Petroleum Plume
Service Station-Grand Rapids MI

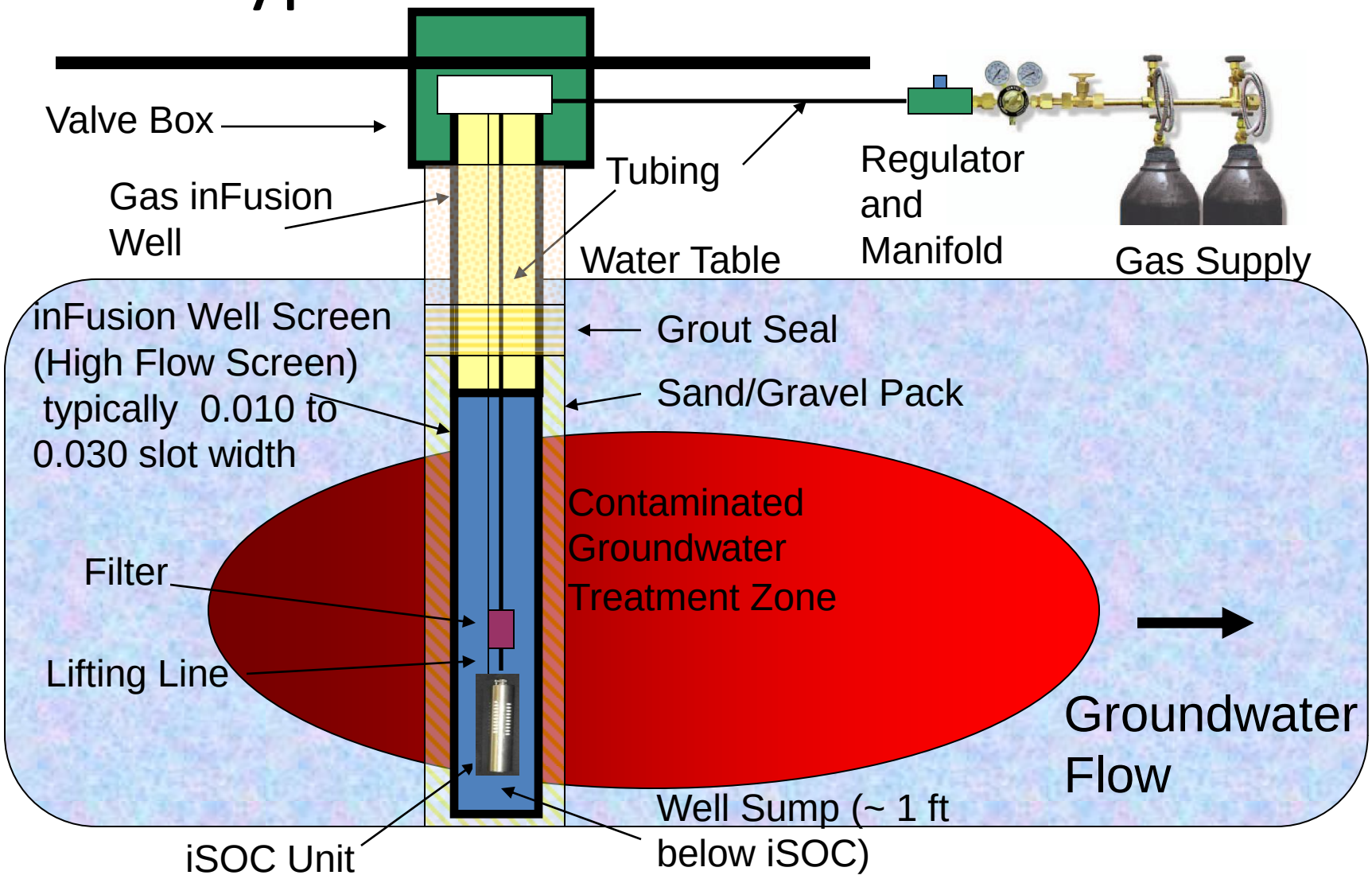
inVentures Technologies Inc.

Gas inFusion iSOC® Technology



- Effect rapid, no bubble gas transfer (infusion).
- Create DO concentrations of hundreds of PPM.
- Allow long term retention of extremely high DO levels.
- Virtually eliminate DO losses to atmosphere.
- Achieve gas transfer efficiencies 10X better than best conventional methods.
- Allow specifically designed mass transfer devices

Typical iSOC Well Schematic

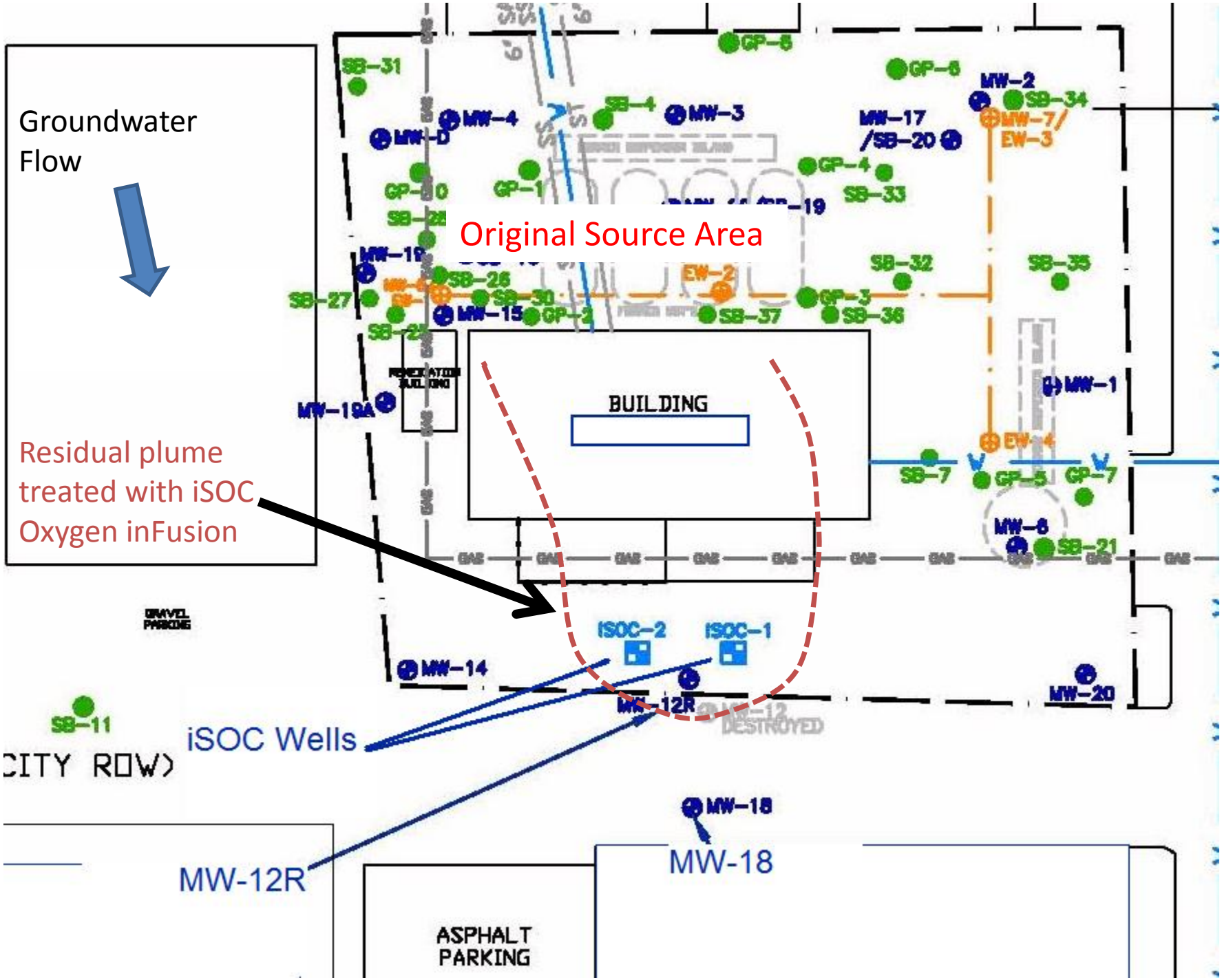


Site Background

- Release of gasoline from service station USTs
- Geologic conditions
  - Sand and silty sand
  - 5 feet to groundwater
  - Continuous clay lens at 10 feet below land surface
  - Groundwater flow to the south

Remedial Response Actions

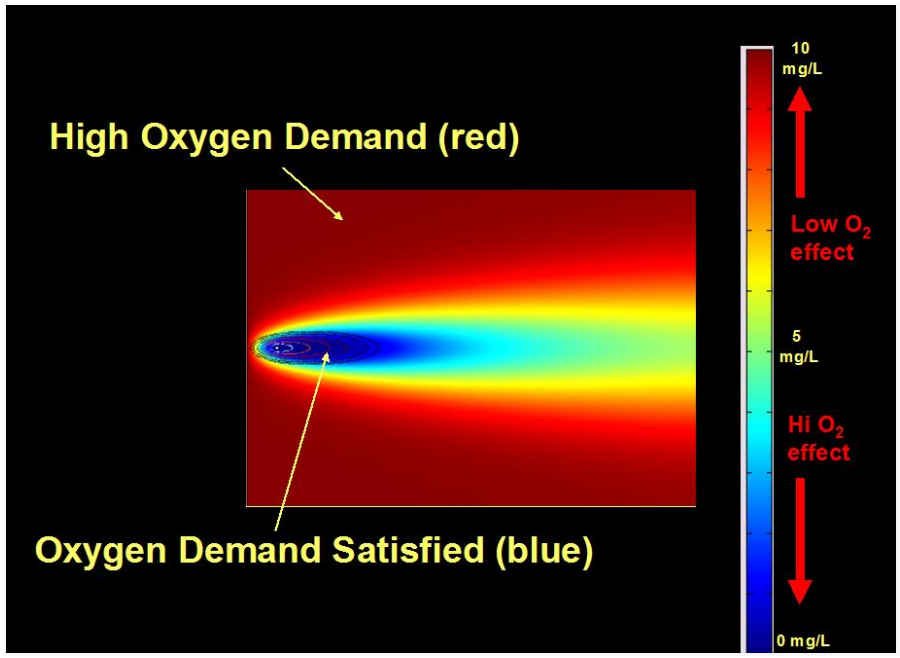
- Source removal
- Source area total fluids pumping system operated 2000 to 2004
- 2 iSOC treatment wells installed approximately 18 feet cross gradient August 2006 forming oxygen biobarrier to cut off migration of residual plume

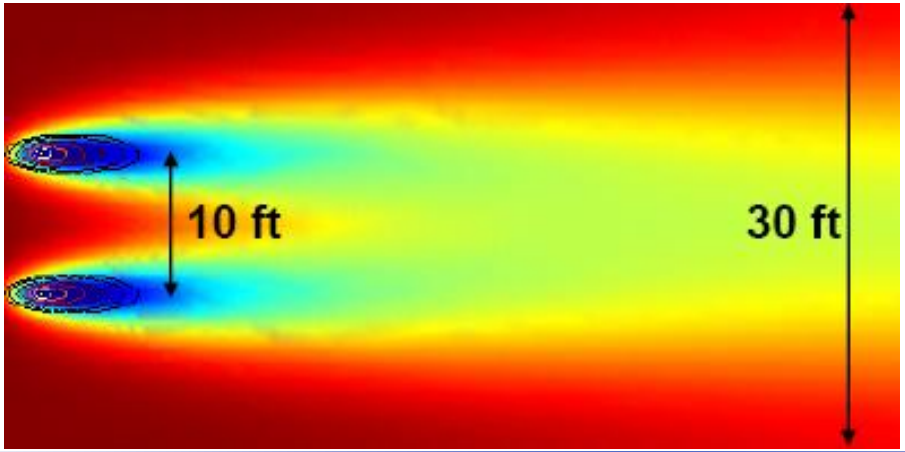

Groundwater Flow
Original Source Area
Residual plume treated with iSOC Oxygen inFusion
BUILDING
ISOC-2
ISOC-1
iSOC Wells
MW-12R
MW-18
ASPHALT PARKING
MW-1
MW-2
MW-3
MW-4
MW-5
MW-6
MW-7/ EW-3
MW-14
MW-15
MW-17 /SB-20
MW-19A
MW-20
EW-2
EW-4
SB-11
SB-21
SB-22
SB-26
SB-27
SB-30
SB-31
SB-32
SB-33
SB-34
SB-35
SB-36
SB-37
SB-4
SB-7
GP-1
GP-2
GP-3
GP-4
GP-5
GP-6
GP-7
GP-8
GP-10
GRAVEL PARKING

In-Well iSOC Installation

(2) 80cf. O_2 cylinders linked with a “pigtail” providing (3) months supply of O_2

iSOC Area of Influence and Treatment Zone



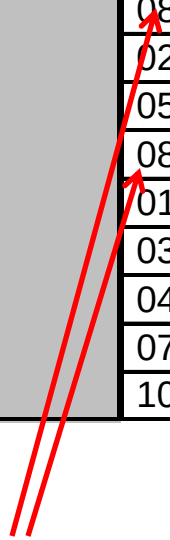


Note the difference in the treatment zone when using two isocs side by side versus using only one unit. You *more* than double your area of coverage and are able to deliver and sustain much higher concentrations of O_2.

This results in a significant reduction of your time on site, overall costs and getting you to closure in a much shorter period of time.

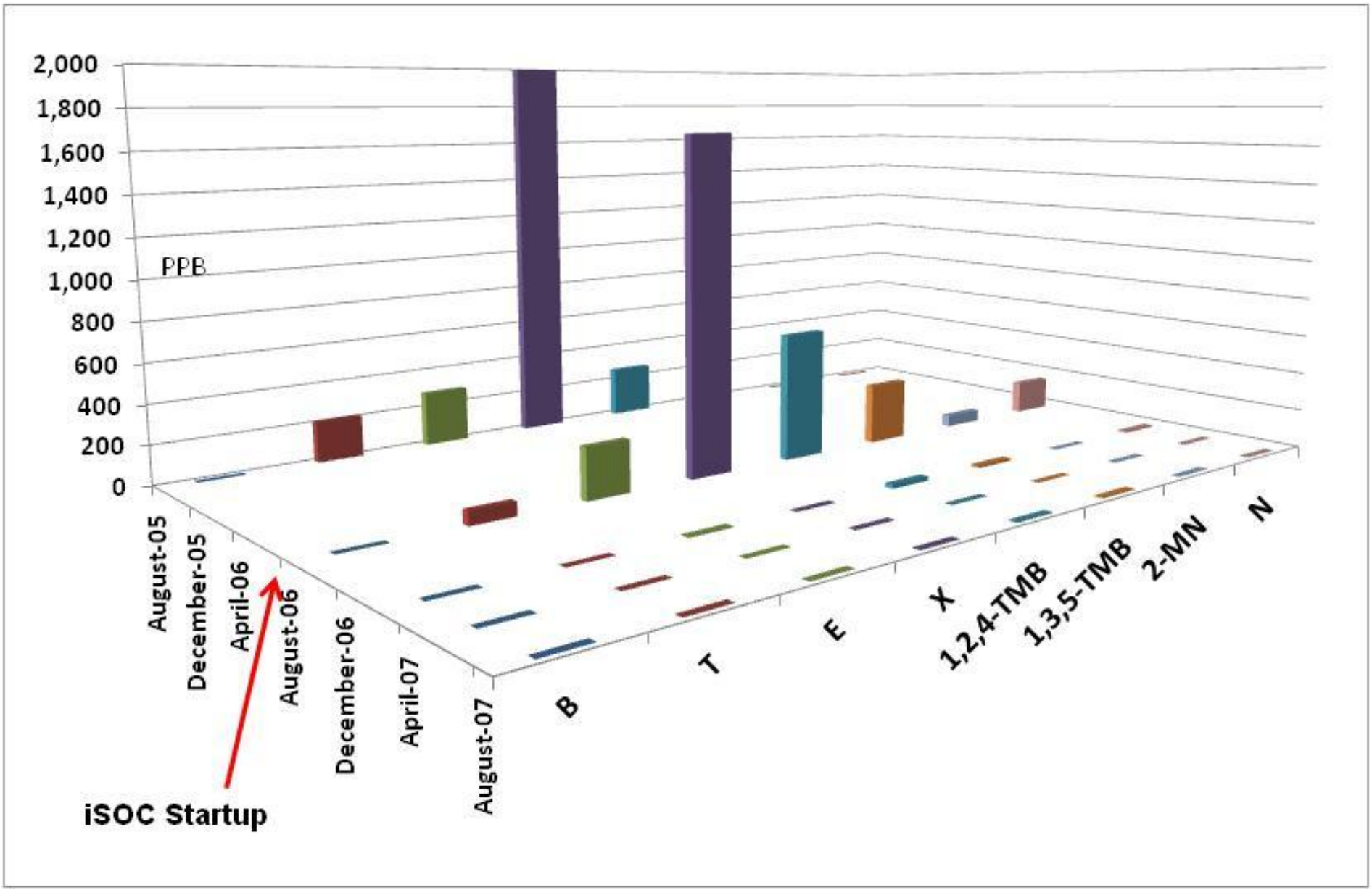
Performance Monitoring Data

					BTEX				TMB Isomers	
Sample ID	Sample Date	Extraction Date	Analysis Date	Screen Interval	Benzene	Toluene	Ethylbenzene	Xylenes (total)	1,2,4-Trimethyl benzene	1,3,5-Trimethyl benzene
MW-12R	04/14/05	04/19/05	04/19/05	5.5-10.5	**8.1**	18	37	150	16	14
	08/09/05	08/15/05	08/15/05	5.5-10.5	<20	210	**280**	**2,000**	**260**	**90**
	08/31/06	08/31/06	08/31/06	5.5-10.5	<10	70	**260**	**1,680**	**650**	**310**
	02/21/07	02/27/07	02/27/07	5.5-10.5	<1	<1	5.8	<3	21	13
	05/09/07	05/14/07	05/14/07	5.5-10.5	<1	<1	<1	<3	<1	<1
	08/29/07	09/06/07	09/06/07	5.5-10.5	<1	<1	<1	<3	3.4	4.9
	01/30/08	02/01/08	02/04/08	5.5-10.5	<1	<1	7.7	2.5	12	29
	03/12/08	03/15/08	03/15/08	5.5-10.5	<1	<1	1.5	<3	9.9	23
	04/23/08	05/01/08	05/01/08	5.5-10.5	<1	<1	<1	<3	2.1	6.6
	07/16/08	07/24/08	07/24/08	5.5-10.5	<1	<1	<1	<3	<1	<1
	10/22/08	10/27/08	10/28/08	5.5-10.5	<1	<1	<1	<3	<1	<1



iSOC system started 8/06 and removed 8/07

Performance Chart



Outcome and Site Closure

- Residual plume migration cut off demonstrated with performance monitoring at MW-12R
- No contaminant migration to downgradient MW-18
- No rebound following completion of one year of iSOC treatment