


Memorandum



Date: December 8, 2005

To: Section Chiefs
Pollution Control Division

To: PRS Staff

From: Wilbur Mayorga, P.E., Chief
Pollution Control Division 

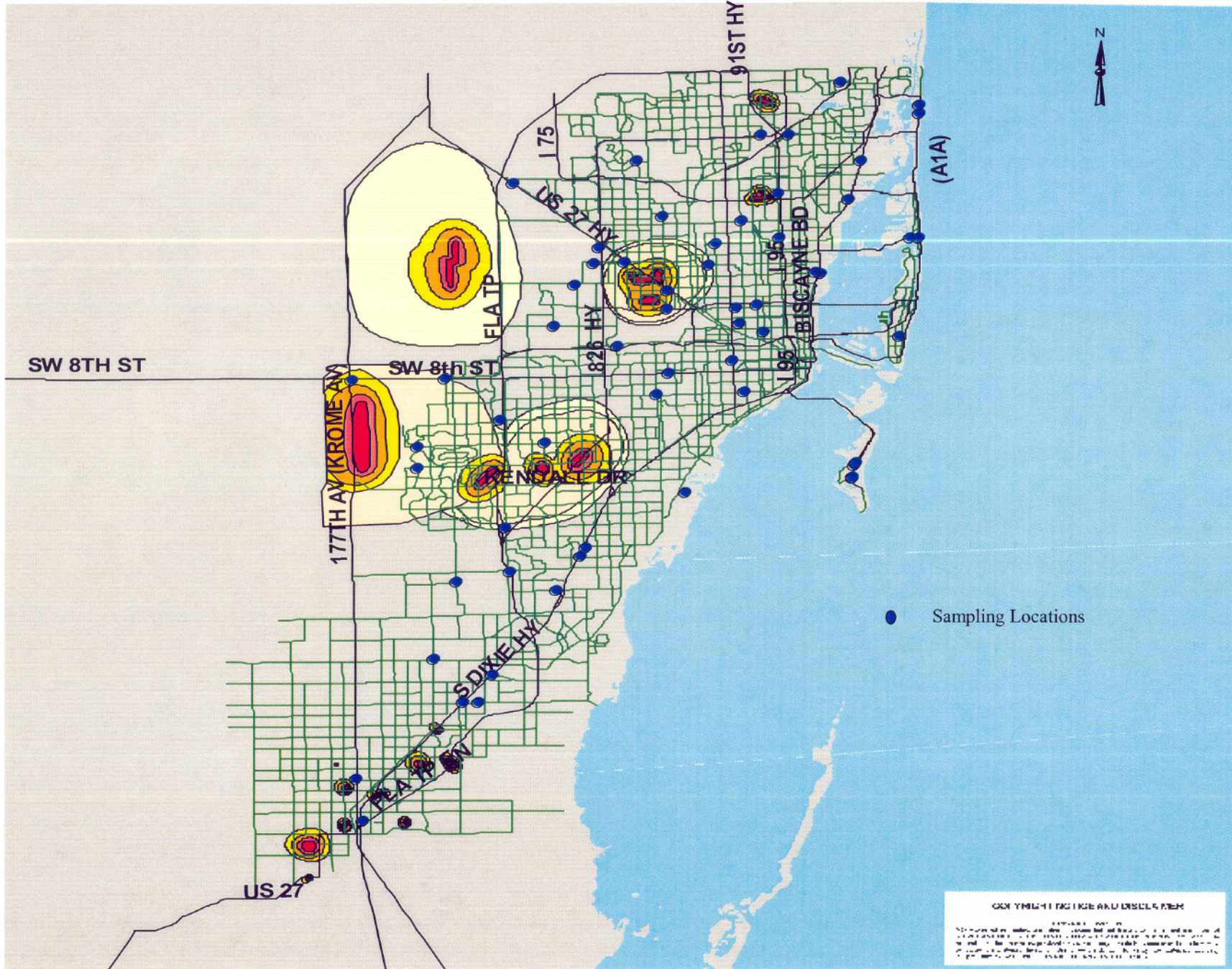
Subject: Background Concentrations of Iron in Groundwater in Miami-Dade County

The table below provides summary statistics for background concentration for iron in the shallow (0-15 feet) groundwater of the Miami-Dade County. A total of sixty-four groundwater samples were collected from shallow groundwater monitoring wells located around Miami-Dade County (see attached map). The sampling locations were selected using a stratified random sampling design to ensure countywide coverage. The Minimum Variance Unbiased Estimate (MVUE) of the mean for the data set (706 ug/l) shall be used in conjunction with the population distribution to guide clean up decisions under the risk based corrective action provisions (RBCA) of Chapter 24, Miami-Dade County Code.

SUMMARY STATISTICS Miami Dade County Background Concentration of Iron in Shallow Groundwater	
Descriptive Statistics	
n	62*
Minimum	11
Maximum	4222
Arithmetic Mean	525
Geomean	190
MVUE Mean (FL UCL)	706
95% UCL (FL UCL)	962
Distribution recommended	Lognormal

* Outliers (2 data points) not included in statistical analysis

SAMPLING LOCATIONS FOR THE MIAMI-DADE COUNTY GROUNDWATER IRON BACKGROUND STUDY



BACKGROUND CONCENTRATION OF IRON IN SHALLOW
GROUNDWATER (0-15 FT)
MIAMI DADE COUNTY

Sample Location	Sample ID	Date Sampled	Iron (ug/l)
1	259322	5/5/2005	563
2	261302	10/19/2005	138
3	261272	11/3/2005	4222
4	260520	8/30/2005	77
5	245424	10/19/2005	55
6	261437	11/7/2005	570
7	259808	5/18/2005	51
8	261300	10/18/2005	11
9	259276	4/1/2005	152
10	258414	2/4/2005	254
11	258430	4/20/2005	550
12	245425	10/19/2005	205
13	260155	6/17/2005	624
14	261423	11/3/2005	82
15	258263	4/6/2005	11
16	256708	1/21/2005	970
17	257470	12/14/2004	272
18	261301	10/19/2005	114
19	258431	4/20/2005	750
20	258248	4/18/2005	74
21	261299	10/18/2005	383
22	259713	5/6/2005	11
23	260358	7/21/2005	632
24	245418	10/17/2005	15
25	260018	5/27/2005	88
26	258403	3/3/2005	15193
27	245417	10/17/2005	947
28	258406	3/30/2005	33
29	261446	11/8/2005	214
30	259537	5/27/2005	21
31	261436	11/7/2005	42
32	256715	1/21/2005	288
33	258646	3/3/2005	510
34	260361	7/21/2005	124
35	260014	5/27/2005	1740
36	259767	5/6/2005	628
37	257473	12/14/2004	3560
38	261297	10/18/2005	822
39	259533	4/26/2005	1280
40	259542	6/3/2005	82

BACKGROUND CONCENTRATION OF IRON IN SHALLOW
GROUNDWATER (0-15 FT)
MIAMI DADE COUNTY

Sample Location	Sample ID	Date Sampled	Iron (ug/l)
41	260649	8/19/2005	903
42	256712	1/21/2005	20
43	256720	1/28/2005	1355
44	261434	11/7/2005	210
45	259326	5/4/2005	128
46	261429	11/4/2005	465
47	245426	10/19/2005	965
48	260541	7/14/2005	491
49	261321	11/2/2005	51
50	261427	11/4/2005	42
51	260147	8/19/2005	1324
52	260651	8/10/2005	700
53	261431	11/7/2005	13
54	256698	12/29/2004	875
55	261279	11/1/2005	152
56	258671	3/3/2005	14700
57	256727	2/4/2005	385
58	260627	8/19/2005	13
59	261281	11/1/2005	22
60	259954	6/3/2005	177
61	261298	10/18/2005	21
62	259085	3/23/2005	569
63	256722	1/28/2005	30
64	256696	1/26/2005	2500