

# Recent Field Results

Global Environmental Services

in association

Archaea Solutions, Inc.

# South Carolina

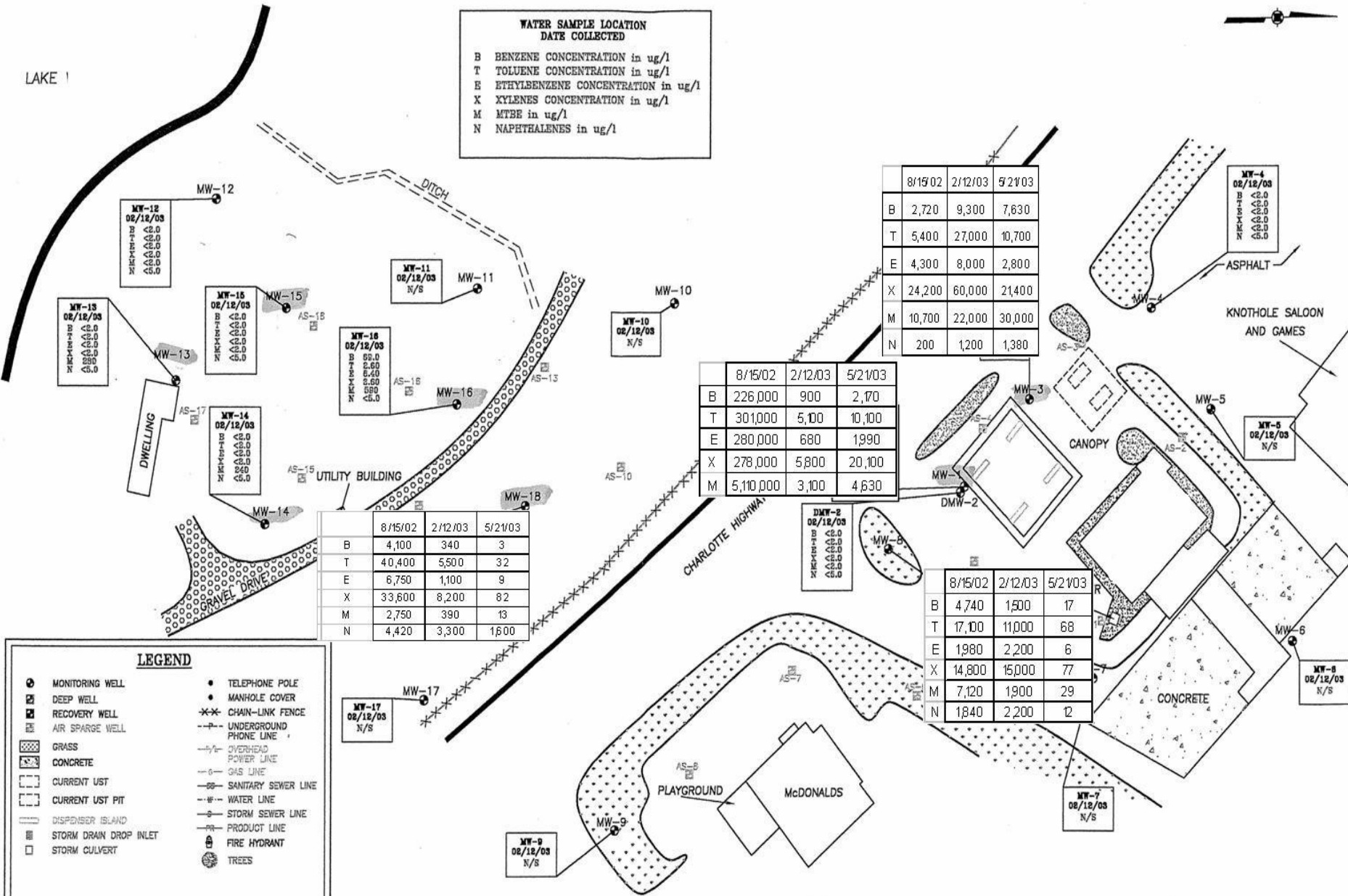
- Situation
  - Active Gas Station Near Recreational Lake
  - Benzene as high as 226,000 ppb
  - Total Mass > 6,000,000
- Application
  - Gravity feed through existing wells
- Results
  - Total Mass 117,000 in six Months
- Site map and results are on next slide.



**WATER SAMPLE LOCATION  
DATE COLLECTED**

B BENZENE CONCENTRATION in ug/l  
 T TOLUENE CONCENTRATION in ug/l  
 E ETHYLBENZENE CONCENTRATION in ug/l  
 X XYLENES CONCENTRATION in ug/l  
 M MTBE in ug/l  
 N NAPHTHALENES in ug/l

LAKE 1



	8/15/02	2/12/03	5/21/03
B	2,720	9,300	7,630
T	5,400	27,000	10,700
E	4,300	8,000	2,800
X	24,200	60,000	21,400
M	10,700	22,000	30,000
N	200	1,200	1,380

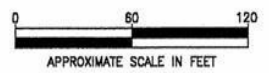
	8/15/02	2/12/03	5/21/03
B	226,000	900	2,170
T	301,000	5,100	10,100
E	280,000	680	1,990
X	278,000	5,800	20,100
M	5,110,000	3,100	4,630

	8/15/02	2/12/03	5/21/03
B	4,100	340	3
T	40,400	5,500	32
E	6,750	1,100	9
X	33,600	8,200	82
M	2,750	390	13
N	4,420	3,300	1,600

	8/15/02	2/12/03	5/21/03
B	4,740	1,900	17
T	17,100	11,000	68
E	1,980	2,200	6
X	14,800	15,000	77
M	7,120	1,900	29
N	1,840	2,200	12

**LEGEND**

- MONITORING WELL
- ⊠ DEEP WELL
- ⊡ RECOVERY WELL
- ⊞ AIR SPARGE WELL
- ▨ GRASS
- ▩ CONCRETE
- ⋯ CURRENT UST
- ⋯ CURRENT UST PIT
- ⋯ DISPENSER ISLAND
- ⊞ STORM DRAIN DROP INLET
- STORM CULVERT
- TELEPHONE POLE
- MANHOLE COVER
- ⋯ CHAIN-LINK FENCE
- ⋯ UNDERGROUND PHONE LINE
- ⋯ OVERHEAD POWER LINE
- ⋯ GAS LINE
- ⋯ SANITARY SEWER LINE
- ⋯ WATER LINE
- ⋯ STORM SEWER LINE
- ⋯ PRODUCT LINE
- ⊞ FIRE HYDRANT
- ⊞ TREES



DATE: 03/04/03

-1138

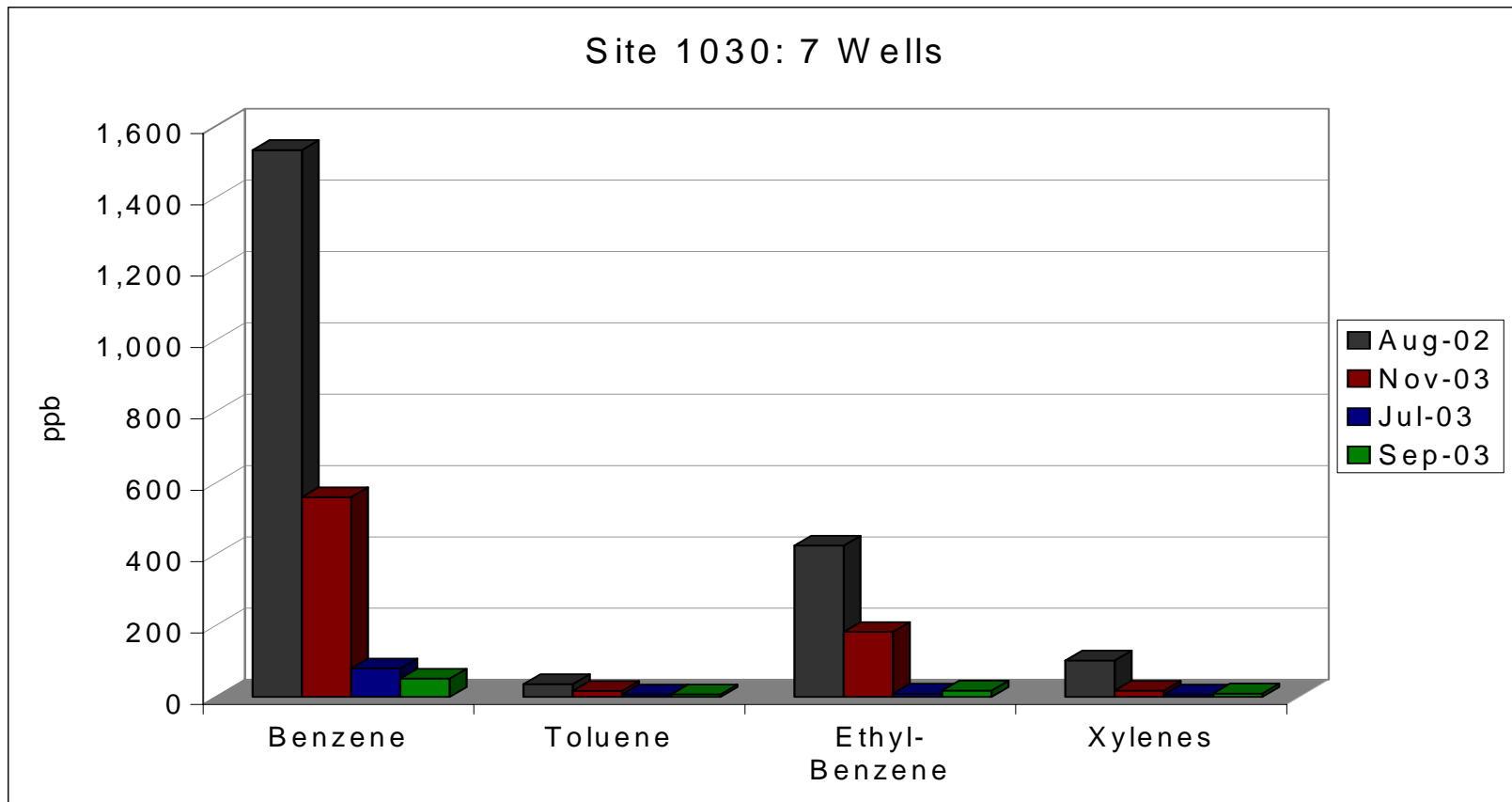
**FIGURE 3  
CHEMICALS OF CONCERN  
IN GROUNDWATER  
(FEBRUARY 12, 2003)**

# South Carolina

- Situation
  - Active Gas Station
  - Benzene no higher than 1,400 ppb
  - Total BTEX = 73,174
- Application
  - Gravity feed through existing wells
- Results
  - Total BTEX 6,443 in six Months
- Site map and results are on next slide.

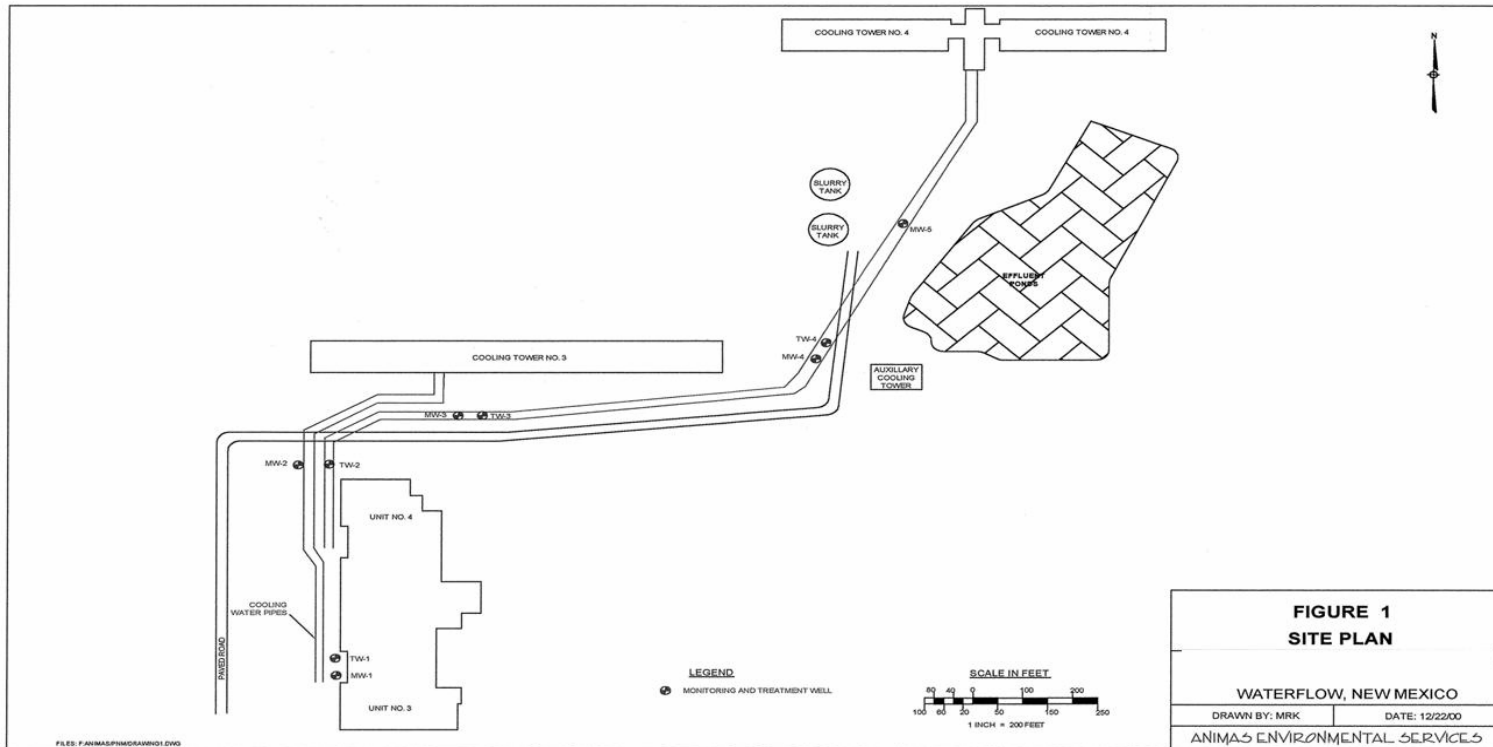


# South Carolina



# Waterflow, NM: Diesel Fuel

- Situation
  - Diesel storage tank leaking into pipeline corridor
  - 727.4 ug/L PAHs
- Application
  - 1,875 gallons ArchaeaSolutions bio-system applied to treatment wells
- Results
  - Non-detectable concentrations of PAHs in eight months



	mw 1				mw -3			
	11/8/2000	2/1/2001	5/1/2001	8/6/2001	11/8/2000	2/1/2001	5/1/2001	8/6/2001
Acenaphthene	16	2.5	2.5	2.5	11	2.5	2.5	2.5
Acenaphthylene	4.3	2.5	2.5	2.5	1	2.5	2.5	2.5
Anthracene	0.6	0.6	0.6	0.6	1.1	0.6	0.6	0.6
Benzo (a)	24	0.2	0.2	0.2	1	0.2	0.2	0.2
Benzo (a) pyrene	0.2	0.2	0.2	0.2	1	0.2	0.2	0.2
Benzo (a)	3.4	0.05	0.05	0.05	1	0.05	0.05	0.05
Benzo (g,h,l)	0.3	0.3	0.3	0.3	1	0.3	0.3	0.3
Benzo (k)	0.2	0.2	0.2	0.2	1	0.2	0.2	0.2
Chrysene	29	0.6	0.2	0.2	1	0.02	0.02	0.02
Dibenzo (a,h)	0.4	0.4	0.4	0.4	1	0.4	0.4	0.4
Fluoranthene	220	0.3	0.3	0.3	17	0.3	0.3	0.3
Fluorene	19	12	0.8	0.8	5.7	0.8	3.9	0.8
Indeno(1,2,3-	0.6	0.6	0.6	0.6	1	0.6	0.6	0.6
Naphthalene	3.7	2.5	2.5	2.5	7	2.5	2.5	2.5
Phenanthrene	51	12	0.6	0.6	6.5	0.6	0.6	0.6
Pyrene	200	0.3	0.3	0.3	15	0.3	0.3	0.3
1-	64	6.5	2.5	2.5	24	2.5	2.5	2.5
2-	93	4.5	2.5	2.5	14	2.5	2.5	2.5
total PAH	729.7	46.25	17.25	17.25	110.3	17.07	20.17	17.07