

**Volusia County
FLORIDA
Public Works Department
Solid Waste Division**

AM
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APR 22 2013
DEP Central District

April 19, 2013

ENV-13-115

Mr. F. Thomas Lubozynski
Waste and Air Administrator
Florida Department of Environmental Protection
3319 Maguire Blvd. Ste. 232
Orlando, FL 32803-3767

Subject: Surface Emission Monitoring (SEM) First Quarter 2013
Tomoka Farms Road Landfill, Volusia County

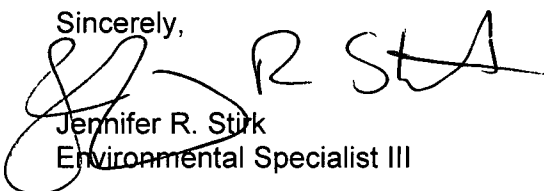
Dear Mr. Lubozynski,

Please find enclosed the First Quarter 2013 Surface Emission Monitoring report for the Tomoka Farms Road Landfill, Volusia County, Florida. Two areas were observed with exceedances on the north cell during this monitoring event. As indicated in an email from Junos Reed dated January 22, 2013, Volusia County Solid Waste Division is conducting some regarding activity on the north cell in preparation for partial closure. The initial exceedances were observed during this period. The regarding activities have moved from these areas and intermediate cover has been re-established. Both locations continued to have exceedances during the 10 day recheck. At the time of the 20 and 30 day rechecks the areas were back in compliance with no exceedances.

As you may recall, the Fourth Quarter 2012 Surface Emission Monitoring event had an area that remained out of compliance after the 20 day recheck. Shaw Environmental dewatered the horizontal wells in this area which improved the gas collection. As of the March 19, 2013, Surface Emission Monitoring event this area was in compliance prior to the 120 day corrective action compliance date of April 5, 2013.

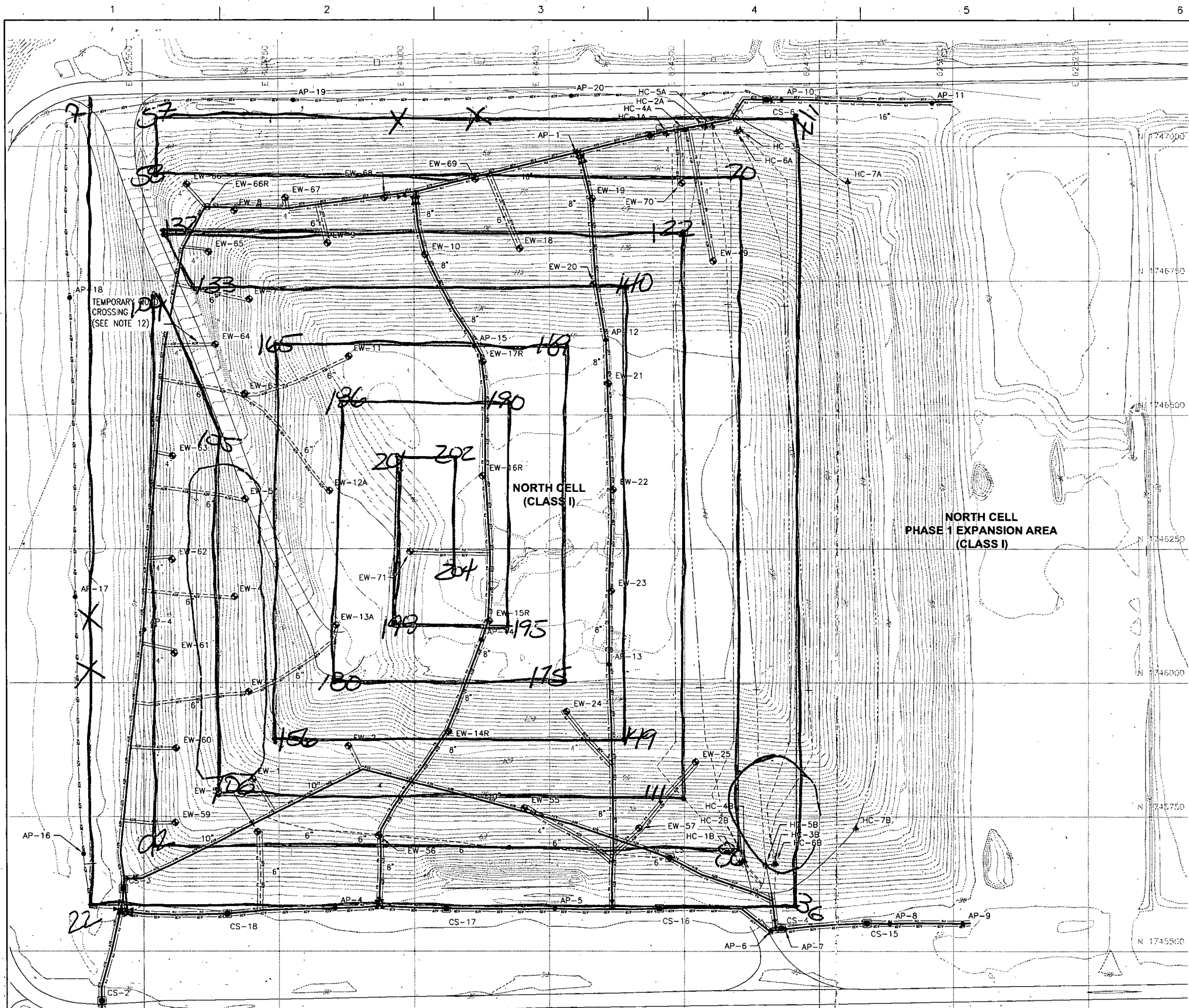
If you have any comments or questions regarding this matter please contact me at (386)947-2952 or jstirk@co.volusia.fl.us.

Sincerely,


Jennifer R. Stirk
Environmental Specialist III

Enclosure: Surface Emission Monitoring Report

CC: Dan Cooper, SCS Engineers
File





SCALE IN FEET



LEGEND

- 140 EXISTING CONTOURS (MAJOR)
- EXISTING CONTOURS (MINOR)
- HDPE SDR 17 LFG HEADER (SIZE VARIES)
- HDPE SDR 11 LATERAL PIPE (SIZE VARIES)
- UG-E UNDERGROUND ELECTRIC
- UG-L UNDERGROUND LEACHATE FORCEMAIN
- HC-7B HORIZONTAL LFG WELLHEAD
- ISOLATION VALVE
- CS-2 CONDENSATE SUMP
- EW-1 LFG WELL
- EW-16AR UPSLOPE WELLHEAD
- AP-2 ACCESS POINTS

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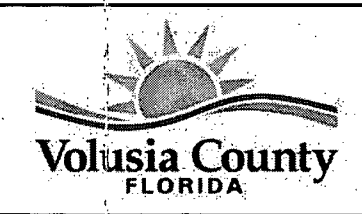
- NOTES:
- AERIAL TOPOGRAPHY WAS TAKEN FROM AERIAL SURVEY PERFORMED BY AERIAL CARTOGRAPHICS OF AMERICA ON APRIL 27, 2012.
 - LIMITS OF LINER OBTAINED FROM THE TOMOKA LANDFILL LINER AS-BUILT DRAWING BY MAPTECH, INC. ON OCTOBER 4, 2005 AND FROM THE CLASS I CELL FILL SEQUENCING PLAN DRAWING PREPARED BY SCS ENGINEERS AND SUBMITTED TO FDEP ON AUGUST 14, 2009.
 - UTILITY INFORMATION OBTAINED FROM THE SPECIFIC PURPOSE SURVEY GAS LINE AS-BUILT TOMOKA FARMS ROAD LANDFILL PREPARED BY SLIGER & ASSOCIATES, INC. ON MARCH 1, 2010.



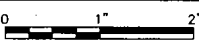
HDR Engineering, Inc.
200 W Forsyth St
Jacksonville, FL 32202
FLORIDA CA 80004213

ISSUE	DATE	DESCRIPTION

PROJECT MANAGER	C. KOENIG, P.E.
DESIGNED BY	M. AUSTIN
DESIGNED BY	
DRAWN BY	M. AUSTIN
CHECKED BY	C. LEBRON, P.E.
PROJECT NUMBER	000000000170244



**CLASS I ACTIVE AREA
TOMOKA FARMS ROAD LANDFILL
VOLUSIA COUNTY, FLORIDA**



**PHASE III - PART A
RECORD DRAWING LFG SYSTEM**

FILENAME	00LFG-01-2.dwg	SHEET
SCALE	AS SHOWN	00LFG-01-2

G:\PROJECT\Volusia\09211049.01\SEM Map with path-0365005 SITE 052412.dwg May 24, 2012 - 3:59pm Layout Name: Figure 2. Br. cadd

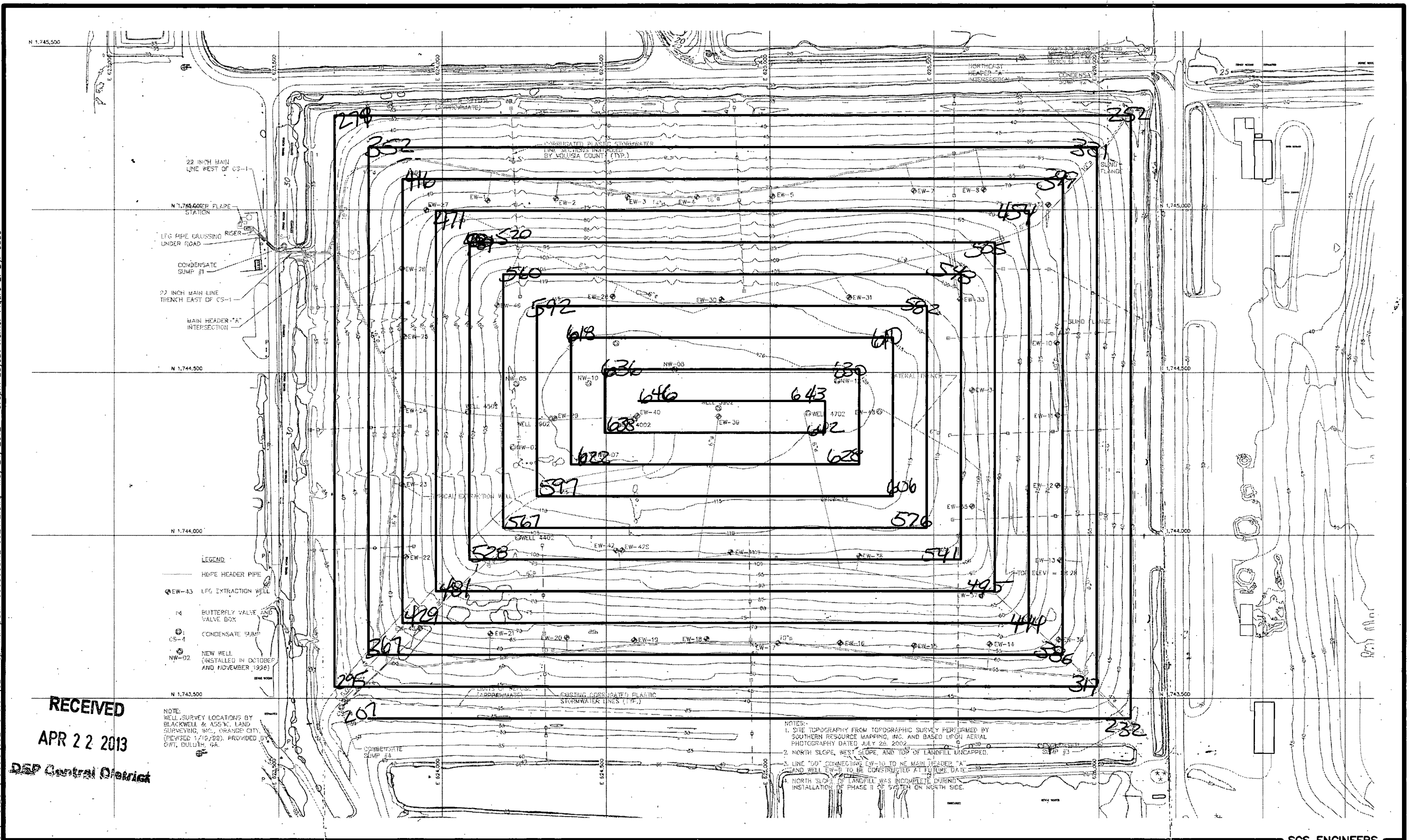


Figure 2. South Cell SEM Path, Tomoka Farms Landfill, Volusia County, Florida

LOGGED DA TA
VER= 1 0

VOC DA TA

DATE	TIME	TAG	FID CONCENTRATION	
19-Mar	13	8:32:34	Zero Gas	1.45 PPM OK
19-Mar	13	8:32:59	Span Gas	511 PPM OK
19-Mar	13	8:33:25	Zero Gas	2.76 PPM OK
19-Mar	13	8:34:08	Span Gas	502 PPM OK
19-Mar	13	9:05:03	Upwind	3.41 PPM OK
19-Mar	13	9:10:58	Downwind	6.43 PPM OK
19-Mar	13	9:16:59	7	49.83 PPM OK
19-Mar	13	9:17:39	8	17.79 PPM OK
19-Mar	13	9:18:20	9	16.36 PPM OK
19-Mar	13	9:19:00	10	66.09 PPM OK
19-Mar	13	9:19:40	11	34.58 PPM OK
19-Mar	13	9:20:19	12	69.7 PPM OK
19-Mar	13	9:20:58	13	15.33 PPM OK
19-Mar	13	9:21:41	14	41.47 PPM OK
19-Mar	13	9:22:25	15	158 PPM OK
19-Mar	13	9:23:08	16	19.92 PPM OK
19-Mar	13	9:23:59	17	249.61 PPM OK
19-Mar	13	9:24:48	18	518 PPM OK
19-Mar	13	9:25:51	19	522 PPM OK
19-Mar	13	9:26:31	20	157.08 PPM OK
19-Mar	13	9:27:11	21	141.36 PPM OK
19-Mar	13	9:28:53	22	27.16 PPM OK
19-Mar	13	9:29:40	23	40.88 PPM OK
19-Mar	13	9:30:31	24	29.43 PPM OK
19-Mar	13	9:31:12	25	68.33 PPM OK
19-Mar	13	9:31:51	26	162.11 PPM OK
19-Mar	13	9:32:25	27	30.67 PPM OK
19-Mar	13	9:33:00	28	113 PPM OK
19-Mar	13	9:33:42	29	46.14 PPM OK
19-Mar	13	9:34:53	30	147 PPM OK
19-Mar	13	9:39:56	31	18.31 PPM OK
19-Mar	13	9:40:38	32	41.51 PPM OK
19-Mar	13	9:41:25	33	27.8 PPM OK
19-Mar	13	9:42:15	34	36.41 PPM OK
19-Mar	13	9:43:33	35	74.16 PPM OK
19-Mar	13	9:44:23	36	45.01 PPM OK
19-Mar	13	9:45:19	37	18.59 PPM OK
19-Mar	13	9:46:20	38	17.41 PPM OK
19-Mar	13	9:47:37	39	25.94 PPM OK
19-Mar	13	9:48:25	40	16.12 PPM OK
19-Mar	13	9:49:49	41	16 PPM OK

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19-Mar	13	9:49:17	42	3.06 PPM	OK
19-Mar	13	9:50:09	43	3.27 PPM	OK
19-Mar	13	9:51:49	44	8.26 PPM	OK
19-Mar	13	9:52:10	45	17.52 PPM	OK
19-Mar	13	9:52:59	46	55.06 PPM	OK
19-Mar	13	9:53:48	47	18.86 PPM	OK
19-Mar	13	9:54:30	48	73.36 PPM	OK
19-Mar	13	9:55:15	49	43.28 PPM	OK
19-Mar	13	9:55:55	50	627 PPM	OK
19-Mar	13	9:56:35	51	519 PPM	OK
19-Mar	13	9:57:14	52	4.32 PPM	OK
19-Mar	13	9:58:03	53	16.34 PPM	OK
19-Mar	13	9:59:38	54	2.81 PPM	OK
19-Mar	13	10:00:27	55	4.17 PPM	OK
19-Mar	13	10:01:41	56	3.59 PPM	OK
19-Mar	13	10:02:22	57	9 PPM	OK
19-Mar	13	10:03:14	58	3.48 PPM	OK
19-Mar	13	10:04:13	59	20.34 PPM	OK
19-Mar	13	10:05:07	60	7.87 PPM	OK
19-Mar	13	10:06:53	61	7.12 PPM	OK
19-Mar	13	10:07:36	62	4.69 PPM	OK
19-Mar	13	10:08:40	63	7.44 PPM	OK
19-Mar	13	10:09:38	64	50.59 PPM	OK
19-Mar	13	10:10:27	65	22.15 PPM	OK
19-Mar	13	10:11:10	66	23.52 PPM	OK
19-Mar	13	10:11:49	67	35.67 PPM	OK
19-Mar	13	10:12:19	68	21.09 PPM	OK
19-Mar	13	10:12:56	69	32.15 PPM	OK
19-Mar	13	10:13:32	70	43.08 PPM	OK
19-Mar	13	10:14:07	71	11.92 PPM	OK
19-Mar	13	10:14:55	72	20.22 PPM	OK
19-Mar	13	10:15:06	73	14.67 PPM	OK
19-Mar	13	10:15:55	74	12.6 PPM	OK
19-Mar	13	10:17:29	75	40.58 PPM	OK
19-Mar	13	10:18:02	76	21.18 PPM	OK
19-Mar	13	10:18:55	77	14.16 PPM	OK
19-Mar	13	10:19:40	78	21.66 PPM	OK
19-Mar	13	10:20:20	79	13.38 PPM	OK
19-Mar	13	10:21:53	80	11.22 PPM	OK
19-Mar	13	10:22:23	81	8.37 PPM	OK
19-Mar	13	10:23:01	82	7.94 PPM	OK
19-Mar	13	10:24:01	83	5.03 PPM	OK
19-Mar	13	10:24:43	84	4.37 PPM	OK
19-Mar	13	10:25:16	85	7.36 PPM	OK
19-Mar	13	10:26:29	86	6.25 PPM	OK
19-Mar	13	10:27:07	87	5.24 PPM	OK
19-Mar	13	10:28:39	88	6.32 PPM	OK

19-Mar	13	10:29:23	89	7.1 PPM	OK
19-Mar	13	10:30:58	90	13.32 PPM	OK
19-Mar	13	10:31:37	91	11.75 PPM	OK
19-Mar	13	10:32:46	92	6.7 PPM	OK
19-Mar	13	10:33:28	93	6.77 PPM	OK
19-Mar	13	10:34:01	94	6.83 PPM	OK
19-Mar	13	10:34:40	95	12.4 PPM	OK
19-Mar	13	10:35:04	96	12.36 PPM	OK
19-Mar	13	10:36:15	97	13.31 PPM	OK
19-Mar	13	10:37:03	98	32.1 PPM	OK
19-Mar	13	10:38:44	99	16.68 PPM	OK
19-Mar	13	10:40:28	100	9.78 PPM	OK
19-Mar	13	10:41:16	101	9.21 PPM	OK
19-Mar	13	10:42:04	102	8.44 PPM	OK
19-Mar	13	10:42:43	103	13.35 PPM	OK
19-Mar	13	10:43:24	104	12.91 PPM	OK
19-Mar	13	10:44:05	105	14.04 PPM	OK
19-Mar	13	10:45:41	106	23.35 PPM	OK
19-Mar	13	10:46:49	107	18.28 PPM	OK
19-Mar	13	10:47:22	108	11.76 PPM	OK
19-Mar	13	10:48:01	109	23.89 PPM	OK
19-Mar	13	10:48:46	110	6.3 PPM	OK
19-Mar	13	10:49:27	111	3.91 PPM	OK
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19-Mar	13	10:52:18	115	3.73 PPM	OK
19-Mar	13	10:52:50	116	4.85 PPM	OK
19-Mar	13	10:53:28	117	2.09 PPM	OK
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19-Mar	13	10:55:48	119	32.13 PPM	OK
19-Mar	13	10:56:25	120	27.01 PPM	OK
19-Mar	13	10:57:05	121	28.11 PPM	OK
19-Mar	13	10:57:51	122	16.33 PPM	OK
19-Mar	13	10:58:53	123	5.75 PPM	OK
19-Mar	13	10:59:41	124	12.45 PPM	OK
19-Mar	13	11:00:50	125	7.68 PPM	OK
19-Mar	13	11:01:19	126	5.46 PPM	OK
19-Mar	13	11:02:18	127	4.06 PPM	OK
19-Mar	13	11:03:23	128	5.95 PPM	OK
19-Mar	13	11:04:02	129	1.78 PPM	OK
19-Mar	13	11:04:48	130	56.87 PPM	OK
19-Mar	13	11:05:54	131	98.64 PPM	OK
19-Mar	13	11:06:22	132	4.53 PPM	OK
19-Mar	13	11:07:03	133	1.81 PPM	OK
19-Mar	13	11:08:05	134	64.25 PPM	OK
19-Mar	13	11:08:42	135	101.57 PPM	OK

19-Mar	13	11:09:31	136	34.95 PPM	OK
19-Mar	13	11:10:27	137	8.52 PPM	OK
19-Mar	13	11:11:11	138	6.66 PPM	OK
19-Mar	13	11:11:41	139	1.54 PPM	OK
19-Mar	13	11:12:24	140	1.76 PPM	OK
19-Mar	13	11:13:05	141	0.69 PPM	OK
19-Mar	13	11:14:35	142	1.88 PPM	OK
19-Mar	13	11:15:01	143	2.28 PPM	OK
19-Mar	13	11:15:51	144	1.81 PPM	OK
19-Mar	13	11:17:18	145	3.17 PPM	OK
19-Mar	13	11:17:46	146	2.61 PPM	OK
19-Mar	13	11:18:30	147	1.89 PPM	OK
19-Mar	13	11:19:38	148	3.36 PPM	OK
19-Mar	13	11:20:22	149	1.81 PPM	OK
19-Mar	13	11:20:57	150	2.04 PPM	OK
19-Mar	13	11:21:37	151	1.93 PPM	OK
19-Mar	13	11:22:16	152	2.74 PPM	OK
19-Mar	13	11:23:12	153	2.33 PPM	OK
19-Mar	13	11:23:57	154	2.61 PPM	OK
19-Mar	13	11:24:27	155	5.92 PPM	OK
19-Mar	13	11:25:12	156	5.13 PPM	OK
19-Mar	13	11:25:41	157	3.84 PPM	OK
19-Mar	13	11:26:12	158	3.18 PPM	OK
19-Mar	13	11:26:39	159	1.97 PPM	OK
19-Mar	13	11:27:04	160	2.1 PPM	OK
19-Mar	13	11:27:46	161	4.6 PPM	OK
19-Mar	13	11:28:29	162	3.36 PPM	OK
19-Mar	13	11:29:17	163	18.56 PPM	OK
19-Mar	13	11:29:57	164	8.59 PPM	OK
19-Mar	13	11:29:32	165	13.87 PPM	OK
19-Mar	13	11:30:48	166	7.65 PPM	OK
19-Mar	13	11:31:35	167	15.76 PPM	OK
19-Mar	13	11:32:41	168	5.89 PPM	OK
19-Mar	13	11:33:17	169	7.58 PPM	OK
19-Mar	13	11:34:48	170	8.85 PPM	OK
19-Mar	13	11:35:17	171	4.12 PPM	OK
19-Mar	13	11:34:51	172	4.17 PPM	OK
19-Mar	13	11:35:43	173	4.17 PPM	OK
19-Mar	13	11:36:18	174	4.38 PPM	OK
19-Mar	13	11:37:10	175	4.7 PPM	OK
19-Mar	13	11:37:51	176	12.54 PPM	OK
19-Mar	13	11:38:32	177	6.32 PPM	OK
19-Mar	13	11:39:38	178	3.69 PPM	OK
19-Mar	13	11:40:49	179	3.03 PPM	OK
19-Mar	13	11:41:40	180	11.35 PPM	OK
19-Mar	13	11:42:35	181	4.54 PPM	OK
19-Mar	13	11:43:48	182	6.2 PPM	OK

19-Mar	13	11:44:10	183	2.91 PPM	OK
19-Mar	13	11:44:57	184	7.41 PPM	OK
19-Mar	13	11:45:30	185	4.56 PPM	OK
19-Mar	13	11:46:36	186	7.66 PPM	OK
19-Mar	13	11:47:14	187	8.86 PPM	OK
19-Mar	13	11:47:41	188	5.88 PPM	OK
19-Mar	13	11:48:12	189	5.13 PPM	OK
19-Mar	13	11:48:41	190	3.84 PPM	OK
19-Mar	13	11:49:12	191	3.18 PPM	OK
19-Mar	13	11:49:29	192	1.97 PPM	OK
19-Mar	13	11:49:04	193	2.1 PPM	OK
19-Mar	13	11:49:36	194	4.6 PPM	OK
19-Mar	13	11:50:09	195	3.36 PPM	OK
19-Mar	13	11:50:57	196	18.56 PPM	OK
19-Mar	13	11:51:27	197	8.59 PPM	OK
19-Mar	13	11:52:12	198	13.87 PPM	OK
19-Mar	13	11:52:48	199	7.65 PPM	OK
19-Mar	13	11:53:19	200	15.76 PPM	OK
19-Mar	13	11:53:51	201	5.89 PPM	OK
19-Mar	13	11:54:17	202	7.58 PPM	OK
19-Mar	13	11:54:48	203	8.85 PPM	OK
19-Mar	13	11:55:59	204	4.12 PPM	OK

Closed South Cell

VOC DA TA

DATE	TIME	TAG	FID CONCENTRATION	
19-Mar	13	12:55:31	Upwind	4.17 PPM OK
19-Mar	13	12:57:43	Downwind	4.17 PPM OK
19-Mar	13	12:58:18	207	4.38 PPM OK
19-Mar	13	12:58:48	208	4.7 PPM OK
19-Mar	13	12:59:25	209	12.54 PPM OK
19-Mar	13	12:59:59	210	6.32 PPM OK
19-Mar	13	13:00:38	211	3.69 PPM OK
19-Mar	13	13:01:19	212	3.03 PPM OK
19-Mar	13	13:01:40	213	11.35 PPM OK
19-Mar	13	13:02:25	214	4.54 PPM OK
19-Mar	13	13:02:58	215	6.2 PPM OK
19-Mar	13	13:03:30	216	2.91 PPM OK
19-Mar	13	13:03:57	217	17.41 PPM OK
19-Mar	13	13:04:30	218	4.65 PPM OK
19-Mar	13	13:04:56	219	7.66 PPM OK
19-Mar	13	13:05:34	220	8.86 PPM OK
19-Mar	13	13:05:55	221	5.88 PPM OK
19-Mar	13	13:06:21	222	12.45 PPM OK
19-Mar	13	13:06:56	223	7.68 PPM OK
19-Mar	13	13:07:29	224	5.46 PPM OK

19-Mar	13	13:07:58	225	4.06 PPM	OK
19-Mar	13	13:08:33	226	25.35 PPM	OK
19-Mar	13	13:08:00	227	6.3 PPM	OK
19-Mar	13	13:08:28	228	3.91 PPM	OK
19-Mar	13	13:08:54	229	2.82 PPM	OK
19-Mar	13	13:09:22	230	2.1 PPM	OK
19-Mar	13	13:10:03	231	18.21 PPM	OK
19-Mar	13	13:10:58	232	3.73 PPM	OK
19-Mar	13	13:11:32	233	4.85 PPM	OK
19-Mar	13	13:12:01	234	2.09 PPM	OK
19-Mar	13	13:12:37	235	8.38 PPM	OK
19-Mar	13	13:13:11	236	6.66 PPM	OK
19-Mar	13	13:13:41	237	1.54 PPM	OK
19-Mar	13	13:14:24	238	1.76 PPM	OK
19-Mar	13	13:14:55	239	8.69 PPM	OK
19-Mar	13	13:15:35	240	1.88 PPM	OK
19-Mar	13	13:16:01	241	2.28 PPM	OK
19-Mar	13	13:16:41	242	1.81 PPM	OK
19-Mar	13	13:17:18	243	3.17 PPM	OK
19-Mar	13	13:17:46	244	16.61 PPM	OK
19-Mar	13	13:18:30	245	1.89 PPM	OK
19-Mar	13	13:19:18	246	3.36 PPM	OK
19-Mar	13	13:19:42	247	1.81 PPM	OK
19-Mar	13	13:20:20	248	2.04 PPM	OK
19-Mar	13	13:20:57	249	1.93 PPM	OK
19-Mar	13	13:21:36	250	2.74 PPM	OK
19-Mar	13	13:22:12	251	2.33 PPM	OK
19-Mar	13	13:22:57	252	2.61 PPM	OK
19-Mar	13	13:23:27	253	5.92 PPM	OK
19-Mar	13	13:23:58	254	5.13 PPM	OK
19-Mar	13	13:24:41	255	3.84 PPM	OK
19-Mar	13	13:25:12	256	3.18 PPM	OK
19-Mar	13	13:25:59	257	1.97 PPM	OK
19-Mar	13	13:26:34	258	2.1 PPM	OK
19-Mar	13	13:27:08	259	4.6 PPM	OK
19-Mar	13	13:27:49	260	3.36 PPM	OK
19-Mar	13	13:28:27	261	18.56 PPM	OK
19-Mar	13	13:28:57	262	8.59 PPM	OK
19-Mar	13	13:29:32	263	13.87 PPM	OK
19-Mar	13	13:30:08	264	7.65 PPM	OK
19-Mar	13	13:30:35	265	15.76 PPM	OK
19-Mar	13	13:30:51	266	5.89 PPM	OK
19-Mar	13	13:31:17	267	7.58 PPM	OK
19-Mar	13	13:31:48	268	8.85 PPM	OK
19-Mar	13	13:32:37	269	4.12 PPM	OK
19-Mar	13	13:33:09	270	8.35 PPM	OK
19-Mar	13	13:33:43	271	4.17 PPM	OK

19-Mar	13	13:34:08	272	4.38 PPM	OK
19-Mar	13	13:34:40	273	4.7 PPM	OK
19-Mar	13	13:35:21	274	12.54 PPM	OK
19-Mar	13	13:35:52	275	6.32 PPM	OK
19-Mar	13	13:36:28	276	3.69 PPM	OK
19-Mar	13	13:36:49	277	3.03 PPM	OK
19-Mar	13	13:37:20	278	11.35 PPM	OK
19-Mar	13	13:37:55	279	14.54 PPM	OK
19-Mar	13	13:38:28	280	6.2 PPM	OK
19-Mar	13	13:38:50	281	2.91 PPM	OK
19-Mar	13	13:39:27	282	7.41 PPM	OK
19-Mar	13	13:40:00	283	4.56 PPM	OK
19-Mar	13	13:40:36	284	7.66 PPM	OK
19-Mar	13	13:41:14	285	8.86 PPM	OK
19-Mar	13	13:41:51	286	5.88 PPM	OK
19-Mar	13	13:42:32	287	5.13 PPM	OK
19-Mar	13	13:43:01	288	3.84 PPM	OK
19-Mar	13	13:43:32	289	3.18 PPM	OK
19-Mar	13	13:43:59	290	1.97 PPM	OK
19-Mar	13	13:44:34	291	2.1 PPM	OK
19-Mar	13	13:45:06	292	4.6 PPM	OK
19-Mar	13	13:45:49	293	3.36 PPM	OK
19-Mar	13	13:46:27	294	18.56 PPM	OK
19-Mar	13	13:46:57	295	8.59 PPM	OK
19-Mar	13	13:47:29	296	13.87 PPM	OK
19-Mar	13	13:47:58	297	16.65 PPM	OK
19-Mar	13	13:48:35	298	15.76 PPM	OK
19-Mar	13	13:49:11	299	5.89 PPM	OK
19-Mar	13	13:49:47	300	7.58 PPM	OK
19-Mar	13	13:50:28	301	8.85 PPM	OK
19-Mar	13	13:50:57	302	4.12 PPM	OK
19-Mar	13	13:51:31	303	4.17 PPM	OK
19-Mar	13	13:52:03	304	4.75 PPM	OK
19-Mar	13	13:52:48	305	4.38 PPM	OK
19-Mar	13	13:53:00	306	4.7 PPM	OK
19-Mar	13	13:53:31	307	12.54 PPM	OK
19-Mar	13	13:54:12	308	6.32 PPM	OK
19-Mar	13	13:54:58	309	3.69 PPM	OK
19-Mar	13	13:55:49	310	3.03 PPM	OK
19-Mar	13	13:56:40	311	11.35 PPM	OK
19-Mar	13	13:57:15	312	4.54 PPM	OK
19-Mar	13	13:57:58	313	6.2 PPM	OK
19-Mar	13	13:58:30	314	2.91 PPM	OK
19-Mar	13	13:58:57	315	7.41 PPM	OK
19-Mar	13	13:59:30	316	4.56 PPM	OK
19-Mar	13	14:00:36	317	7.66 PPM	OK
19-Mar	13	14:00:55	318	8.34 PPM	OK

19-Mar	13	14:01:37	319	6.52 PPM	OK
19-Mar	13	14:02:18	320	5.68 PPM	OK
19-Mar	13	14:02:51	321	6.66 PPM	OK
19-Mar	13	14:03:36	322	7.46 PPM	OK
19-Mar	13	14:04:13	323	6.87 PPM	OK
19-Mar	13	14:04:58	324	6.74 PPM	OK
19-Mar	13	14:05:29	325	7.22 PPM	OK
19-Mar	13	14:06:04	326	5.67 PPM	OK
19-Mar	13	14:06:51	327	5.31 PPM	OK
19-Mar	13	14:07:34	328	6.46 PPM	OK
19-Mar	13	14:08:10	329	6.51 PPM	OK
19-Mar	13	14:08:41	330	5.67 PPM	OK
19-Mar	13	14:09:17	331	5.61 PPM	OK
19-Mar	13	14:09:51	332	7.21 PPM	OK
19-Mar	13	14:10:27	333	6.6 PPM	OK
19-Mar	13	14:11:08	334	6.51 PPM	OK
19-Mar	13	14:11:35	335	6.68 PPM	OK
19-Mar	13	14:12:07	336	6.99 PPM	OK
19-Mar	13	14:12:35	337	8.54 PPM	OK
19-Mar	13	14:13:06	338	7.66 PPM	OK
19-Mar	13	14:13:34	339	6.9 PPM	OK
19-Mar	13	14:14:34	340	7.98 PPM	OK
19-Mar	13	14:15:21	341	9.22 PPM	OK
19-Mar	13	14:15:53	342	6.91 PPM	OK
19-Mar	13	14:16:35	343	6.83 PPM	OK
19-Mar	13	14:17:19	344	5.28 PPM	OK
19-Mar	13	14:17:54	345	6.91 PPM	OK
19-Mar	13	14:18:27	346	5.9 PPM	OK
19-Mar	13	14:18:55	347	8.41 PPM	OK
19-Mar	13	14:19:24	348	6.1 PPM	OK
19-Mar	13	14:19:53	349	8.11 PPM	OK
19-Mar	13	14:20:30	350	10.88 PPM	OK
19-Mar	13	14:21:02	351	18.25 PPM	OK
19-Mar	13	14:21:32	352	7.81 PPM	OK
19-Mar	13	14:22:01	353	7.79 PPM	OK
19-Mar	13	14:22:33	354	7.72 PPM	OK
19-Mar	13	14:23:07	355	8.56 PPM	OK
19-Mar	13	14:23:45	356	7.93 PPM	OK
19-Mar	13	14:24:11	357	9.8 PPM	OK
19-Mar	13	14:25:36	358	7.97 PPM	OK
19-Mar	13	14:26:09	359	8.42 PPM	OK
19-Mar	13	14:26:42	360	6.83 PPM	OK
19-Mar	13	14:27:08	361	6.77 PPM	OK
19-Mar	13	14:27:42	362	7.65 PPM	OK
19-Mar	13	14:28:14	363	7.87 PPM	OK
19-Mar	13	14:28:44	364	8.77 PPM	OK
19-Mar	13	14:29:16	365	7.53 PPM	OK

19-Mar	13	14:29:51	366	7.09 PPM	OK
19-Mar	13	14:30:23	367	6.87 PPM	OK
19-Mar	13	14:30:53	368	7.49 PPM	OK
19-Mar	13	14:31:32	369	8.17 PPM	OK
19-Mar	13	14:32:06	370	7.93 PPM	OK
19-Mar	13	14:32:44	371	7.7 PPM	OK
19-Mar	13	14:33:17	372	6.58 PPM	OK
19-Mar	13	14:33:50	373	7.17 PPM	OK
19-Mar	13	14:34:35	374	6.55 PPM	OK
19-Mar	13	14:35:05	375	7.68 PPM	OK
19-Mar	13	14:35:43	376	7.37 PPM	OK
19-Mar	13	14:36:18	377	7.11 PPM	OK
19-Mar	13	14:36:57	378	7.73 PPM	OK
19-Mar	13	14:37:27	379	5.66 PPM	OK
19-Mar	13	14:37:57	380	10.15 PPM	OK
19-Mar	13	14:38:25	381	7.98 PPM	OK
19-Mar	13	14:39:01	382	8.31 PPM	OK
19-Mar	13	14:39:53	383	8.78 PPM	OK
19-Mar	13	14:40:16	384	15.12 PPM	OK
19-Mar	13	14:40:58	385	9.74 PPM	OK
19-Mar	13	14:41:28	386	6.77 PPM	OK
19-Mar	13	14:41:58	387	8.27 PPM	OK
19-Mar	13	14:42:33	388	7.7 PPM	OK
19-Mar	13	14:43:10	389	7.76 PPM	OK
19-Mar	13	14:44:43	390	7.93 PPM	OK
19-Mar	13	14:45:19	391	10.16 PPM	OK
19-Mar	13	14:45:56	392	11.81 PPM	OK
19-Mar	13	14:46:35	393	9.46 PPM	OK
19-Mar	13	14:47:12	394	9.5 PPM	OK
19-Mar	13	14:47:41	395	9.35 PPM	OK
19-Mar	13	14:48:12	396	9.11 PPM	OK
19-Mar	13	14:48:47	397	7.23 PPM	OK
19-Mar	13	14:49:20	398	7.23 PPM	OK
19-Mar	13	14:49:57	399	6.8 PPM	OK
19-Mar	13	14:50:29	400	8.99 PPM	OK
19-Mar	13	14:51:02	401	8.76 PPM	OK
19-Mar	13	14:51:33	402	8.77 PPM	OK
19-Mar	13	14:52:08	403	7.23 PPM	OK
19-Mar	13	14:52:37	404	8.45 PPM	OK
19-Mar	13	14:53:10	405	8.89 PPM	OK
19-Mar	13	14:53:40	406	10.1 PPM	OK
19-Mar	13	14:54:09	407	8.15 PPM	OK
19-Mar	13	14:54:40	408	7.16 PPM	OK
19-Mar	13	14:55:05	409	7.53 PPM	OK
19-Mar	13	14:55:34	410	10.05 PPM	OK
19-Mar	13	14:55:59	411	10.8 PPM	OK
19-Mar	13	14:56:26	412	9.35 PPM	OK

19-Mar	13	14:56:51	413	8.54 PPM	OK
19-Mar	13	14:57:17	414	8.88 PPM	OK
19-Mar	13	14:57:52	415	9.02 PPM	OK
19-Mar	13	14:58:25	416	9.6 PPM	OK
19-Mar	13	14:59:03	417	9.94 PPM	OK
19-Mar	13	15:00:02	418	8.55 PPM	OK
19-Mar	13	15:00:51	419	10.02 PPM	OK
19-Mar	13	15:01:29	420	9.66 PPM	OK
19-Mar	13	15:02:05	421	9.75 PPM	OK
19-Mar	13	15:02:46	422	8.49 PPM	OK
19-Mar	13	15:03:34	423	9.63 PPM	OK
19-Mar	13	15:04:11	424	10.12 PPM	OK
19-Mar	13	15:04:38	425	9.53 PPM	OK
19-Mar	13	15:05:05	426	8.27 PPM	OK
19-Mar	13	15:05:32	427	9.11 PPM	OK
19-Mar	13	15:05:56	428	9.76 PPM	OK
19-Mar	13	15:06:23	429	9.81 PPM	OK
19-Mar	13	15:06:47	430	9.05 PPM	OK
19-Mar	13	15:07:14	431	9.92 PPM	OK
19-Mar	13	15:07:37	432	9.72 PPM	OK
19-Mar	13	15:08:02	433	9.71 PPM	OK
19-Mar	13	15:08:31	434	9.33 PPM	OK
19-Mar	13	15:09:02	435	9.31 PPM	OK
19-Mar	13	15:09:48	436	9.15 PPM	OK
19-Mar	13	15:10:23	437	9.19 PPM	OK
19-Mar	13	15:10:53	438	8.5 PPM	OK
19-Mar	13	15:11:22	439	9.83 PPM	OK
19-Mar	13	15:11:52	440	9.02 PPM	OK
19-Mar	13	15:12:07	441	9.5 PPM	OK
19-Mar	13	15:12:31	442	10.14 PPM	OK
19-Mar	13	15:12:57	443	9.8 PPM	OK
19-Mar	13	15:13:32	444	10.26 PPM	OK
19-Mar	13	15:14:02	445	9.79 PPM	OK
19-Mar	13	15:14:31	446	9.8 PPM	OK
19-Mar	13	15:15:04	447	9.26 PPM	OK
19-Mar	13	15:15:40	448	10.78 PPM	OK
19-Mar	13	15:16:15	449	9.83 PPM	OK
19-Mar	13	15:16:47	450	9.77 PPM	OK
19-Mar	13	15:17:16	451	9.47 PPM	OK
19-Mar	13	15:17:43	452	9.47 PPM	OK
19-Mar	13	15:18:07	453	9.38 PPM	OK
19-Mar	13	15:18:42	454	9.92 PPM	OK
19-Mar	13	15:19:09	455	9.53 PPM	OK
19-Mar	13	15:19:38	456	9.82 PPM	OK
19-Mar	13	15:20:14	457	10.9 PPM	OK
19-Mar	13	15:20:49	458	9.21 PPM	OK
19-Mar	13	15:21:19	459	10.24 PPM	OK

19-Mar	13	15:21:49	460	10.29 PPM	OK
19-Mar	13	15:22:21	461	10.29 PPM	OK
19-Mar	13	15:23:14	462	10.51 PPM	OK
19-Mar	13	17:23:38	463	10.47 PPM	OK
19-Mar	13	15:24:10	464	9.43 PPM	OK
19-Mar	13	15:24:42	465	9.86 PPM	OK
19-Mar	13	15:25:12	466	11.91 PPM	OK
19-Mar	13	15:25:37	467	10.52 PPM	OK
19-Mar	13	15:26:11	468	10.92 PPM	OK
19-Mar	13	15:26:36	469	9.59 PPM	OK
19-Mar	13	15:27:01	470	9.99 PPM	OK
19-Mar	13	15:27:51	471	10.12 PPM	OK
19-Mar	13	15:28:23	472	10.29 PPM	OK
19-Mar	13	15:29:02	473	9.64 PPM	OK
19-Mar	13	15:29:30	474	9.38 PPM	OK
19-Mar	13	15:30:02	475	9.99 PPM	OK
19-Mar	13	15:30:37	476	10.37 PPM	OK
19-Mar	13	15:31:03	477	9.64 PPM	OK
19-Mar	13	15:31:50	478	11.04 PPM	OK
19-Mar	13	15:32:24	479	14.45 PPM	OK
19-Mar	13	15:32:55	480	10.59 PPM	OK
19-Mar	13	15:33:30	481	10.88 PPM	OK
19-Mar	13	15:33:56	482	10.71 PPM	OK
19-Mar	13	15:34:30	483	11.56 PPM	OK
19-Mar	13	15:35:05	484	10.74 PPM	OK
19-Mar	13	15:35:58	485	10.01 PPM	OK
19-Mar	13	15:36:25	486	11.35 PPM	OK
19-Mar	13	15:36:53	487	11.12 PPM	OK
19-Mar	13	15:37:31	488	10.76 PPM	OK
19-Mar	13	15:37:59	489	10.05 PPM	OK
19-Mar	13	15:38:27	490	9.71 PPM	OK
19-Mar	13	15:38:59	491	9.87 PPM	OK
19-Mar	13	15:39:37	492	10.41 PPM	OK
19-Mar	13	15:40:05	493	10.04 PPM	OK
19-Mar	13	15:40:29	494	9.71 PPM	OK
19-Mar	13	15:40:57	495	9.71 PPM	OK
19-Mar	13	15:41:21	496	10.24 PPM	OK
19-Mar	13	15:41:46	497	10.1 PPM	OK
19-Mar	13	15:42:16	498	10.25 PPM	OK
19-Mar	13	15:42:47	499	10.07 PPM	OK
19-Mar	13	15:43:12	500	9.36 PPM	OK
19-Mar	13	15:43:54	501	9.88 PPM	OK
19-Mar	13	15:44:26	502	10.9 PPM	OK
19-Mar	13	15:44:54	503	9.76 PPM	OK
19-Mar	13	15:45:17	504	9.92 PPM	OK
19-Mar	13	15:45:51	505	9.77 PPM	OK
19-Mar	13	15:46:30	506	9.9 PPM	OK

19-Mar	13	15:47:04	507	8.05 PPM	OK
19-Mar	13	15:47:54	508	9.6 PPM	OK
19-Mar	13	15:48:24	509	9.81 PPM	OK
19-Mar	13	15:48:59	510	9.98 PPM	OK
19-Mar	13	15:49:34	511	9.65 PPM	OK
19-Mar	13	15:50:05	512	8.73 PPM	OK
19-Mar	13	15:50:38	513	9.98 PPM	OK
19-Mar	13	15:51:10	514	10.36 PPM	OK
19-Mar	13	15:51:43	515	9.61 PPM	OK
19-Mar	13	15:52:26	516	9.87 PPM	OK
19-Mar	13	15:52:52	517	11.68 PPM	OK
19-Mar	13	15:53:23	518	10.47 PPM	OK
19-Mar	13	15:53:58	519	10.05 PPM	OK
19-Mar	13	15:54:32	520	10.73 PPM	OK
19-Mar	13	15:55:15	521	10.91 PPM	OK
19-Mar	13	15:55:51	522	10.9 PPM	OK
19-Mar	13	15:56:34	523	10.62 PPM	OK
19-Mar	13	15:57:04	524	11.06 PPM	OK
19-Mar	13	15:57:52	525	10.12 PPM	OK
19-Mar	13	14:58:30	526	11.41 PPM	OK
19-Mar	13	15:59:03	527	11.23 PPM	OK
19-Mar	13	15:59:41	528	11.18 PPM	OK
19-Mar	13	16:00:24	529	11.45 PPM	OK
19-Mar	13	16:00:49	530	11.46 PPM	OK
19-Mar	13	16:01:26	531	10.12 PPM	OK
19-Mar	13	16:01:55	532	11.04 PPM	OK
19-Mar	13	16:02:22	533	10.18 PPM	OK
19-Mar	13	16:02:58	534	10.12 PPM	OK
19-Mar	13	16:03:23	535	9.97 PPM	OK
19-Mar	13	16:03:55	536	10.86 PPM	OK
19-Mar	13	16:04:23	537	9.93 PPM	OK
19-Mar	13	16:05:00	538	10.26 PPM	OK
19-Mar	13	16:05:39	539	9.22 PPM	OK
19-Mar	13	16:06:00	540	10.04 PPM	OK
19-Mar	13	16:06:25	541	9.97 PPM	OK
19-Mar	13	16:06:56	542	10.54 PPM	OK
19-Mar	13	16:07:27	543	10.56 PPM	OK
19-Mar	13	16:07:57	544	9.55 PPM	OK
19-Mar	13	16:08:30	545	10.36 PPM	OK
19-Mar	13	16:09:05	546	9.81 PPM	OK
19-Mar	13	16:09:40	547	9.8 PPM	OK
19-Mar	13	16:10:25	548	9.44 PPM	OK
19-Mar	13	16:11:09	549	9.88 PPM	OK
19-Mar	13	16:11:55	550	10.3 PPM	OK
19-Mar	13	16:12:25	551	10.2 PPM	OK
19-Mar	13	16:12:54	552	9.94 PPM	OK
19-Mar	13	16:13:27	553	10.37 PPM	OK

19-Mar	13	16:13:56	554	10.92 PPM	OK
19-Mar	13	16:14:23	555	10.29 PPM	OK
19-Mar	13	16:14:51	556	10.6 PPM	OK
19-Mar	13	16:15:14	557	10.36 PPM	OK
19-Mar	13	16:15:40	558	10.41 PPM	OK
19-Mar	13	16:16:16	559	10.03 PPM	OK
19-Mar	13	16:16:44	560	10.27 PPM	OK
19-Mar	13	16:17:12	561	10.76 PPM	OK
19-Mar	13	16:17:39	562	10.48 PPM	OK
19-Mar	13	16:18:09	563	10.98 PPM	OK
19-Mar	13	16:18:47	564	9.9 PPM	OK
19-Mar	13	16:19:16	565	10.14 PPM	OK
19-Mar	13	16:19:47	566	11.46 PPM	OK
19-Mar	13	16:20:18	567	11.01 PPM	OK
19-Mar	13	16:20:51	568	10.6 PPM	OK
19-Mar	13	16:21:44	569	12.18 PPM	OK
19-Mar	13	16:22:13	570	11.85 PPM	OK
19-Mar	13	16:22:43	571	10.86 PPM	OK
19-Mar	13	16:23:30	572	10.42 PPM	OK
19-Mar	13	16:24:18	573	10.57 PPM	OK
19-Mar	13	16:24:50	574	10.87 PPM	OK
19-Mar	13	16:25:31	575	9.68 PPM	OK
19-Mar	13	16:25:59	576	10.97 PPM	OK
19-Mar	13	16:26:27	577	10.38 PPM	OK
19-Mar	13	16:26:56	578	11.02 PPM	OK
19-Mar	13	16:27:24	579	10.87 PPM	OK
19-Mar	13	16:27:52	580	10.65 PPM	OK
19-Mar	13	16:28:24	581	9.25 PPM	OK
19-Mar	13	16:28:52	582	9.27 PPM	OK
19-Mar	13	16:29:18	583	10.69 PPM	OK
19-Mar	13	16:30:50	584	10.15 PPM	OK
19-Mar	13	16:31:20	585	10.51 PPM	OK
19-Mar	13	16:31:54	586	10.01 PPM	OK
19-Mar	13	16:32:30	587	10.84 PPM	OK
19-Mar	13	16:33:04	588	10.86 PPM	OK
19-Mar	13	16:33:30	589	6.45 PPM	OK
19-Mar	13	16:33:57	590	10.53 PPM	OK
19-Mar	13	16:34:26	591	10.79 PPM	OK
19-Mar	13	16:35:11	592	8.35 PPM	OK
19-Mar	13	16:35:47	593	10.24 PPM	OK
19-Mar	13	16:36:19	594	9.61 PPM	OK
19-Mar	13	16:36:44	595	10.73 PPM	OK
19-Mar	13	16:37:09	596	10.3 PPM	OK
19-Mar	13	16:37:34	597	10.8 PPM	OK
19-Mar	13	16:37:59	598	10.76 PPM	OK
19-Mar	13	16:38:20	599	10.69 PPM	OK
19-Mar	13	16:38:47	600	9.97 PPM	OK

19-Mar	13	16:39:18	601	10.58 PPM	OK
19-Mar	13	16:39:41	602	9.9 PPM	OK
19-Mar	13	16:40:10	603	11.2 PPM	OK
19-Mar	13	16:40:34	604	10.73 PPM	OK
19-Mar	13	16:41:00	605	10.08 PPM	OK
19-Mar	13	16:41:28	606	11.84 PPM	OK
19-Mar	13	16:41:58	607	10.63 PPM	OK
19-Mar	13	16:42:24	608	10.49 PPM	OK
19-Mar	13	16:24:57	609	12.53 PPM	OK
19-Mar	13	16:25:29	610	10.76 PPM	OK
19-Mar	13	16:25:57	611	11.32 PPM	OK
19-Mar	13	16:26:22	612	12.97 PPM	OK
19-Mar	13	16:26:59	613	10.24 PPM	OK
19-Mar	13	16:27:29	614	10.07 PPM	OK
19-Mar	13	16:27:58	615	10.97 PPM	OK
19-Mar	13	16:28:23	616	9.71 PPM	OK
19-Mar	13	16:28:49	617	10.19 PPM	OK
19-Mar	13	16:29:15	618	10.9 PPM	OK
19-Mar	13	16:29:41	619	11.25 PPM	OK
19-Mar	13	16:30:22	620	10.8 PPM	OK
19-Mar	13	16:30:59	621	10.54 PPM	OK
19-Mar	13	16:31:34	622	11.32 PPM	OK
19-Mar	13	16:32:02	623	10.81 PPM	OK
19-Mar	13	16:32:31	624	10.51 PPM	OK
19-Mar	13	16:33:03	625	10.9 PPM	OK
19-Mar	13	16:33:41	626	10.9 PPM	OK
19-Mar	13	16:34:15	627	11.46 PPM	OK
19-Mar	13	16:34:48	628	9.36 PPM	OK
19-Mar	13	16:35:22	629	11.01 PPM	OK
19-Mar	13	16:35:56	630	11.61 PPM	OK
19-Mar	13	16:36:29	631	11.09 PPM	OK
19-Mar	13	16:36:55	632	11.58 PPM	OK
19-Mar	13	16:37:23	633	10.88 PPM	OK
19-Mar	13	16:37:50	634	18.18 PPM	OK
19-Mar	13	16:38:19	635	10.65 PPM	OK
19-Mar	13	16:38:51	636	7.43 PPM	OK
19-Mar	13	16:39:25	637	10.86 PPM	OK
19-Mar	13	16:39:54	638	11.28 PPM	OK
19-Mar	13	16:40:19	639	10.64 PPM	OK
19-Mar	13	16:40:50	640	11.26 PPM	OK
19-Mar	13	16:41:18	641	10.95 PPM	OK
19-Mar	13	16:41:52	642	10.6 PPM	OK
19-Mar	13	16:42:31	643	11.91 PPM	OK
19-Mar	13	16:42:59	644	10.7 PPM	OK
19-Mar	13	16:43:37	645	9.8 PPM	OK
19-Mar	13	16:44:08	646	10.98 PPM	OK

LOGGED DATA

VER= 1.00

VOC DATA

DATE	TIME	TAG	FID CONCENTRATION	
28-Mar-13	10:17:11	1	5.87 PPM	Upwind
28-Mar-13	10:19:35	2	9.12 PPM	Downwind
28-Mar-13	10:21:21	3	511.63 PPM	westside areas
28-Mar-13	10:22:31	4	467.23 PPM	westside areas
28-Mar-13	10:24:06	5	579.42 PPM	westside areas
28-Mar-13	10:26:33	6	359.46 PPM	northside areas
28-Mar-13	10:27:25	7	546.32 PPM	northside areas
28-Mar-13	10:28:49	8	582.39 PPM	northside areas

END

LOGGED DATA

VER= 1.00

VOC DATA

DATE	TIME	TAG	FID CONCENTRATION	
-----	-----	-----	----	
8-Apr-13	14:30:16	1	1.28 PPM	Upwind
8-Apr-13	14:32:45	2	14.93 PPM	Downwind
8-Apr-13	14:33:21	3	30.63 PPM	westside areas
8-Apr-13	14:34:31	4	22.8 PPM	westside areas
8-Apr-13	14:35:10	5	12.42 PPM	westside areas
8-Apr-13	14:36:03	6	164 PPM	westside areas
8-Apr-13	14:36:18	7	78.7 PPM	westside areas
8-Apr-13	14:38:19	8	147 PPM	northside areas
8-Apr-13	14:39:14	9	63.7 PPM	northside areas
8-Apr-13	14:39:40	10	32.16 PPM	northside areas
8-Apr-13	14:40:14	11	21.88 PPM	northside areas

END

LOGGED DATA

VER= 1.00

VOC DATA

DATE	TIME	TAG	FID CONCENTRATION	
18-Apr-13	13:39:20 PM	upwind	1.29 PPM OK	
18-Apr-13	13:41:43 PM	downwind	1.46 PPM OK	
18-Apr-13	13:43:56 PM	1	58.34 PPM OK	northside
18-Apr-13	13:44:33 PM	2	14.34 PPM OK	northside
18-Apr-13	13:45:21 PM	3	213 PPM OK	northside
18-Apr-13	13:47:16 PM	4	398 PPM OK	northside
18-Apr-13	13:48:42 PM	5	47.00 PPM OK	westside
18-Apr-13	13:50:12 PM	6	44.12 PPM OK	westside
18-Apr-13	13:51:13 PM	7	50.91 PPM OK	westside

END



TVA1000 Calibration Form

Tomoka Landfill Surface Emissions Monitoring

Date: 3/19/13
Year/Quarter: 1st Qtr 2013
Re-Check Yes (No): No
Technician: Stirk

Weather Observations

Wind Speed: Calm
picked up later
Air Temp: 63

Wind Direction: NA

Barometric Pressure: 29.97

General Weather Conditions: Mostly Cloudy

Calibration Information

Pre-monitoring Calibration Precision Check

Procedure: Calibrate the instrument. Make a total of three measurements by alternating zero air and the calibration gas. Record the readings and calculate the average algebraic difference between the instrument reading and the calibration gas as a percentage. The calibration precision must be less than or equal to 10% of the calibration gas value.

Cal Gas Concentration: 500 ppm

Trial	Zero Air Reading	Cal Gas Reading	Cal Gas Conc.- Cal Gas Reading
1	<u>1.45</u>	<u>511</u>	<u>-11</u>
2	<u>2.76</u>	<u>502</u>	<u>-2</u>
3	<u>0.92</u>	<u>503</u>	<u>-3</u>

Average Difference: 5.33

Calibration = Average Difference/Cal Gas Conc. X 100%

= 5.33 / 500 X 100%

= 1.06 %

Post-monitoring Calibration Check

Zero Air Reading: 1.67 ppm

Cal Gas Reading: 499 ppm

Background Concentration Checks

Upwind Location Description: 3.41 NW Class1 Reading: 3.41 ppm

Downwind Location Description: 6.43 SE Class1 Reading: 6.43 ppm

Response Time Check

Procedure: Introduce zero concentration methane/H2S into the instrument. Quickly change to the calibration gas. Measure the amount of time it takes the instrument to read 90% of the calibration gas concentration. This average response time should be less than 30 seconds.

Trial	Start Time (Add Cal. Gas)	Time at 90% Reading	Difference
1	<u>8:32:51</u>	<u>8:32:59</u>	<u>8</u>
2	<u>8:33:53</u>	<u>8:34:08</u>	<u>15</u>
3	<u>8:35:45</u>	<u>8:35:52</u>	<u>7</u>

Average Response Time: 10



TVA1000 Calibration Form
Tomoka Landfill Surface Emissions Monitoring

Date: 3/28/13
Year/Quarter: 2013 / 1st Qtr
Re-Check ☒ Yes / ☐ No:
Technician: Stirk

Weather Observations

Wind Speed: 10 mph Wind Direction: NE Barometric Pressure: 29.77
Air Temp: 55 General Weather Conditions: partly cloudy

Calibration Information

Pre-monitoring Calibration Precision Check

Procedure: Calibrate the instrument. Make a total of three measurements by alternating zero air and the calibration gas. Record the readings and calculate the average algebraic difference between the instrument reading and the calibration gas as a percentage. The calibration precision must be less than or equal to 10% of the calibration gas value.

Cal Gas Concentration: 500 ppm

Trial	Zero Air Reading	Cal Gas Reading	Cal Gas Conc.- Cal Gas Reading
1	<u>.68</u>	<u>496</u>	<u>4</u>
2	<u>.73</u>	<u>499</u>	<u>11</u>
3	<u>1.01</u>	<u>497</u>	<u>3</u>

Average Difference: 6

$$\begin{aligned}\text{Calibration} &= \text{Average Difference} / \text{Cal Gas Conc.} \times 100\% \\ &= \frac{6}{500} \times 100\% \\ &= \underline{1.2} \%\end{aligned}$$

Post-monitoring Calibration Check

Zero Air Reading: .98 ppm Cal Gas Reading: 491 ppm

Background Concentration Checks

Upwind Location Description: NW class 1 Reading: 297 ppm
Downwind Location Description: SE class 1 Reading: 4.05 ppm

Response Time Check

Procedure: Introduce zero concentration methane/H2S into the instrument. Quickly change to the calibration gas. Measure the amount of time it takes the instrument to read 90% of the calibration gas concentration. This average response time should be less than 30 seconds.

Trial	Start Time (Add Cal. Gas)	Time at 90% Reading	Difference
1	<u>10:06:34</u>	<u>10:06:49</u>	<u>15</u>
2	<u>10:07:17</u>	<u>10:07:24</u>	<u>7</u>
3	<u>10:07:49</u>	<u>10:08:03</u>	<u>14</u>

Average Response Time: 12 sec.



TVA1000 Calibration Form
Tomoka Landfill Surface Emissions Monitoring

Date: 8/4/13
Year/Quarter: 1st Qtr / 2013
Re-Check ☒ Yes ☐ No
Technician: Stark

Weather Observations

Wind Speed: E 8 mph Wind Direction: E Barometric Pressure: 30.17
Air Temp: 78 General Weather Conditions: Partly cloudy

Calibration Information

Pre-monitoring Calibration Precision Check

Procedure: Calibrate the instrument. Make a total of three measurements by alternating zero air and the calibration gas. Record the readings and calculate the average algebraic difference between the instrument reading and the calibration gas as a percentage. The calibration precision must be less than or equal to 10% of the calibration gas value.

Cal Gas Concentration: 500 ppm

Trial	Zero Air Reading	Cal Gas Reading	Cal Gas Conc.- Cal Gas Reading
1	<u>.17</u>	<u>433</u>	<u>17</u>
2	<u>.08</u>	<u>492</u>	<u>8</u>
3	<u>1.01</u>	<u>494</u>	<u>6</u>

Average Difference: 10.33

Calibration = Average Difference/Cal Gas Conc. X 100%

= 10.33 / 500 X 100%

= 2.07 %

Post-monitoring Calibration Check

Zero Air Reading: 1.05 ppm Cal Gas Reading: 496 ppm

Background Concentration Checks

Upwind Location Description: southeast class 1 Reading: 1.28 ppm

Downwind Location Description: northeast class 1 Reading: 14.93 ppm

Response Time Check

Procedure: Introduce zero concentration methane/H₂S into the instrument. Quickly change to the calibration gas. Measure the amount of time it takes the instrument to read 90% of the calibration gas concentration. This average response time should be less than 30 seconds.

Trial	Start Time (Add Cal. Gas)	Time at 90% Reading	Difference
1	<u>2:15:39</u>	<u>2:16:02</u>	<u>23</u>
2	<u>2:16:44</u>	<u>2:17:03</u>	<u>19</u>
3	<u>2:17:36</u>	<u>2:17:52</u>	<u>16</u>

Average Response Time: 19.33



TVA1000 Calibration Form
Tomoka Landfill Surface Emissions Monitoring

Date: 4/18/13
Year/Quarter: 2013 / 1st
Re-Check Yes/No: Yes
Technician: Stirk

Weather Observations

Wind Speed: 10 mph Wind Direction: east Barometric Pressure: 30.05

Air Temp: 82 General Weather Conditions: partly cloudy

Calibration Information

Pre-monitoring Calibration Precision Check

Procedure: Calibrate the instrument. Make a total of three measurements by alternating zero air and the calibration gas. Record the readings and calculate the average algebraic difference between the instrument reading and the calibration gas as a percentage. The calibration precision must be less than or equal to 10% of the calibration gas value.

Cal Gas Concentration: 500 ppm

Trial	Zero Air Reading	Cal Gas Reading	Cal Gas Conc. - Cal Gas Reading
1	<u>-.14</u>	<u>493</u>	<u>7</u>
2	<u>.12</u>	<u>494</u>	<u>6</u>
3	<u>-.07</u>	<u>491</u>	<u>9</u>

Average Difference: 7.33

Calibration = Average Difference/Cal Gas Conc. X 100%

= 7.33 / 500 X 100%

= 1.47 %

Post-monitoring Calibration Check

Zero Air Reading: .10 ppm Cal Gas Reading: 460 ppm

Background Concentration Checks

Upwind Location Description: SE corner Class Reading: 1.29 ppm

Downwind Location Description: NW corner Reading: 1.46 ppm

Response Time Check

Procedure: Introduce zero concentration methane/H₂S into the instrument. Quickly change to the calibration gas. Measure the amount of time it takes the instrument to read 90% of the calibration gas concentration. This average response time should be less than 30 seconds.

Trial	Start Time (Add Cal. Gas)	Time at 90% Reading	Difference
1	<u>1:21:35</u>	<u>1:21:45</u>	<u>10</u>
2	<u>1:22:20</u>	<u>1:22:32</u>	<u>12</u>
3	<u>1:22:41</u>	<u>1:22:49</u>	<u>8</u>

Average Response Time: 10 sec