



Ambient Air Sampling Report

Date: December 14, 2011
To: Brian Kelly, U.S. EPA
CC: Joseph DeGrazia, MDEQ; Paul Max, City of Detroit DHWP; Yousef S. Ahmed, DWSD; William Burbidge, DWSD; Raymond Scott, City of Detroit Environmental Affairs; Elisa Walker, Honor Sheard, MPC; Greg Smith, MPC; Lisa Lautermilch, MPC
From: Joseph F. Marra
RE: November Ambient Air Sampling Report

Ambient air sampling per the Sewer Vapor Investigation Work Plan (revision 2; March 16, 2011) was conducted on November 21 and 22, 2011.

During the sampling event the refinery was running both the hydrogen peroxide and carbon filter treatment systems except during the early hours on 11/22/11 when the carbon filters were taken off-line. Carbon was taken off-line due to pump problems. The samples are analyzed for benzene in the water phase of the sample per EPA Method 8260, results are reported in ppb.

Date	Carbon Bed Wastewater Effluent
11/21/11	<i>Non-Detect</i>
11/22/11	26
11/23/11	26

Results in Italics are from the Date of Ambient Air Testing, all results are in ppb.

Per Attachment 1 – Figure 3 Ambient Air Sample Locations the four 'Monthly Community Air Sample Locations' were collected as described in the Work Plan. In addition, two background samples were attempted from the two locations identified on the Figure as 'Monthly Background Air Sample Location' as Deacon and Pleasant and Deacon and Leonard. Canisters were set-up at the specified location based on a predicted East wind. The regulator on the canister at Deacon and Leonard malfunctioned during the sampling period and not enough sample was taken for analysis.

Lab data for the air samples are contained in Attachment 2 – Analytical Results. Benzene concentrations are summarized as follows:

Location	Benzene (ppbv)
I-75	0.39
Patricia	0.30
Liebold	0.26
Liddesdale	0.37
Background: Deacon and Pleasant	0.62
Background: Deacon and Leonard	--*

** The 11/21/11 sample at Deacon and Leonard had a regulator problem which did not allow a sample to be taken. This noted will appear in summary tables.*

Attachment 3 – Indoor/Ambient Air Sample Collection Log contains the field notes for the sampling.

Attachment 4 – Detailed Weather November 21-22, 2011 contains weather conditions as acquired from the refinery's ambient air modeling software, Safer Systems. Winds were typically between 5 and 10 mph from the East –Northeast.

Attachments:

Attachment 1 – Figure 3 Ambient Air Sample Locations

Attachment 2 – Analytical Results

Attachment 3 – Indoor/Ambient Air Sample Collection Log

Attachment 4 – Detailed Weather November 21-22, 2011

Attachment 5 – Ambient Air and Wastewater Sample results March 2011 through November 2011

Attachment 1 – Figure 3 Ambient Air Sample Locations

Attachment 2 – Analytical Results



12065 Lebanon Rd.
Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

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Mr. Greg Shay
Marathon Petroleum Co., MI
1300 South Fort Street
Detroit, MI 48217

Report Summary

Monday November 28, 2011

Report Number: L548474

Samples Received: 11/23/11

Client Project:

Description: Ambient Air Monitoring

The analytical results in this report are based upon information supplied by you, the client, and are for your exclusive use. If you have any questions regarding this data package, please do not hesitate to call.

Entire Report Reviewed By:

Craig Cothron , ESC Representative

Laboratory Certification Numbers

A2LA - 1461-01, AIHA - 100789, AL - 40660, CA - I-2327, CT - PH-0197, FL - E87487
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NJ - TN002, NJ NELAP - TN002, SC - 84004, TN - 2006, VA - 00109, WV - 233
AZ - 0612, MN - 047-999-395, NY - 11742, WI - 998093910, NV - TN000032008A,
TX - T104704245, OK-9915, PA - 68-02979

Accreditation is only applicable to the test methods specified on each scope of accreditation held by ESC Lab Sciences.

Note: The use of the preparatory EPA Method 3511 is not approved or endorsed by the CA ELAP.

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REPORT OF ANALYSIS

November 28, 2011

Mr. Greg Shay
Marathon Petroleum Co., MI
1300 South Fort Street
Detroit, MI 48217

Date Received : November 23, 2011
Description : Ambient Air Monitoring
Sample ID : I-75
Collected By : Landon Eenigenburg
Collection Date : 11/22/11 08:26

ESC Sample # : L548474-01

Site ID :

Project # :

Parameter	Cas#	Mol Wght	RDL1	RDL2	ppbv	ug/m3	Method	Date	Dil.
Volatile Organics									
Acetone	67-64-1	58.1	1.25	3.00	2.1	5.0	TO-15	11/25/11	1
Allyl chloride	107-05-1	76.53	0.200	0.630	< 0.20	< 0.63	TO-15	11/25/11	1
Benzene	71-43-2	78.1	0.200	0.640	0.39	1.2	TO-15	11/25/11	1
Benzyl Chloride	100-44-7	127	0.200	1.00	< 0.20	< 1.0	TO-15	11/25/11	1
Bromodichloromethane	75-27-4	164	0.200	1.30	< 0.20	< 1.3	TO-15	11/25/11	1
Bromoform	75-25-2	253	0.600	6.20	< 0.60	< 6.2	TO-15	11/25/11	1
Bromomethane	74-83-9	94.9	0.200	0.780	< 0.20	< 0.78	TO-15	11/25/11	1
1,3-Butadiene	106-99-0	54.1	2.00	4.40	< 2.0	< 4.4	TO-15	11/25/11	1
Carbon disulfide	75-15-0	76.1	0.200	0.620	< 0.20	< 0.62	TO-15	11/25/11	1
Carbon tetrachloride	56-23-5	154	0.200	1.30	< 0.20	< 1.3	TO-15	11/25/11	1
Chlorobenzene	108-90-7	113	0.200	0.920	< 0.20	< 0.92	TO-15	11/25/11	1
Chloroethane	75-00-3	64.5	0.200	0.530	< 0.20	< 0.53	TO-15	11/25/11	1
Chloroform	67-66-3	119	0.200	0.970	< 0.20	< 0.97	TO-15	11/25/11	1
Chloromethane	74-87-3	50.5	0.200	0.410	0.48	0.99	TO-15	11/25/11	1
2-Chlorotoluene	95-49-8	126	0.200	1.00	< 0.20	< 1.0	TO-15	11/25/11	1
Cyclohexane	110-82-7	84.2	0.200	0.690	< 0.20	< 0.69	TO-15	11/25/11	1
Dibromochloromethane	124-48-1	208	0.200	1.70	< 0.20	< 1.7	TO-15	11/25/11	1
1,2-Dibromoethane	106-93-4	188	0.200	1.50	< 0.20	< 1.5	TO-15	11/25/11	1
1,2-Dichlorobenzene	95-50-1	147	0.200	1.20	< 0.20	< 1.2	TO-15	11/25/11	1
1,3-Dichlorobenzene	541-73-1	147	0.200	1.20	< 0.20	< 1.2	TO-15	11/25/11	1
1,4-Dichlorobenzene	106-46-7	147	0.200	1.20	< 0.20	< 1.2	TO-15	11/25/11	1
1,2-Dichloroethane	107-06-2	99	0.200	0.810	< 0.20	< 0.81	TO-15	11/25/11	1
1,1-Dichloroethane	75-34-3	98	0.200	0.800	< 0.20	< 0.80	TO-15	11/25/11	1
1,1-Dichloroethene	75-35-4	96.9	0.200	0.790	< 0.20	< 0.79	TO-15	11/25/11	1
cis-1,2-Dichloroethene	156-59-2	96.9	0.200	0.790	< 0.20	< 0.79	TO-15	11/25/11	1
trans-1,2-Dichloroethene	156-60-5	96.9	0.200	0.790	< 0.20	< 0.79	TO-15	11/25/11	1
1,2-Dichloropropane	78-87-5	113	0.200	0.920	< 0.20	< 0.92	TO-15	11/25/11	1
cis-1,3-Dichloropropene	10061-01-5	111	0.200	0.910	< 0.20	< 0.91	TO-15	11/25/11	1
trans-1,3-Dichloropropene	10061-02-6	111	0.200	0.910	< 0.20	< 0.91	TO-15	11/25/11	1
1,4-Dioxane	123-91-1	88.1	0.200	0.720	< 0.20	< 0.72	TO-15	11/25/11	1
Ethanol	64-17-5	46.1	0.630	1.20	13.	25.	TO-15	11/25/11	1
Ethylbenzene	100-41-4	106	0.200	0.870	< 0.20	< 0.87	TO-15	11/25/11	1
4-Ethyltoluene	622-96-8	120	0.200	0.980	< 0.20	< 0.98	TO-15	11/25/11	1
Trichlorofluoromethane	75-69-4	137.4	0.200	1.10	0.21	1.2	TO-15	11/25/11	1
Dichlorodifluoromethane	75-71-8	120.92	0.200	0.990	0.33	1.6	TO-15	11/25/11	1
1,1,2-Trichlorotrifluoroethane	76-13-1	187.4	0.200	1.50	< 0.20	< 1.5	TO-15	11/25/11	1
1,2-Dichlorotetrafluoroethane	76-14-2	171	0.200	1.40	< 0.20	< 1.4	TO-15	11/25/11	1
Heptane	142-82-5	100	0.200	0.820	< 0.20	< 0.82	TO-15	11/25/11	1
Hexachloro-1,3-butadiene	87-68-3	261	0.630	6.70	< 0.63	< 6.7	TO-15	11/25/11	1
n-Hexane	110-54-3	86.2	0.200	0.710	0.26	0.92	TO-15	11/25/11	1
Isopropylbenzene	98-82-8	120.2	0.200	0.980	< 0.20	< 0.98	TO-15	11/25/11	1
Methylene Chloride	75-09-2	84.9	0.200	0.690	< 0.20	< 0.69	TO-15	11/25/11	1
Methyl Butyl Ketone	591-78-6	100	1.25	5.10	< 1.3	< 5.1	TO-15	11/25/11	1

RDL1 = ppbv , RDL2 = ug/m3

Note:

Units are based on (STP) - Standard Temperature and Pressure

The reported analytical results relate only to the sample submitted.

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REPORT OF ANALYSIS

November 28, 2011

Mr. Greg Shay
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Description : Ambient Air Monitoring
Sample ID : I-75
Collected By : Landon Eenigenburg
Collection Date : 11/22/11 08:26

ESC Sample # : L548474-01
Site ID :
Project # :

Parameter	Cas#	Mol Wght	RDL1	RDL2	ppbv	ug/m3	Method	Date	Dil.
2-Butanone (MEK)	78-93-3	72.1	1.25	3.70	< 1.3	< 3.7	TO-15	11/25/11	1
4-Methyl-2-pentanone (MIBK)	108-10-1	100.1	1.25	5.10	< 1.3	< 5.1	TO-15	11/25/11	1
Methyl methacrylate	80-62-6	100.12	0.200	0.820	< 0.20	< 0.82	TO-15	11/25/11	1
MTBE	1634-04-4	88.1	0.200	0.720	< 0.20	< 0.72	TO-15	11/25/11	1
Naphthalene	91-20-3	128	0.630	3.30	< 0.63	< 3.3	TO-15	11/25/11	1
2-Propanol	67-63-0	60.1	1.25	3.10	1.4	3.4	TO-15	11/25/11	1
Propene	115-07-1	42.1	0.400	0.690	< 0.40	< 0.69	TO-15	11/25/11	1
Styrene	100-42-5	104	0.200	0.850	< 0.20	< 0.85	TO-15	11/25/11	1
1,1,2,2-Tetrachloroethane	79-34-5	168	0.200	1.40	< 0.20	< 1.4	TO-15	11/25/11	1
Tetrachloroethylene	127-18-4	166	0.200	1.40	< 0.20	< 1.4	TO-15	11/25/11	1
Tetrahydrofuran	109-99-9	72.1	0.200	0.590	< 0.20	< 0.59	TO-15	11/25/11	1
Toluene	108-88-3	92.1	0.200	0.750	0.60	2.3	TO-15	11/25/11	1
1,2,4-Trichlorobenzene	120-82-1	181	0.630	4.70	< 0.63	< 4.7	TO-15	11/25/11	1
1,1,1-Trichloroethane	71-55-6	133	0.200	1.10	< 0.20	< 1.1	TO-15	11/25/11	1
1,1,2-Trichloroethane	79-00-5	133	0.200	1.10	< 0.20	< 1.1	TO-15	11/25/11	1
Trichloroethylene	79-01-6	131	0.200	1.10	< 0.20	< 1.1	TO-15	11/25/11	1
1,2,4-Trimethylbenzene	95-63-6	120	0.200	0.980	0.22	1.1	TO-15	11/25/11	1
1,3,5-Trimethylbenzene	108-67-8	120	0.200	0.980	< 0.20	< 0.98	TO-15	11/25/11	1
2,2,4-Trimethylpentane	540-84-1	114.22	0.200	0.930	< 0.20	< 0.93	TO-15	11/25/11	1
Vinyl chloride	75-01-4	62.5	0.200	0.510	< 0.20	< 0.51	TO-15	11/25/11	1
Vinyl Bromide	593-60-2	106.95	0.200	0.870	< 0.20	< 0.87	TO-15	11/25/11	1
Vinyl acetate	108-05-4	86.1	0.200	0.700	< 0.20	< 0.70	TO-15	11/25/11	1
m&p-Xylene	1330-20-7	106	0.400	1.70	0.43	1.9	TO-15	11/25/11	1
o-Xylene	95-47-6	106	0.200	0.870	< 0.20	< 0.87	TO-15	11/25/11	1
1,4-Bromofluorobenzene	460-00-4				90.44	% Rec.	TO-15	11/25/11	1

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REPORT OF ANALYSIS

November 28, 2011

Mr. Greg Shay
Marathon Petroleum Co., MI
1300 South Fort Street
Detroit, MI 48217

Date Received : November 23, 2011
Description : Ambient Air Monitoring

Sample ID : PATRICIA

Collected By : Landon Eenigenburg
Collection Date : 11/22/11 08:29

ESC Sample # : L548474-02

Site ID :

Project # :

Parameter	Cas#	Mol Wght	RDL1	RDL2	ppbv	ug/m3	Method	Date	Dil.
Volatile Organics									
Acetone	67-64-1	58.1	1.25	3.00	3.7	8.8	TO-15	11/25/11	1
Allyl chloride	107-05-1	76.53	0.200	0.630	< 0.20	< 0.63	TO-15	11/25/11	1
Benzene	71-43-2	78.1	0.200	0.640	0.30	0.96	TO-15	11/25/11	1
Benzyl Chloride	100-44-7	127	0.200	1.00	< 0.20	< 1.0	TO-15	11/25/11	1
Bromodichloromethane	75-27-4	164	0.200	1.30	< 0.20	< 1.3	TO-15	11/25/11	1
Bromoform	75-25-2	253	0.600	6.20	< 0.60	< 6.2	TO-15	11/25/11	1
Bromomethane	74-83-9	94.9	0.200	0.780	< 0.20	< 0.78	TO-15	11/25/11	1
1,3-Butadiene	106-99-0	54.1	2.00	4.40	< 2.0	< 4.4	TO-15	11/25/11	1
Carbon disulfide	75-15-0	76.1	0.200	0.620	< 0.20	< 0.62	TO-15	11/25/11	1
Carbon tetrachloride	56-23-5	154	0.200	1.30	< 0.20	< 1.3	TO-15	11/25/11	1
Chlorobenzene	108-90-7	113	0.200	0.920	< 0.20	< 0.92	TO-15	11/25/11	1
Chloroethane	75-00-3	64.5	0.200	0.530	< 0.20	< 0.53	TO-15	11/25/11	1
Chloroform	67-66-3	119	0.200	0.970	< 0.20	< 0.97	TO-15	11/25/11	1
Chloromethane	74-87-3	50.5	0.200	0.410	0.52	1.1	TO-15	11/25/11	1
2-Chlorotoluene	95-49-8	126	0.200	1.00	< 0.20	< 1.0	TO-15	11/25/11	1
Cyclohexane	110-82-7	84.2	0.200	0.690	< 0.20	< 0.69	TO-15	11/25/11	1
Dibromochloromethane	124-48-1	208	0.200	1.70	< 0.20	< 1.7	TO-15	11/25/11	1
1,2-Dibromoethane	106-93-4	188	0.200	1.50	< 0.20	< 1.5	TO-15	11/25/11	1
1,2-Dichlorobenzene	95-50-1	147	0.200	1.20	< 0.20	< 1.2	TO-15	11/25/11	1
1,3-Dichlorobenzene	541-73-1	147	0.200	1.20	< 0.20	< 1.2	TO-15	11/25/11	1
1,4-Dichlorobenzene	106-46-7	147	0.200	1.20	< 0.20	< 1.2	TO-15	11/25/11	1
1,2-Dichloroethane	107-06-2	99	0.200	0.810	< 0.20	< 0.81	TO-15	11/25/11	1
1,1-Dichloroethane	75-34-3	98	0.200	0.800	< 0.20	< 0.80	TO-15	11/25/11	1
1,1-Dichloroethene	75-35-4	96.9	0.200	0.790	< 0.20	< 0.79	TO-15	11/25/11	1
cis-1,2-Dichloroethene	156-59-2	96.9	0.200	0.790	< 0.20	< 0.79	TO-15	11/25/11	1
trans-1,2-Dichloroethene	156-60-5	96.9	0.200	0.790	< 0.20	< 0.79	TO-15	11/25/11	1
1,2-Dichloropropane	78-87-5	113	0.200	0.920	< 0.20	< 0.92	TO-15	11/25/11	1
cis-1,3-Dichloropropene	10061-01-5	111	0.200	0.910	< 0.20	< 0.91	TO-15	11/25/11	1
trans-1,3-Dichloropropene	10061-02-6	111	0.200	0.910	< 0.20	< 0.91	TO-15	11/25/11	1
1,4-Dioxane	123-91-1	88.1	0.200	0.720	< 0.20	< 0.72	TO-15	11/25/11	1
Ethanol	64-17-5	46.1	0.630	1.20	13.	25.	TO-15	11/25/11	1
Ethylbenzene	100-41-4	106	0.200	0.870	< 0.20	< 0.87	TO-15	11/25/11	1
4-Ethyltoluene	622-96-8	120	0.200	0.980	< 0.20	< 0.98	TO-15	11/25/11	1
Trichlorofluoromethane	75-69-4	137.4	0.200	1.10	0.22	1.2	TO-15	11/25/11	1
Dichlorodifluoromethane	75-71-8	120.92	0.200	0.990	0.34	1.7	TO-15	11/25/11	1
1,1,2-Trichlorotrifluoroethane	76-13-1	187.4	0.200	1.50	< 0.20	< 1.5	TO-15	11/25/11	1
1,2-Dichlorotetrafluoroethane	76-14-2	171	0.200	1.40	< 0.20	< 1.4	TO-15	11/25/11	1
Heptane	142-82-5	100	0.200	0.820	< 0.20	< 0.82	TO-15	11/25/11	1
Hexachloro-1,3-butadiene	87-68-3	261	0.630	6.70	< 0.63	< 6.7	TO-15	11/25/11	1
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Isopropylbenzene	98-82-8	120.2	0.200	0.980	< 0.20	< 0.98	TO-15	11/25/11	1
Methylene Chloride	75-09-2	84.9	0.200	0.690	< 0.20	< 0.69	TO-15	11/25/11	1
Methyl Butyl Ketone	591-78-6	100	1.25	5.10	< 1.3	< 5.1	TO-15	11/25/11	1

RDL1 = ppbv , RDL2 = ug/m3

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Site ID :

Project # :

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2-Butanone (MEK)	78-93-3	72.1	1.25	3.70	< 1.3	< 3.7	TO-15	11/25/11	1
4-Methyl-2-pentanone (MIBK)	108-10-1	100.1	1.25	5.10	< 1.3	< 5.1	TO-15	11/25/11	1
Methyl methacrylate	80-62-6	100.12	0.200	0.820	< 0.20	< 0.82	TO-15	11/25/11	1
MTBE	1634-04-4	88.1	0.200	0.720	< 0.20	< 0.72	TO-15	11/25/11	1
Naphthalene	91-20-3	128	0.630	3.30	< 0.63	< 3.3	TO-15	11/25/11	1
2-Propanol	67-63-0	60.1	1.25	3.10	< 1.3	< 3.1	TO-15	11/25/11	1
Propene	115-07-1	42.1	0.400	0.690	< 0.40	< 0.69	TO-15	11/25/11	1
Styrene	100-42-5	104	0.200	0.850	< 0.20	< 0.85	TO-15	11/25/11	1
1,1,2,2-Tetrachloroethane	79-34-5	168	0.200	1.40	< 0.20	< 1.4	TO-15	11/25/11	1
Tetrachloroethylene	127-18-4	166	0.200	1.40	0.28	1.9	TO-15	11/25/11	1
Tetrahydrofuran	109-99-9	72.1	0.200	0.590	< 0.20	< 0.59	TO-15	11/25/11	1
Toluene	108-88-3	92.1	0.200	0.750	0.69	2.6	TO-15	11/25/11	1
1,2,4-Trichlorobenzene	120-82-1	181	0.630	4.70	< 0.63	< 4.7	TO-15	11/25/11	1
1,1,1-Trichloroethane	71-55-6	133	0.200	1.10	< 0.20	< 1.1	TO-15	11/25/11	1
1,1,2-Trichloroethane	79-00-5	133	0.200	1.10	< 0.20	< 1.1	TO-15	11/25/11	1
Trichloroethylene	79-01-6	131	0.200	1.10	< 0.20	< 1.1	TO-15	11/25/11	1
1,2,4-Trimethylbenzene	95-63-6	120	0.200	0.980	< 0.20	< 0.98	TO-15	11/25/11	1
1,3,5-Trimethylbenzene	108-67-8	120	0.200	0.980	< 0.20	< 0.98	TO-15	11/25/11	1
2,2,4-Trimethylpentane	540-84-1	114.22	0.200	0.930	< 0.20	< 0.93	TO-15	11/25/11	1
Vinyl chloride	75-01-4	62.5	0.200	0.510	< 0.20	< 0.51	TO-15	11/25/11	1
Vinyl Bromide	593-60-2	106.95	0.200	0.870	< 0.20	< 0.87	TO-15	11/25/11	1
Vinyl acetate	108-05-4	86.1	0.200	0.700	< 0.20	< 0.70	TO-15	11/25/11	1
m&p-Xylene	1330-20-7	106	0.400	1.70	< 0.40	< 1.7	TO-15	11/25/11	1
o-Xylene	95-47-6	106	0.200	0.870	< 0.20	< 0.87	TO-15	11/25/11	1
1,4-Bromofluorobenzene	460-00-4				91.39	% Rec.	TO-15	11/25/11	1

RDL1 = ppbv , RDL2 = ug/m3

Note:

Units are based on (STP) - Standard Temperature and Pressure

The reported analytical results relate only to the sample submitted.

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REPORT OF ANALYSIS

November 28, 2011

Mr. Greg Shay
Marathon Petroleum Co., MI
1300 South Fort Street
Detroit, MI 48217

Date Received : November 23, 2011
Description : Ambient Air Monitoring
Sample ID : LIDDESDALE
Collected By : Landon Eenigenburg
Collection Date : 11/22/11 08:32

ESC Sample # : L548474-03

Site ID :

Project # :

Parameter	Cas#	Mol Wght	RDL1	RDL2	ppbv	ug/m3	Method	Date	Dil.
Volatile Organics									
Acetone	67-64-1	58.1	1.25	3.00	3.0	7.1	TO-15	11/25/11	1
Allyl chloride	107-05-1	76.53	0.200	0.630	< 0.20	< 0.63	TO-15	11/25/11	1
Benzene	71-43-2	78.1	0.200	0.640	0.37	1.2	TO-15	11/25/11	1
Benzyl Chloride	100-44-7	127	0.200	1.00	< 0.20	< 1.0	TO-15	11/25/11	1
Bromodichloromethane	75-27-4	164	0.200	1.30	< 0.20	< 1.3	TO-15	11/25/11	1
Bromoform	75-25-2	253	0.600	6.20	< 0.60	< 6.2	TO-15	11/25/11	1
Bromomethane	74-83-9	94.9	0.200	0.780	< 0.20	< 0.78	TO-15	11/25/11	1
1,3-Butadiene	106-99-0	54.1	2.00	4.40	< 2.0	< 4.4	TO-15	11/25/11	1
Carbon disulfide	75-15-0	76.1	0.200	0.620	< 0.20	< 0.62	TO-15	11/25/11	1
Carbon tetrachloride	56-23-5	154	0.200	1.30	< 0.20	< 1.3	TO-15	11/25/11	1
Chlorobenzene	108-90-7	113	0.200	0.920	< 0.20	< 0.92	TO-15	11/25/11	1
Chloroethane	75-00-3	64.5	0.200	0.530	< 0.20	< 0.53	TO-15	11/25/11	1
Chloroform	67-66-3	119	0.200	0.970	< 0.20	< 0.97	TO-15	11/25/11	1
Chloromethane	74-87-3	50.5	0.200	0.410	0.43	0.89	TO-15	11/25/11	1
2-Chlorotoluene	95-49-8	126	0.200	1.00	< 0.20	< 1.0	TO-15	11/25/11	1
Cyclohexane	110-82-7	84.2	0.200	0.690	< 0.20	< 0.69	TO-15	11/25/11	1
Dibromochloromethane	124-48-1	208	0.200	1.70	< 0.20	< 1.7	TO-15	11/25/11	1
1,2-Dibromoethane	106-93-4	188	0.200	1.50	< 0.20	< 1.5	TO-15	11/25/11	1
1,2-Dichlorobenzene	95-50-1	147	0.200	1.20	< 0.20	< 1.2	TO-15	11/25/11	1
1,3-Dichlorobenzene	541-73-1	147	0.200	1.20	< 0.20	< 1.2	TO-15	11/25/11	1
1,4-Dichlorobenzene	106-46-7	147	0.200	1.20	< 0.20	< 1.2	TO-15	11/25/11	1
1,2-Dichloroethane	107-06-2	99	0.200	0.810	< 0.20	< 0.81	TO-15	11/25/11	1
1,1-Dichloroethane	75-34-3	98	0.200	0.800	< 0.20	< 0.80	TO-15	11/25/11	1
1,1-Dichloroethene	75-35-4	96.9	0.200	0.790	< 0.20	< 0.79	TO-15	11/25/11	1
cis-1,2-Dichloroethene	156-59-2	96.9	0.200	0.790	< 0.20	< 0.79	TO-15	11/25/11	1
trans-1,2-Dichloroethene	156-60-5	96.9	0.200	0.790	< 0.20	< 0.79	TO-15	11/25/11	1
1,2-Dichloropropane	78-87-5	113	0.200	0.920	< 0.20	< 0.92	TO-15	11/25/11	1
cis-1,3-Dichloropropene	10061-01-5	111	0.200	0.910	< 0.20	< 0.91	TO-15	11/25/11	1
trans-1,3-Dichloropropene	10061-02-6	111	0.200	0.910	< 0.20	< 0.91	TO-15	11/25/11	1
1,4-Dioxane	123-91-1	88.1	0.200	0.720	< 0.20	< 0.72	TO-15	11/25/11	1
Ethanol	64-17-5	46.1	0.630	1.20	12.	23.	TO-15	11/25/11	1
Ethylbenzene	100-41-4	106	0.200	0.870	< 0.20	< 0.87	TO-15	11/25/11	1
4-Ethyltoluene	622-96-8	120	0.200	0.980	< 0.20	< 0.98	TO-15	11/25/11	1
Trichlorofluoromethane	75-69-4	137.4	0.200	1.10	0.21	1.2	TO-15	11/25/11	1
Dichlorodifluoromethane	75-71-8	120.92	0.200	0.990	0.35	1.7	TO-15	11/25/11	1
1,1,2-Trichlorotrifluoroethane	76-13-1	187.4	0.200	1.50	< 0.20	< 1.5	TO-15	11/25/11	1
1,2-Dichlorotetrafluoroethane	76-14-2	171	0.200	1.40	< 0.20	< 1.4	TO-15	11/25/11	1
Heptane	142-82-5	100	0.200	0.820	< 0.20	< 0.82	TO-15	11/25/11	1
Hexachloro-1,3-butadiene	87-68-3	261	0.630	6.70	< 0.63	< 6.7	TO-15	11/25/11	1
n-Hexane	110-54-3	86.2	0.200	0.710	0.40	1.4	TO-15	11/25/11	1
Isopropylbenzene	98-82-8	120.2	0.200	0.980	< 0.20	< 0.98	TO-15	11/25/11	1
Methylene Chloride	75-09-2	84.9	0.200	0.690	< 0.20	< 0.69	TO-15	11/25/11	1
Methyl Butyl Ketone	591-78-6	100	1.25	5.10	< 1.3	< 5.1	TO-15	11/25/11	1

RDL1 = ppbv , RDL2 = ug/m3

Note:

Units are based on (STP) - Standard Temperature and Pressure

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REPORT OF ANALYSIS

Mr. Greg Shay
Marathon Petroleum Co., MI
1300 South Fort Street
Detroit, MI 48217

November 28, 2011

Date Received : November 23, 2011
Description : Ambient Air Monitoring
Sample ID : LIDDESDALE
Collected By : Landon Eenigenburg
Collection Date : 11/22/11 08:32

ESC Sample # : L548474-03

Site ID :

Project # :

Parameter	Cas#	Mol Wght	RDL1	RDL2	ppbv	ug/m3	Method	Date	Dil.
2-Butanone (MEK)	78-93-3	72.1	1.25	3.70	< 1.3	< 3.7	TO-15	11/25/11	1
4-Methyl-2-pentanone (MIBK)	108-10-1	100.1	1.25	5.10	< 1.3	< 5.1	TO-15	11/25/11	1
Methyl methacrylate	80-62-6	100.12	0.200	0.820	< 0.20	< 0.82	TO-15	11/25/11	1
MTBE	1634-04-4	88.1	0.200	0.720	< 0.20	< 0.72	TO-15	11/25/11	1
Naphthalene	91-20-3	128	0.630	3.30	< 0.63	< 3.3	TO-15	11/25/11	1
2-Propanol	67-63-0	60.1	1.25	3.10	15.	37.	TO-15	11/25/11	1
Propene	115-07-1	42.1	0.400	0.690	< 0.40	< 0.69	TO-15	11/25/11	1
Styrene	100-42-5	104	0.200	0.850	< 0.20	< 0.85	TO-15	11/25/11	1
1,1,2,2-Tetrachloroethane	79-34-5	168	0.200	1.40	< 0.20	< 1.4	TO-15	11/25/11	1
Tetrachloroethylene	127-18-4	166	0.200	1.40	< 0.20	< 1.4	TO-15	11/25/11	1
Tetrahydrofuran	109-99-9	72.1	0.200	0.590	< 0.20	< 0.59	TO-15	11/25/11	1
Toluene	108-88-3	92.1	0.200	0.750	0.64	2.4	TO-15	11/25/11	1
1,2,4-Trichlorobenzene	120-82-1	181	0.630	4.70	< 0.63	< 4.7	TO-15	11/25/11	1
1,1,1-Trichloroethane	71-55-6	133	0.200	1.10	< 0.20	< 1.1	TO-15	11/25/11	1
1,1,2-Trichloroethane	79-00-5	133	0.200	1.10	< 0.20	< 1.1	TO-15	11/25/11	1
Trichloroethylene	79-01-6	131	0.200	1.10	< 0.20	< 1.1	TO-15	11/25/11	1
1,2,4-Trimethylbenzene	95-63-6	120	0.200	0.980	< 0.20	< 0.98	TO-15	11/25/11	1
1,3,5-Trimethylbenzene	108-67-8	120	0.200	0.980	< 0.20	< 0.98	TO-15	11/25/11	1
2,2,4-Trimethylpentane	540-84-1	114.22	0.200	0.930	< 0.20	< 0.93	TO-15	11/25/11	1
Vinyl chloride	75-01-4	62.5	0.200	0.510	< 0.20	< 0.51	TO-15	11/25/11	1
Vinyl Bromide	593-60-2	106.95	0.200	0.870	< 0.20	< 0.87	TO-15	11/25/11	1
Vinyl acetate	108-05-4	86.1	0.200	0.700	< 0.20	< 0.70	TO-15	11/25/11	1
m&p-Xylene	1330-20-7	106	0.400	1.70	< 0.40	< 1.7	TO-15	11/25/11	1
o-Xylene	95-47-6	106	0.200	0.870	< 0.20	< 0.87	TO-15	11/25/11	1
1,4-Bromofluorobenzene	460-00-4				92.39	% Rec.	TO-15	11/25/11	1

RDL1 = ppbv , RDL2 = ug/m3

Note:

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REPORT OF ANALYSIS

November 28, 2011

Mr. Greg Shay
Marathon Petroleum Co., MI
1300 South Fort Street
Detroit, MI 48217

Date Received : November 23, 2011
Description : Ambient Air Monitoring
Sample ID : DEACON PLEASANT
Collected By : Landon Eenigenburg
Collection Date : 11/22/11 08:36

ESC Sample # : L548474-04

Site ID :

Project # :

Parameter	Cas#	Mol Wght	RDL1	RDL2	ppbv	ug/m3	Method	Date	Dil.
Volatile Organics									
Acetone	67-64-1	58.1	1.25	3.00	3.9	9.3	TO-15	11/25/11	1
Allyl chloride	107-05-1	76.53	0.200	0.630	< 0.20	< 0.63	TO-15	11/25/11	1
Benzene	71-43-2	78.1	0.200	0.640	0.62	2.0	TO-15	11/25/11	1
Benzyl Chloride	100-44-7	127	0.200	1.00	< 0.20	< 1.0	TO-15	11/25/11	1
Bromodichloromethane	75-27-4	164	0.200	1.30	< 0.20	< 1.3	TO-15	11/25/11	1
Bromoform	75-25-2	253	0.600	6.20	< 0.60	< 6.2	TO-15	11/25/11	1
Bromomethane	74-83-9	94.9	0.200	0.780	< 0.20	< 0.78	TO-15	11/25/11	1
1,3-Butadiene	106-99-0	54.1	2.00	4.40	< 2.0	< 4.4	TO-15	11/25/11	1
Carbon disulfide	75-15-0	76.1	0.200	0.620	< 0.20	< 0.62	TO-15	11/25/11	1
Carbon tetrachloride	56-23-5	154	0.200	1.30	< 0.20	< 1.3	TO-15	11/25/11	1
Chlorobenzene	108-90-7	113	0.200	0.920	< 0.20	< 0.92	TO-15	11/25/11	1
Chloroethane	75-00-3	64.5	0.200	0.530	< 0.20	< 0.53	TO-15	11/25/11	1
Chloroform	67-66-3	119	0.200	0.970	< 0.20	< 0.97	TO-15	11/25/11	1
Chloromethane	74-87-3	50.5	0.200	0.410	0.44	0.91	TO-15	11/25/11	1
2-Chlorotoluene	95-49-8	126	0.200	1.00	< 0.20	< 1.0	TO-15	11/25/11	1
Cyclohexane	110-82-7	84.2	0.200	0.690	< 0.20	< 0.69	TO-15	11/25/11	1
Dibromochloromethane	124-48-1	208	0.200	1.70	< 0.20	< 1.7	TO-15	11/25/11	1
1,2-Dibromoethane	106-93-4	188	0.200	1.50	< 0.20	< 1.5	TO-15	11/25/11	1
1,2-Dichlorobenzene	95-50-1	147	0.200	1.20	< 0.20	< 1.2	TO-15	11/25/11	1
1,3-Dichlorobenzene	541-73-1	147	0.200	1.20	< 0.20	< 1.2	TO-15	11/25/11	1
1,4-Dichlorobenzene	106-46-7	147	0.200	1.20	< 0.20	< 1.2	TO-15	11/25/11	1
1,2-Dichloroethane	107-06-2	99	0.200	0.810	< 0.20	< 0.81	TO-15	11/25/11	1
1,1-Dichloroethane	75-34-3	98	0.200	0.800	< 0.20	< 0.80	TO-15	11/25/11	1
1,1-Dichloroethene	75-35-4	96.9	0.200	0.790	< 0.20	< 0.79	TO-15	11/25/11	1
cis-1,2-Dichloroethene	156-59-2	96.9	0.200	0.790	< 0.20	< 0.79	TO-15	11/25/11	1
trans-1,2-Dichloroethene	156-60-5	96.9	0.200	0.790	< 0.20	< 0.79	TO-15	11/25/11	1
1,2-Dichloropropane	78-87-5	113	0.200	0.920	< 0.20	< 0.92	TO-15	11/25/11	1
cis-1,3-Dichloropropene	10061-01-5	111	0.200	0.910	< 0.20	< 0.91	TO-15	11/25/11	1
trans-1,3-Dichloropropene	10061-02-6	111	0.200	0.910	< 0.20	< 0.91	TO-15	11/25/11	1
1,4-Dioxane	123-91-1	88.1	0.200	0.720	< 0.20	< 0.72	TO-15	11/25/11	1
Ethanol	64-17-5	46.1	0.630	1.20	14.	26.	TO-15	11/25/11	1
Ethylbenzene	100-41-4	106	0.200	0.870	0.29	1.3	TO-15	11/25/11	1
4-Ethyltoluene	622-96-8	120	0.200	0.980	< 0.20	< 0.98	TO-15	11/25/11	1
Trichlorofluoromethane	75-69-4	137.4	0.200	1.10	0.22	1.2	TO-15	11/25/11	1
Dichlorodifluoromethane	75-71-8	120.92	0.200	0.990	0.33	1.6	TO-15	11/25/11	1
1,1,2-Trichlorotrifluoroethane	76-13-1	187.4	0.200	1.50	< 0.20	< 1.5	TO-15	11/25/11	1
1,2-Dichlorotetrafluoroethane	76-14-2	171	0.200	1.40	< 0.20	< 1.4	TO-15	11/25/11	1
Heptane	142-82-5	100	0.200	0.820	0.37	1.5	TO-15	11/25/11	1
Hexachloro-1,3-butadiene	87-68-3	261	0.630	6.70	< 0.63	< 6.7	TO-15	11/25/11	1
n-Hexane	110-54-3	86.2	0.200	0.710	1.2	4.2	TO-15	11/25/11	1
Isopropylbenzene	98-82-8	120.2	0.200	0.980	< 0.20	< 0.98	TO-15	11/25/11	1
Methylene Chloride	75-09-2	84.9	0.200	0.690	< 0.20	< 0.69	TO-15	11/25/11	1
Methyl Butyl Ketone	591-78-6	100	1.25	5.10	< 1.3	< 5.1	TO-15	11/25/11	1

RDL1 = ppbv , RDL2 = ug/m3

Note:

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REPORT OF ANALYSIS

Mr. Greg Shay
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November 28, 2011

Date Received : November 23, 2011
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Sample ID : DEACON PLEASANT
Collected By : Landon Eenigenburg
Collection Date : 11/22/11 08:36

ESC Sample # : L548474-04

Site ID :

Project # :

Parameter	Cas#	Mol Wght	RDL1	RDL2	ppbv	ug/m3	Method	Date	Dil.
2-Butanone (MEK)	78-93-3	72.1	1.25	3.70	< 1.3	< 3.7	TO-15	11/25/11	1
4-Methyl-2-pentanone (MIBK)	108-10-1	100.1	1.25	5.10	< 1.3	< 5.1	TO-15	11/25/11	1
Methyl methacrylate	80-62-6	100.12	0.200	0.820	< 0.20	< 0.82	TO-15	11/25/11	1
MTBE	1634-04-4	88.1	0.200	0.720	< 0.20	< 0.72	TO-15	11/25/11	1
Naphthalene	91-20-3	128	0.630	3.30	< 0.63	< 3.3	TO-15	11/25/11	1
2-Propanol	67-63-0	60.1	1.25	3.10	7.6	19.	TO-15	11/25/11	1
Propene	115-07-1	42.1	0.400	0.690	< 0.40	< 0.69	TO-15	11/25/11	1
Styrene	100-42-5	104	0.200	0.850	< 0.20	< 0.85	TO-15	11/25/11	1
1,1,2,2-Tetrachloroethane	79-34-5	168	0.200	1.40	< 0.20	< 1.4	TO-15	11/25/11	1
Tetrachloroethylene	127-18-4	166	0.200	1.40	< 0.20	< 1.4	TO-15	11/25/11	1
Tetrahydrofuran	109-99-9	72.1	0.200	0.590	< 0.20	< 0.59	TO-15	11/25/11	1
Toluene	108-88-3	92.1	0.200	0.750	1.8	6.8	TO-15	11/25/11	1
1,2,4-Trichlorobenzene	120-82-1	181	0.630	4.70	< 0.63	< 4.7	TO-15	11/25/11	1
1,1,1-Trichloroethane	71-55-6	133	0.200	1.10	< 0.20	< 1.1	TO-15	11/25/11	1
1,1,2-Trichloroethane	79-00-5	133	0.200	1.10	< 0.20	< 1.1	TO-15	11/25/11	1
Trichloroethylene	79-01-6	131	0.200	1.10	< 0.20	< 1.1	TO-15	11/25/11	1
1,2,4-Trimethylbenzene	95-63-6	120	0.200	0.980	0.21	1.0	TO-15	11/25/11	1
1,3,5-Trimethylbenzene	108-67-8	120	0.200	0.980	< 0.20	< 0.98	TO-15	11/25/11	1
2,2,4-Trimethylpentane	540-84-1	114.22	0.200	0.930	0.40	1.9	TO-15	11/25/11	1
Vinyl chloride	75-01-4	62.5	0.200	0.510	< 0.20	< 0.51	TO-15	11/25/11	1
Vinyl Bromide	593-60-2	106.95	0.200	0.870	< 0.20	< 0.87	TO-15	11/25/11	1
Vinyl acetate	108-05-4	86.1	0.200	0.700	< 0.20	< 0.70	TO-15	11/25/11	1
m&p-Xylene	1330-20-7	106	0.400	1.70	0.94	4.1	TO-15	11/25/11	1
o-Xylene	95-47-6	106	0.200	0.870	0.34	1.5	TO-15	11/25/11	1
1,4-Bromofluorobenzene	460-00-4				92.87	% Rec.	TO-15	11/25/11	1

RDL1 = ppbv , RDL2 = ug/m3

Note:

Units are based on (STP) - Standard Temperature and Pressure

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1-800-767-5859
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

Mr. Greg Shay
Marathon Petroleum Co., MI
1300 South Fort Street
Detroit, MI 48217

November 28, 2011

Date Received : November 23, 2011
Description : Ambient Air Monitoring

Sample ID : LIEBOLD

Collected By : Landon Eenigenburg
Collection Date : 11/22/11 08:44

ESC Sample # : L548474-06

Site ID :

Project # :

Parameter	Cas#	Mol Wght	RDL1	RDL2	ppbv	ug/m3	Method	Date	Dil.
Volatile Organics									
Acetone	67-64-1	58.1	1.25	3.00	2.5	5.9	TO-15	11/25/11	1
Allyl chloride	107-05-1	76.53	0.200	0.630	< 0.20	< 0.63	TO-15	11/25/11	1
Benzene	71-43-2	78.1	0.200	0.640	0.26	0.83	TO-15	11/25/11	1
Benzyl Chloride	100-44-7	127	0.200	1.00	< 0.20	< 1.0	TO-15	11/25/11	1
Bromodichloromethane	75-27-4	164	0.200	1.30	< 0.20	< 1.3	TO-15	11/25/11	1
Bromoform	75-25-2	253	0.600	6.20	< 0.60	< 6.2	TO-15	11/25/11	1
Bromomethane	74-83-9	94.9	0.200	0.780	< 0.20	< 0.78	TO-15	11/25/11	1
1,3-Butadiene	106-99-0	54.1	2.00	4.40	< 2.0	< 4.4	TO-15	11/25/11	1
Carbon disulfide	75-15-0	76.1	0.200	0.620	< 0.20	< 0.62	TO-15	11/25/11	1
Carbon tetrachloride	56-23-5	154	0.200	1.30	< 0.20	< 1.3	TO-15	11/25/11	1
Chlorobenzene	108-90-7	113	0.200	0.920	< 0.20	< 0.92	TO-15	11/25/11	1
Chloroethane	75-00-3	64.5	0.200	0.530	< 0.20	< 0.53	TO-15	11/25/11	1
Chloroform	67-66-3	119	0.200	0.970	< 0.20	< 0.97	TO-15	11/25/11	1
Chloromethane	74-87-3	50.5	0.200	0.410	0.44	0.91	TO-15	11/25/11	1
2-Chlorotoluene	95-49-8	126	0.200	1.00	< 0.20	< 1.0	TO-15	11/25/11	1
Cyclohexane	110-82-7	84.2	0.200	0.690	< 0.20	< 0.69	TO-15	11/25/11	1
Dibromochloromethane	124-48-1	208	0.200	1.70	< 0.20	< 1.7	TO-15	11/25/11	1
1,2-Dibromoethane	106-93-4	188	0.200	1.50	< 0.20	< 1.5	TO-15	11/25/11	1
1,2-Dichlorobenzene	95-50-1	147	0.200	1.20	< 0.20	< 1.2	TO-15	11/25/11	1
1,3-Dichlorobenzene	541-73-1	147	0.200	1.20	< 0.20	< 1.2	TO-15	11/25/11	1
1,4-Dichlorobenzene	106-46-7	147	0.200	1.20	< 0.20	< 1.2	TO-15	11/25/11	1
1,2-Dichloroethane	107-06-2	99	0.200	0.810	< 0.20	< 0.81	TO-15	11/25/11	1
1,1-Dichloroethane	75-34-3	98	0.200	0.800	< 0.20	< 0.80	TO-15	11/25/11	1
1,1-Dichloroethene	75-35-4	96.9	0.200	0.790	< 0.20	< 0.79	TO-15	11/25/11	1
cis-1,2-Dichloroethene	156-59-2	96.9	0.200	0.790	< 0.20	< 0.79	TO-15	11/25/11	1
trans-1,2-Dichloroethene	156-60-5	96.9	0.200	0.790	< 0.20	< 0.79	TO-15	11/25/11	1
1,2-Dichloropropane	78-87-5	113	0.200	0.920	< 0.20	< 0.92	TO-15	11/25/11	1
cis-1,3-Dichloropropene	10061-01-5	111	0.200	0.910	< 0.20	< 0.91	TO-15	11/25/11	1
trans-1,3-Dichloropropene	10061-02-6	111	0.200	0.910	< 0.20	< 0.91	TO-15	11/25/11	1
1,4-Dioxane	123-91-1	88.1	0.200	0.720	< 0.20	< 0.72	TO-15	11/25/11	1
Ethanol	64-17-5	46.1	0.630	1.20	10.	19.	TO-15	11/25/11	1
Ethylbenzene	100-41-4	106	0.200	0.870	< 0.20	< 0.87	TO-15	11/25/11	1
4-Ethyltoluene	622-96-8	120	0.200	0.980	< 0.20	< 0.98	TO-15	11/25/11	1
Trichlorofluoromethane	75-69-4	137.4	0.200	1.10	0.23	1.3	TO-15	11/25/11	1
Dichlorodifluoromethane	75-71-8	120.92	0.200	0.990	0.35	1.7	TO-15	11/25/11	1
1,1,2-Trichlorotrifluoroethane	76-13-1	187.4	0.200	1.50	< 0.20	< 1.5	TO-15	11/25/11	1
1,2-Dichlorotetrafluoroethane	76-14-2	171	0.200	1.40	< 0.20	< 1.4	TO-15	11/25/11	1
Heptane	142-82-5	100	0.200	0.820	< 0.20	< 0.82	TO-15	11/25/11	1
Hexachloro-1,3-butadiene	87-68-3	261	0.630	6.70	< 0.63	< 6.7	TO-15	11/25/11	1
n-Hexane	110-54-3	86.2	0.200	0.710	< 0.20	< 0.71	TO-15	11/25/11	1
Isopropylbenzene	98-82-8	120.2	0.200	0.980	< 0.20	< 0.98	TO-15	11/25/11	1
Methylene Chloride	75-09-2	84.9	0.200	0.690	< 0.20	< 0.69	TO-15	11/25/11	1
Methyl Butyl Ketone	591-78-6	100	1.25	5.10	< 1.3	< 5.1	TO-15	11/25/11	1

RDL1 = ppbv , RDL2 = ug/m3

Note:

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REPORT OF ANALYSIS

Mr. Greg Shay
Marathon Petroleum Co., MI
1300 South Fort Street
Detroit, MI 48217

November 28, 2011

Date Received : November 23, 2011
Description : Ambient Air Monitoring
Sample ID : LIEBOLD
Collected By : Landon Eenigenburg
Collection Date : 11/22/11 08:44

ESC Sample # : L548474-06

Site ID :

Project # :

Parameter	Cas#	Mol Wght	RDL1	RDL2	ppbv	ug/m3	Method	Date	Dil.
2-Butanone (MEK)	78-93-3	72.1	1.25	3.70	< 1.3	< 3.7	TO-15	11/25/11	1
4-Methyl-2-pentanone (MIBK)	108-10-1	100.1	1.25	5.10	< 1.3	< 5.1	TO-15	11/25/11	1
Methyl methacrylate	80-62-6	100.12	0.200	0.820	< 0.20	< 0.82	TO-15	11/25/11	1
MTBE	1634-04-4	88.1	0.200	0.720	< 0.20	< 0.72	TO-15	11/25/11	1
Naphthalene	91-20-3	128	0.630	3.30	< 0.63	< 3.3	TO-15	11/25/11	1
2-Propanol	67-63-0	60.1	1.25	3.10	9.8	24.	TO-15	11/25/11	1
Propene	115-07-1	42.1	0.400	0.690	< 0.40	< 0.69	TO-15	11/25/11	1
Styrene	100-42-5	104	0.200	0.850	< 0.20	< 0.85	TO-15	11/25/11	1
1,1,2,2-Tetrachloroethane	79-34-5	168	0.200	1.40	< 0.20	< 1.4	TO-15	11/25/11	1
Tetrachloroethylene	127-18-4	166	0.200	1.40	< 0.20	< 1.4	TO-15	11/25/11	1
Tetrahydrofuran	109-99-9	72.1	0.200	0.590	< 0.20	< 0.59	TO-15	11/25/11	1
Toluene	108-88-3	92.1	0.200	0.750	0.50	1.9	TO-15	11/25/11	1
1,2,4-Trichlorobenzene	120-82-1	181	0.630	4.70	< 0.63	< 4.7	TO-15	11/25/11	1
1,1,1-Trichloroethane	71-55-6	133	0.200	1.10	< 0.20	< 1.1	TO-15	11/25/11	1
1,1,2-Trichloroethane	79-00-5	133	0.200	1.10	< 0.20	< 1.1	TO-15	11/25/11	1
Trichloroethylene	79-01-6	131	0.200	1.10	< 0.20	< 1.1	TO-15	11/25/11	1
1,2,4-Trimethylbenzene	95-63-6	120	0.200	0.980	< 0.20	< 0.98	TO-15	11/25/11	1
1,3,5-Trimethylbenzene	108-67-8	120	0.200	0.980	< 0.20	< 0.98	TO-15	11/25/11	1
2,2,4-Trimethylpentane	540-84-1	114.22	0.200	0.930	< 0.20	< 0.93	TO-15	11/25/11	1
Vinyl chloride	75-01-4	62.5	0.200	0.510	< 0.20	< 0.51	TO-15	11/25/11	1
Vinyl Bromide	593-60-2	106.95	0.200	0.870	< 0.20	< 0.87	TO-15	11/25/11	1
Vinyl acetate	108-05-4	86.1	0.200	0.700	< 0.20	< 0.70	TO-15	11/25/11	1
m&p-Xylene	1330-20-7	106	0.400	1.70	< 0.40	< 1.7	TO-15	11/25/11	1
o-Xylene	95-47-6	106	0.200	0.870	< 0.20	< 0.87	TO-15	11/25/11	1
1,4-Bromofluorobenzene	460-00-4				92.67	% Rec.	TO-15	11/25/11	1

RDL1 = ppbv , RDL2 = ug/m3

Note:

Units are based on (STP) - Standard Temperature and Pressure

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Summary of Remarks For Samples Printed
11/28/11 at 14:45:58

TSR Signing Reports: 034
R5 - Desired TAT

standing PO# for 3rd qtr. 2011

Sample: L548474-01 Account: MAROILDMI Received: 11/23/11 09:00 Due Date: 12/01/11 00:00 RPT Date: 11/28/11 14:45
Sample: L548474-02 Account: MAROILDMI Received: 11/23/11 09:00 Due Date: 12/01/11 00:00 RPT Date: 11/28/11 14:45
Sample: L548474-03 Account: MAROILDMI Received: 11/23/11 09:00 Due Date: 12/01/11 00:00 RPT Date: 11/28/11 14:45
Sample: L548474-04 Account: MAROILDMI Received: 11/23/11 09:00 Due Date: 12/01/11 00:00 RPT Date: 11/28/11 14:45
Sample: L548474-06 Account: MAROILDMI Received: 11/23/11 09:00 Due Date: 12/01/11 00:00 RPT Date: 11/28/11 14:45
REMOVED -05. Sample was empty per DR email. MS 11/25

Attachment 3 – Indoor/Ambient Air Sample Collection Log

		Indoor Air/Ambient Air Sample Collection Log	
		Sample ID:	Lebold
Client:	Marathon	Outdoor/Indoor:	Outdoor
Project:	Ambient Air	Sample Intake Height:	~4'
Location:	Detroit, MI	Tubing Information:	None
Project #:	0H085513 02	Miscellaneous Equipment:	None
Samplers:	L. Eenigenburg	Time On/Off:	1254 / 0844
Sample Point Location:		Subcontractor:	

Instrument Readings:


Date	Time	Canister Vacuum (a) (inches of Hg)	Temperature (°F)	Relative Humidity (%)	Air Speed (mph)	Barometric Pressure (inches of Hg)	PID (ppb)
11/21/11	1254	28"	~45				
11/22/11	0844	7"	~40				

(a) Record canister information at a minimum at the beginning and end of sampling

SUMMA Canister Information:

Size (circle one):	1 L (6 L)
Canister ID:	973
Flow Controller ID:	295
Notes:	

General Observations/Notes:

		Indoor Air/Ambient Air Sample Collection Log	
		Sample ID:	I-75
Client:	Marathon	Outdoor/Indoor:	Outdoor
Project:	Ambient Air	Sample Intake Height:	~4'
Location:	Detroit, MI	Tubing Information:	None
Project #:	OH085513 02	Miscellaneous Equipment:	None
Samplers:	L. Eenigenburg	Time On/Off:	1227/0826
Sample Point Location:	I-75	Subcontractor:	

Instrument Readings:


Date	Time	Canister Vacuum (a) (inches of Hg)	Temperature (°F)	Relative Humidity (%)	Air Speed (mph)	Barometric Pressure (inches of Hg)	PID (ppb)
11/21/11	1227	30"	~45				
11/22/11	0826	10"	~40				

(a) Record canister information at a minimum at the beginning and end of sampling

SUMMA Canister Information:

Size (circle one):	1 L (6 L)
Canister ID:	896
Flow Controller ID:	181
Notes:	

General Observations/Notes:

		Indoor Air/Ambient Air Sample Collection Log	
		Sample ID:	Patricia
Client:	Marathon	Outdoor/Indoor:	Outdoor
Project:	Ambient Air	Sample Intake Height:	~4'
Location:	Detroit, MI	Tubing Information:	None
Project #:	0H085513 02	Miscellaneous Equipment:	None
Samplers:	L. Eenigenburg	Time On/Off:	1231/0829
Sample Point Location:		Subcontractor:	

Instrument Readings:


Date	Time	Canister Vacuum (a) (inches of Hg)	Temperature (°F)	Relative Humidity (%)	Air Speed (mph)	Barometric Pressure (inches of Hg)	PID (ppb)
11/21/11	1231	29"	~45				
11/22/11	0829	8.5"	~40				

(a) Record canister information at a minimum at the beginning and end of sampling

SUMMA Canister Information:

Size (circle one):	1 L (6 L)
Canister ID:	512
Flow Controller ID:	201
Notes:	

General Observations/Notes:

		Indoor Air/Ambient Air Sample Collection Log	
		Sample ID:	Liddesdale
Client:	Marathon	Outdoor/Indoor:	Outdoor
Project:	Ambient Air	Sample Intake Height:	~4'
Location:	Detroit, MI	Tubing Information:	None
Project #:	0H085513 02	Miscellaneous Equipment:	None
Samplers:	L. Eenigenburg	Time On/Off:	1238 / 832
Sample Point Location:		Subcontractor:	

Instrument Readings:


Date	Time	Canister Vacuum (a) (inches of Hg)	Temperature (°F)	Relative Humidity (%)	Air Speed (mph)	Barometric Pressure (inches of Hg)	PID (ppb)
11/21/11	1238	29"	~45				
11/22/11	0832	9"	~40				

(a) Record canister information at a minimum at the beginning and end of sampling

SUMMA Canister Information:

Size (circle one):	1 L (6 L)
Canister ID:	981
Flow Controller ID:	233
Notes:	

General Observations/Notes:

		Indoor Air/Ambient Air Sample Collection Log	
		Sample ID:	Deacon & Pleasant
Client:	Marathon	Outdoor/Indoor:	Outdoor
Project:	Ambient Air	Sample Intake Height:	~4'
Location:	Detroit, MI	Tubing Information:	None
Project #:	0H085513 02	Miscellaneous Equipment:	None
Samplers:	L. Eenigenburg	Time On/Off:	1243/0836
Sample Point Location:		Subcontractor:	

Instrument Readings:


Date	Time	Canister Vacuum (a) (inches of Hg)	Temperature (°F)	Relative Humidity (%)	Air Speed (mph)	Barometric Pressure (inches of Hg)	PID (ppb)
11/21/11	1243	30	~45				
11/22/11	0836	15	~40				

(a) Record canister information at a minimum at the beginning and end of sampling

SUMMA Canister Information:

Size (circle one):	1 L <u>6 L</u>
Canister ID:	976
Flow Controller ID:	187
Notes:	

General Observations/Notes:

		Indoor Air/Ambient Air Sample Collection Log	
		Sample ID:	Deacon & Leonard
Client:	Marathon	Outdoor/Indoor:	Outdoor
Project:	Ambient Air	Sample Intake Height:	~4'
Location:	Detroit, MI	Tubing Information:	None
Project #:	0H085513 02	Miscellaneous Equipment:	None
Samplers:	L. Eenigenburg	Time On/Off:	1249 / 0839
Sample Point Location:		Subcontractor:	

Instrument Readings:

Date	Time	Canister Vacuum (a) (inches of Hg)	Temperature (°F)	Relative Humidity (%)	Air Speed (mph)	Barometric Pressure (inches of Hg)	PID (ppb)
11/21/11	1249	30"	~45°				
11/22/11	0839	23"	~40				

(a) Record canister information at a minimum at the beginning and end of sampling

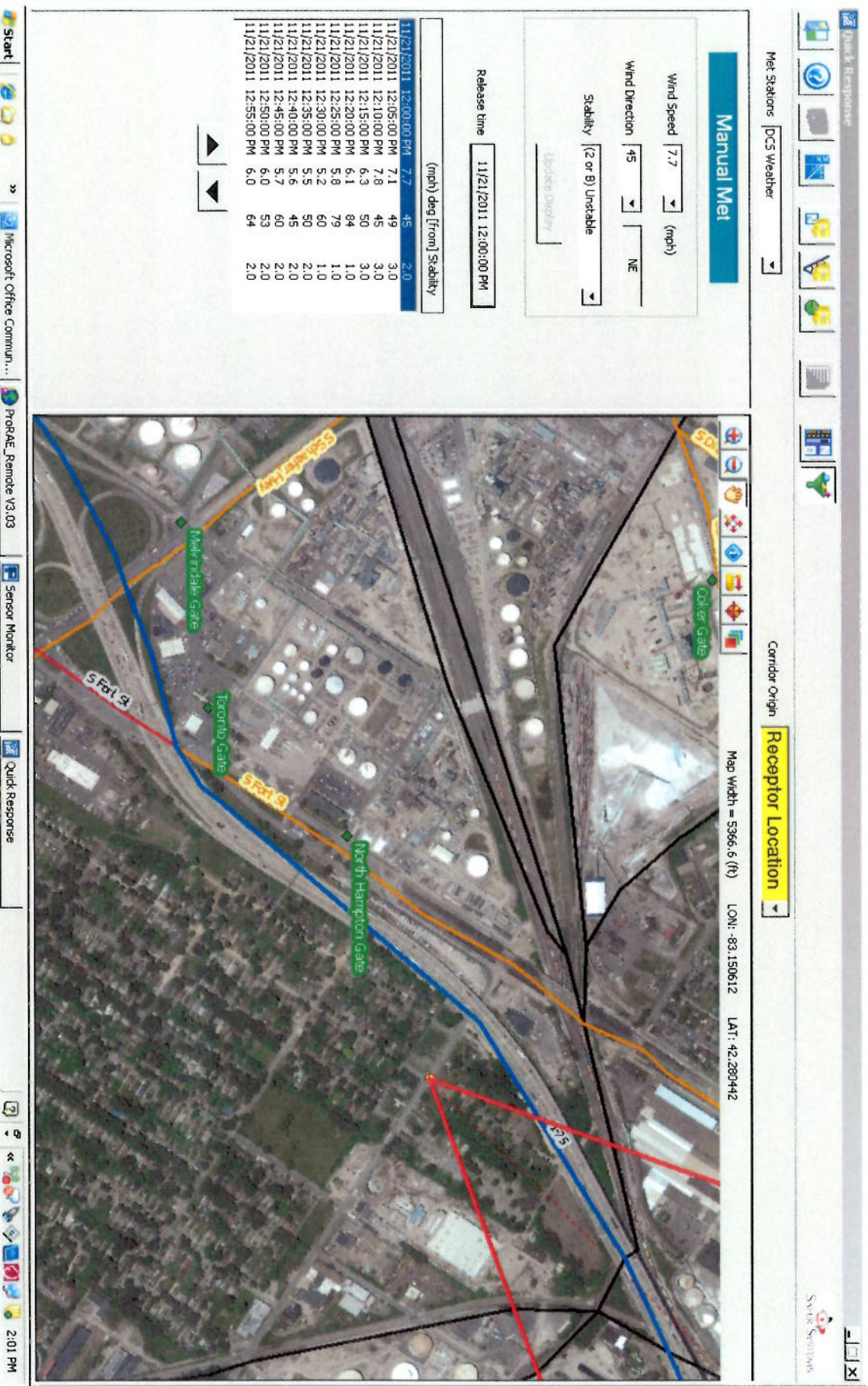
SUMMA Canister Information:

Size (circle one):	1 L (6 L)
Canister ID:	977
Flow Controller ID:	203
Notes:	

General Observations/Notes:

Attachment 4 – Detailed Weather November 21-22, 2011

November 21 2011 12:00 pm



Quick Response

Corridor Origin

Receptor Location

Map width = 5366.6 (ft) LON: -83.149972 LAT: 42.279942

Wind Speed (mph)

Wind Direction 58 ENE

Stability (2 or 8) Unstable

Release time 11/21/2011 1:00:00 PM

(mph) deg [from] Stability

11/21/2011	1:00:00 PM	6.4	58	2.0
11/21/2011	1:05:00 PM	6.6	58	2.0
11/21/2011	1:10:00 PM	7.0	66	2.0
11/21/2011	1:15:00 PM	6.1	51	2.0
11/21/2011	1:20:00 PM	6.1	47	2.0
11/21/2011	1:25:00 PM	7.3	53	2.0
11/21/2011	1:30:00 PM	5.4	65	1.0
11/21/2011	1:35:00 PM	6.0	80	2.0
11/21/2011	1:40:00 PM	5.5	48	1.0
11/21/2011	1:45:00 PM	4.2	61	1.0
11/21/2011	1:50:00 PM	5.4	67	1.0
11/21/2011	1:55:00 PM	6.0	65	1.0



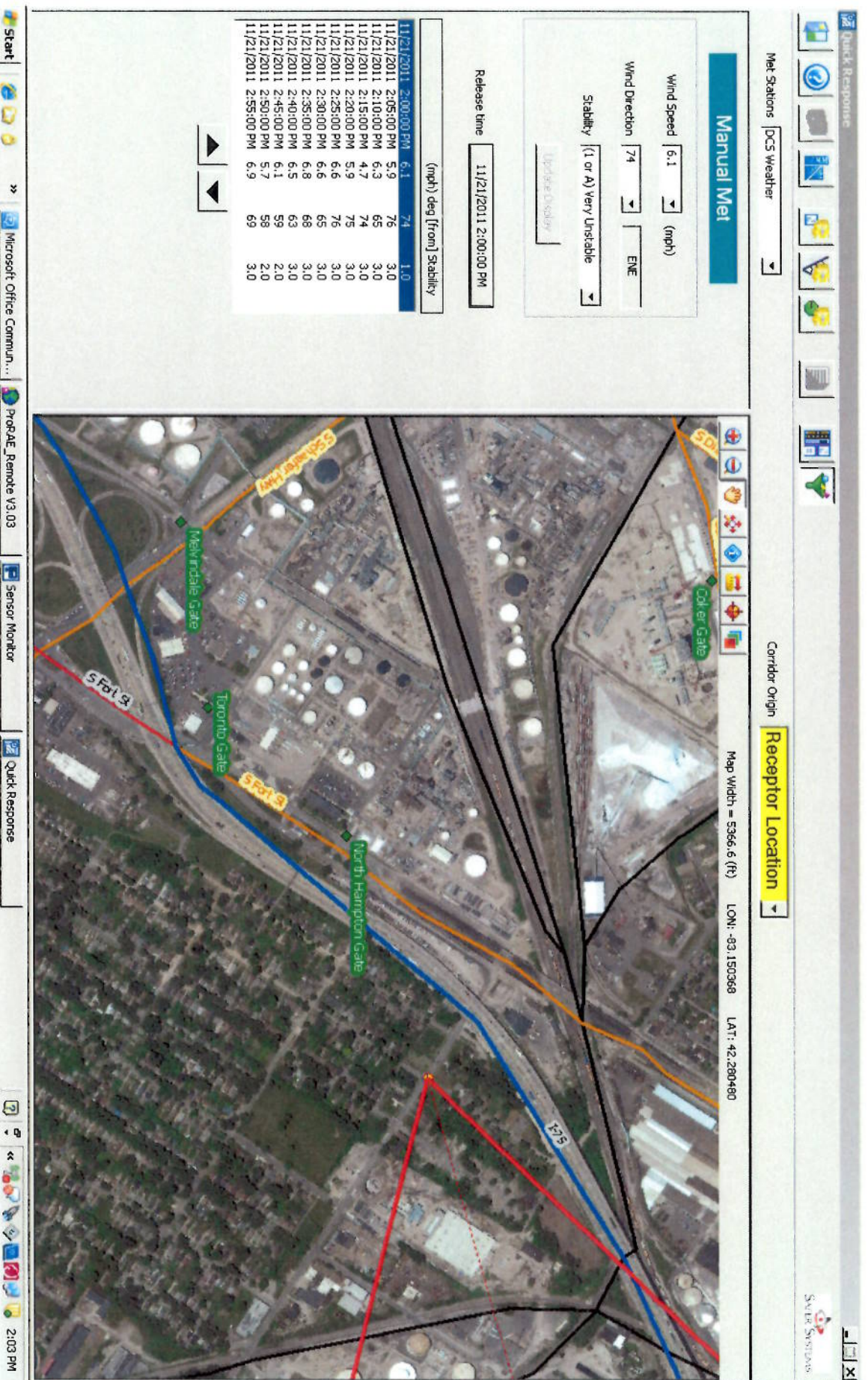
Microsoft Office Commun... ProRAE_Remote V3.03

Sensor Monitor

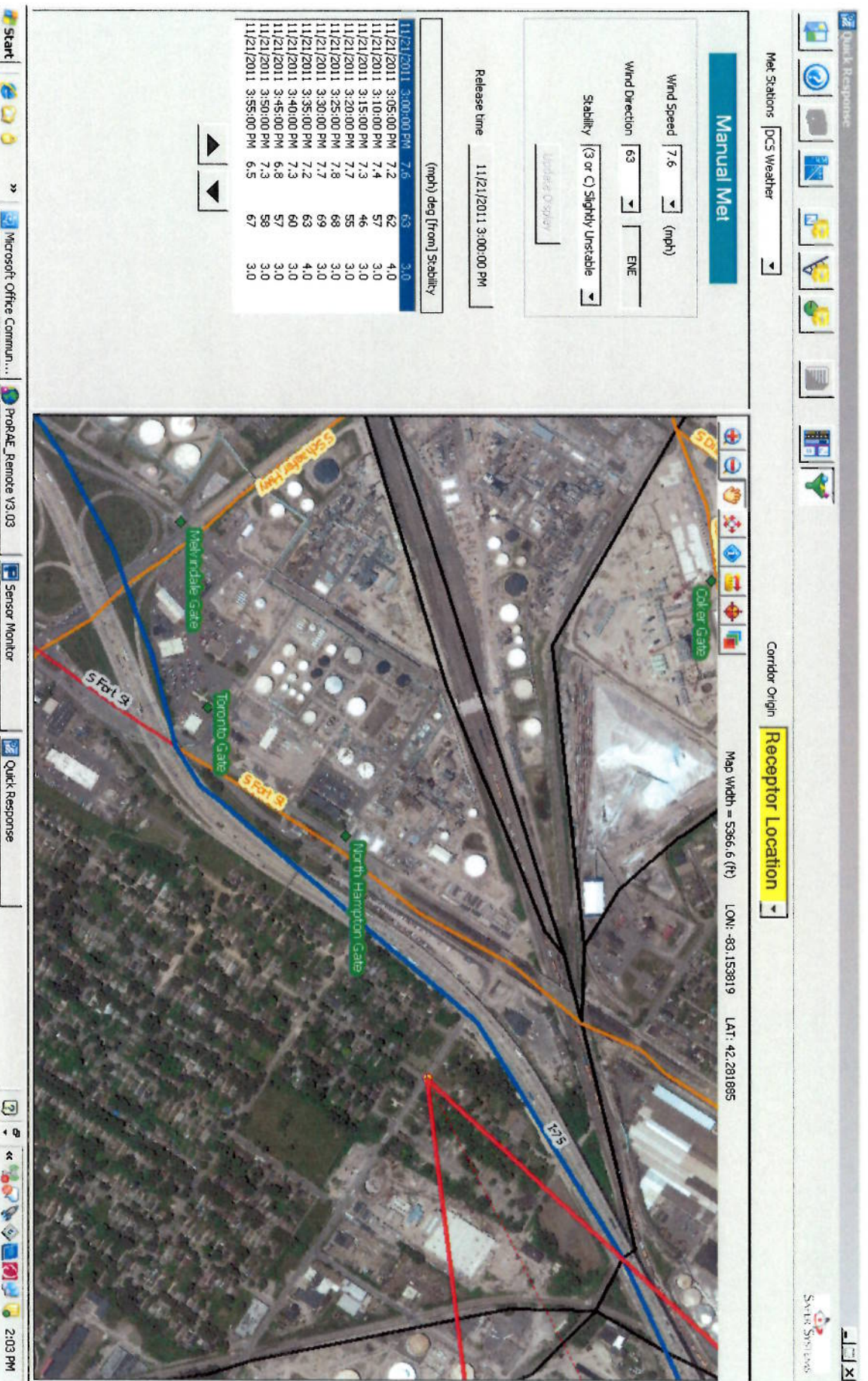
 Quick Response

2:02 PM

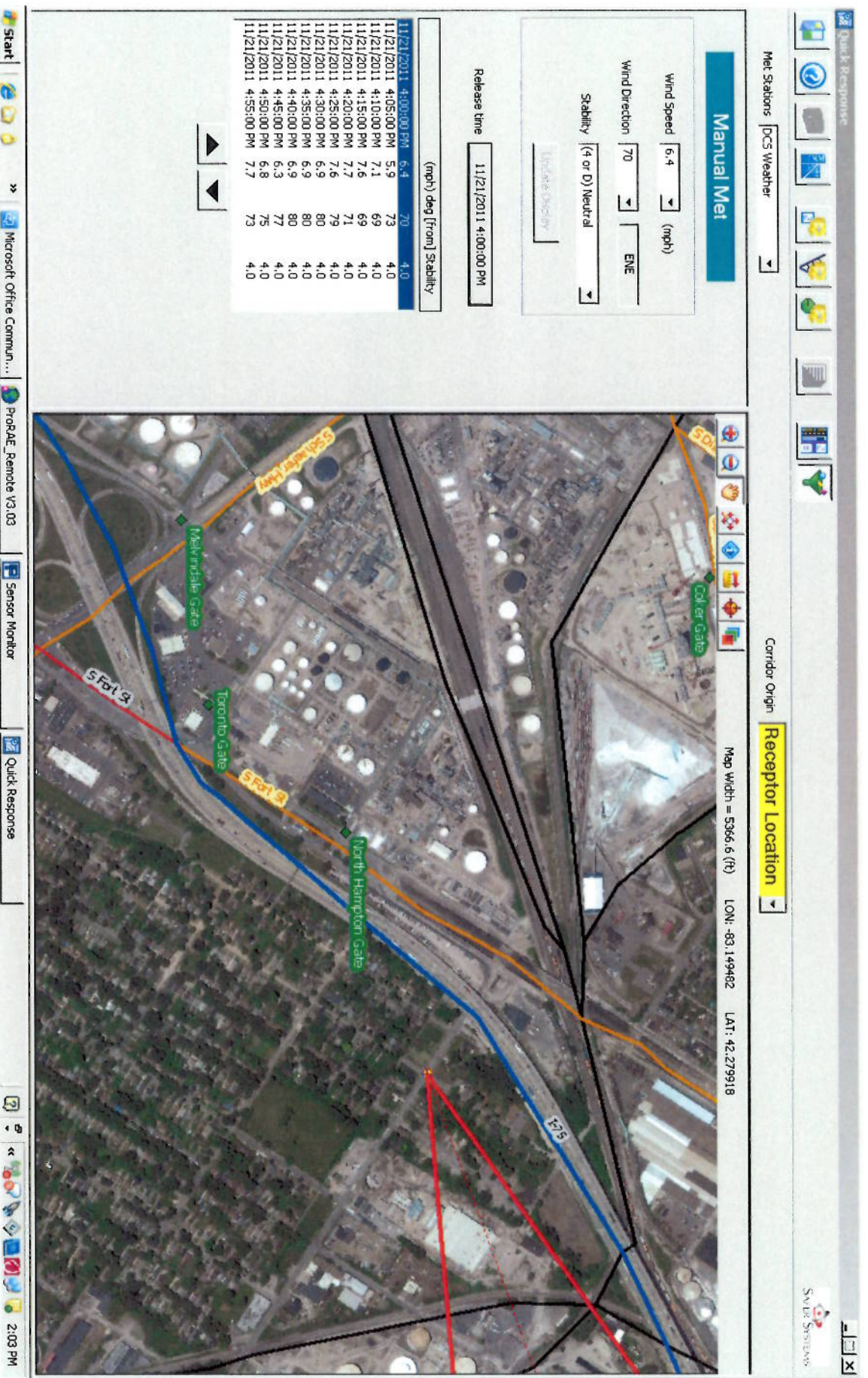
November 21 2011 2:00 pm



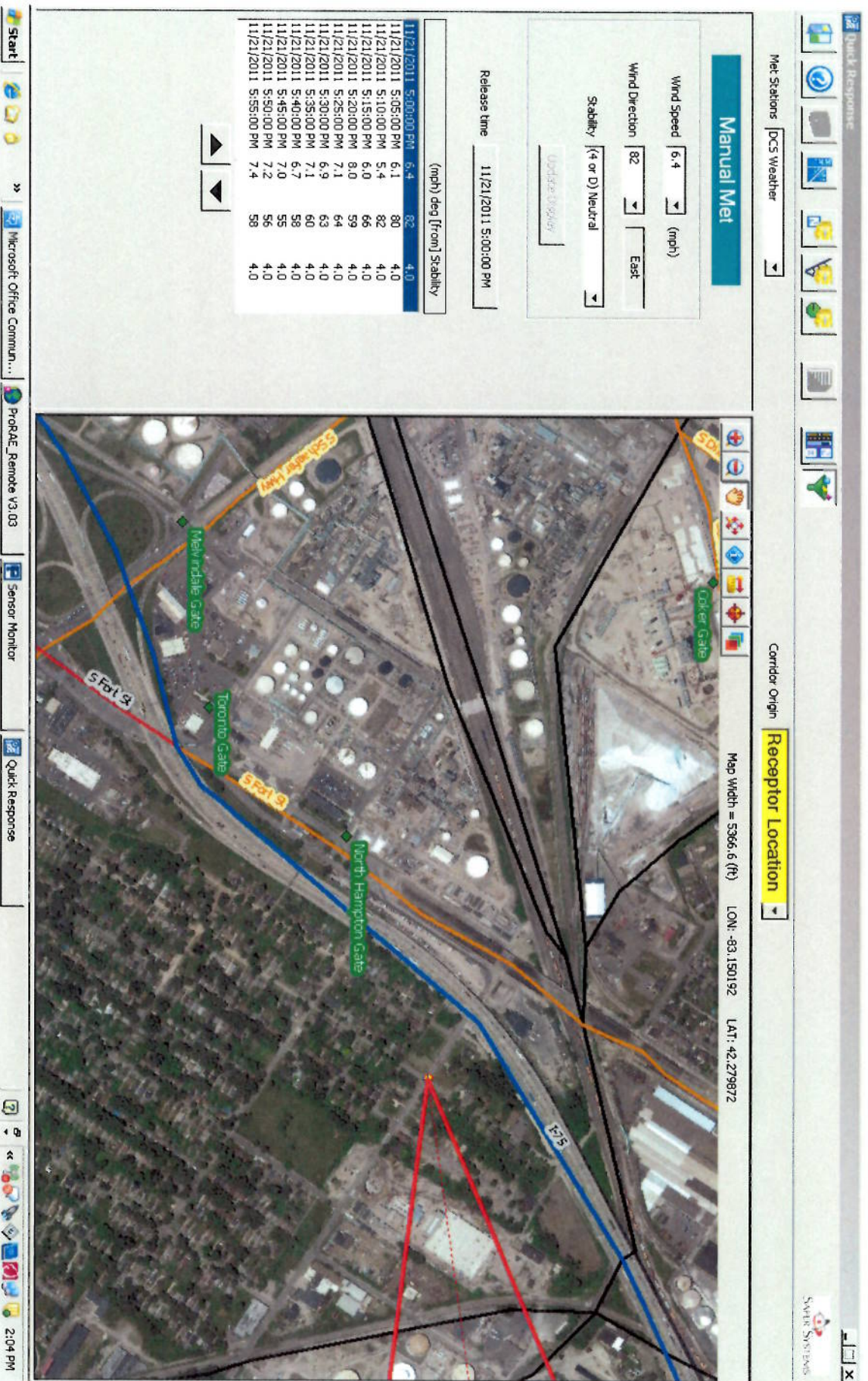
November 21 2011 3:00 pm



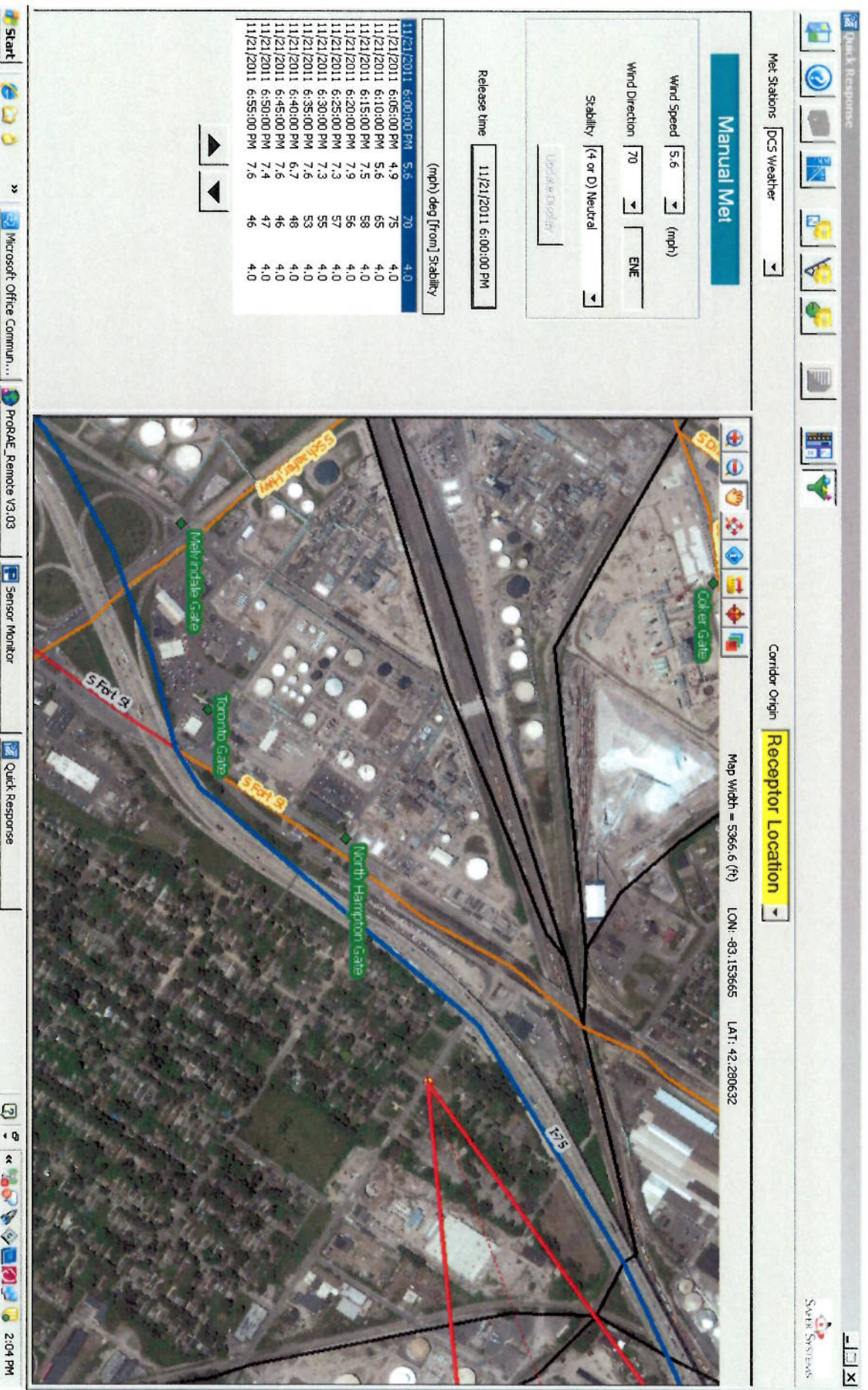
November 21 2011 4:00 pm



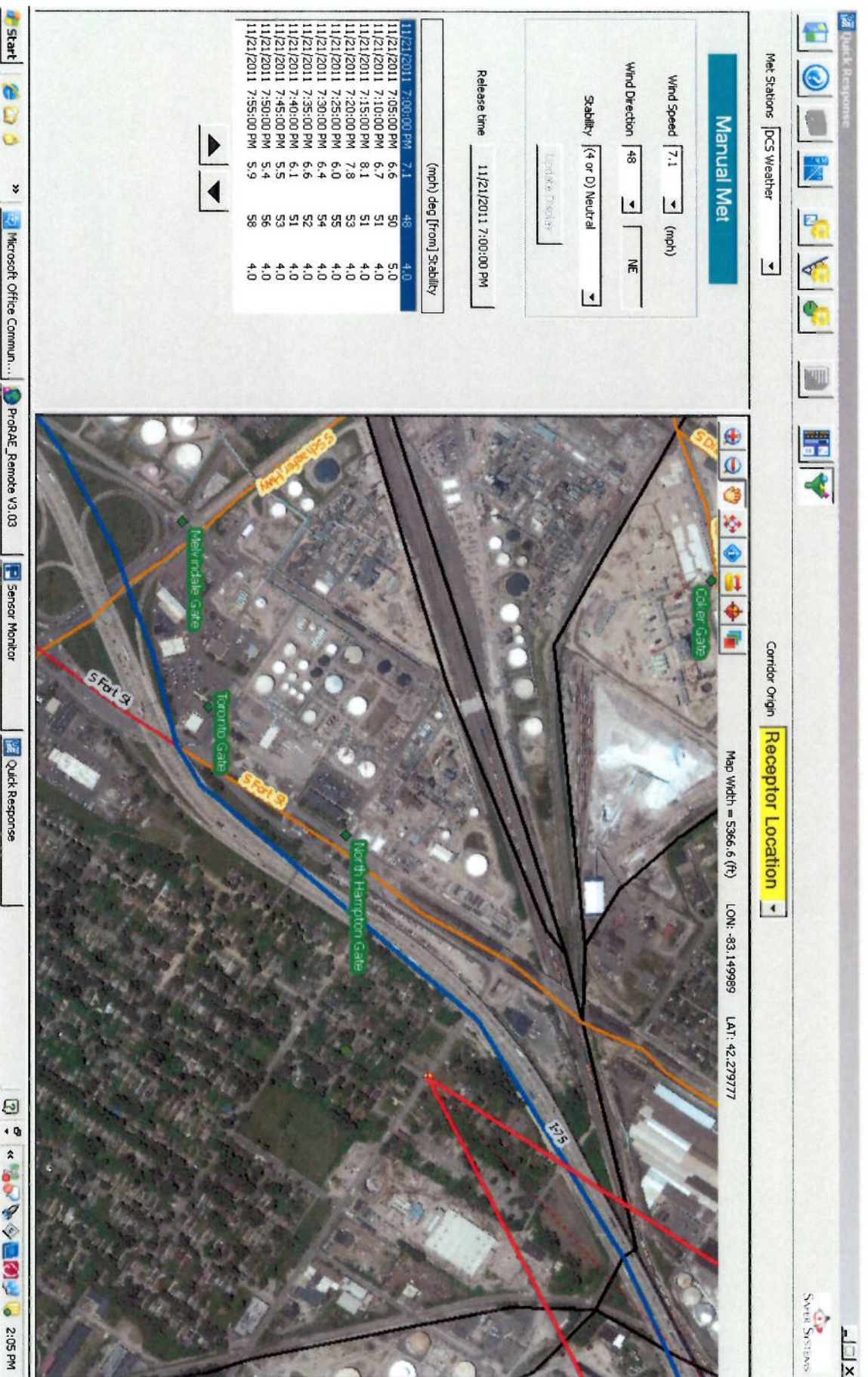
November 21 2011 5:00 pm



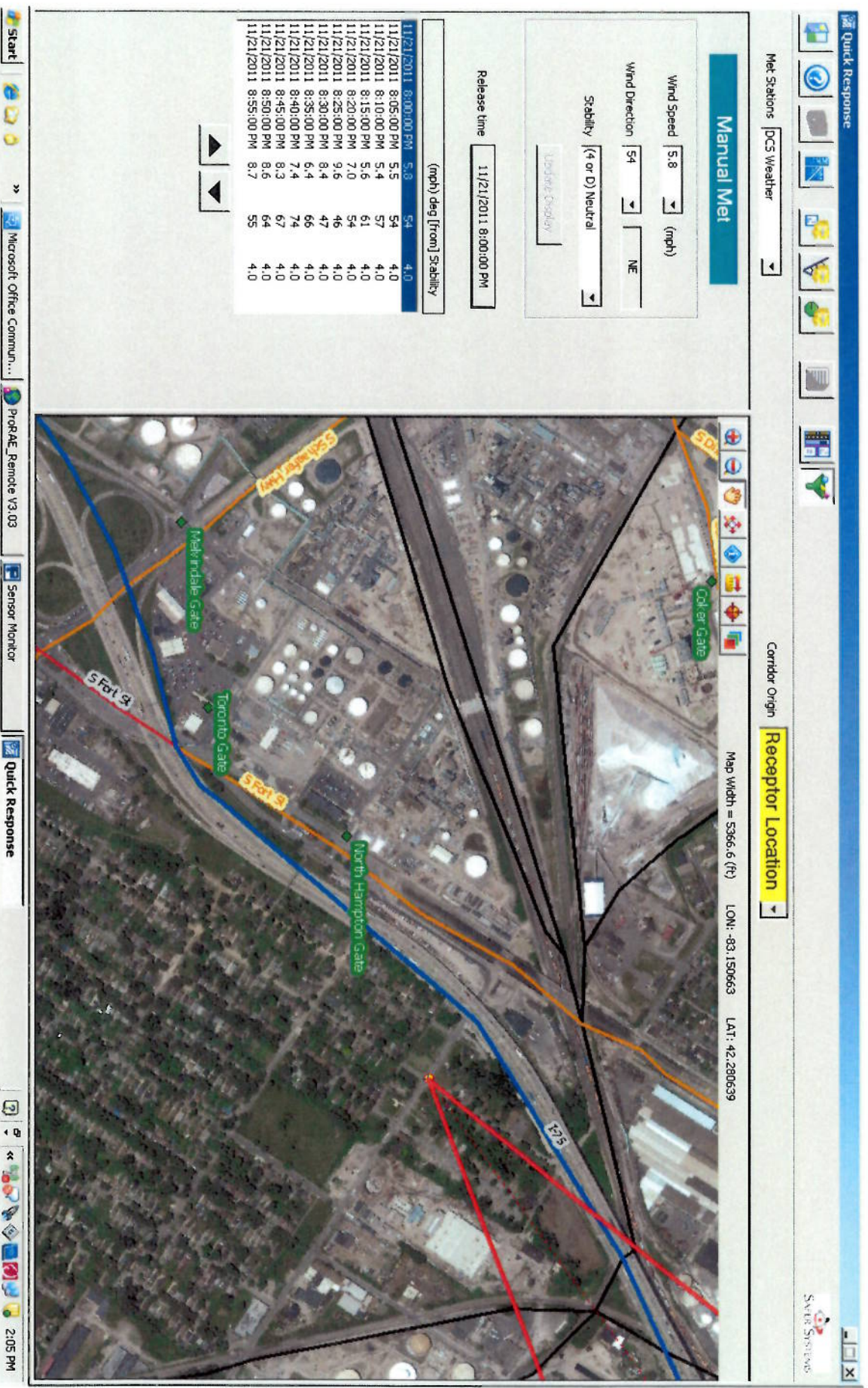
November 21 2011 6:00 pm



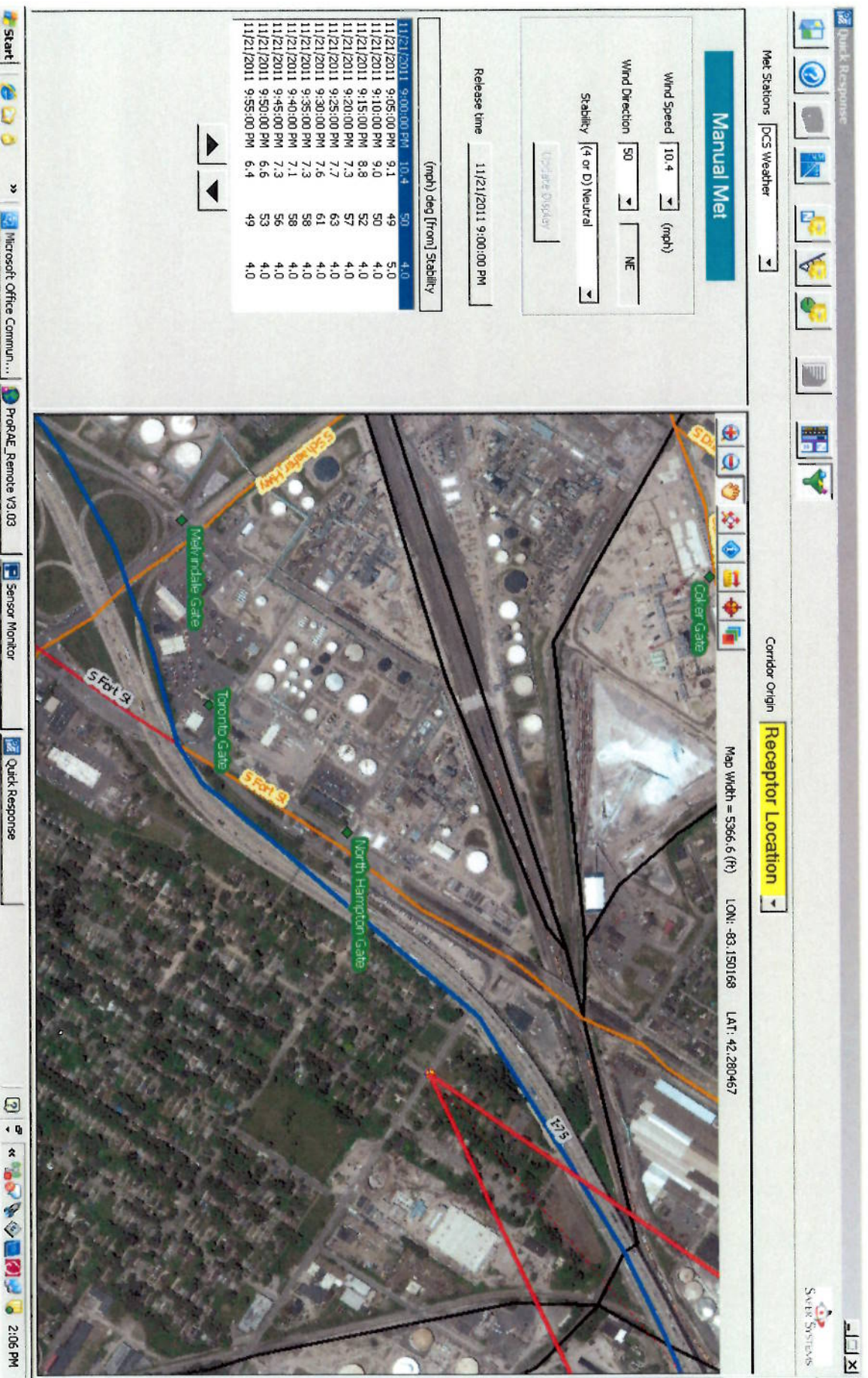
November 21 2011 7:00 pm



November 21 2011 8:00 pm

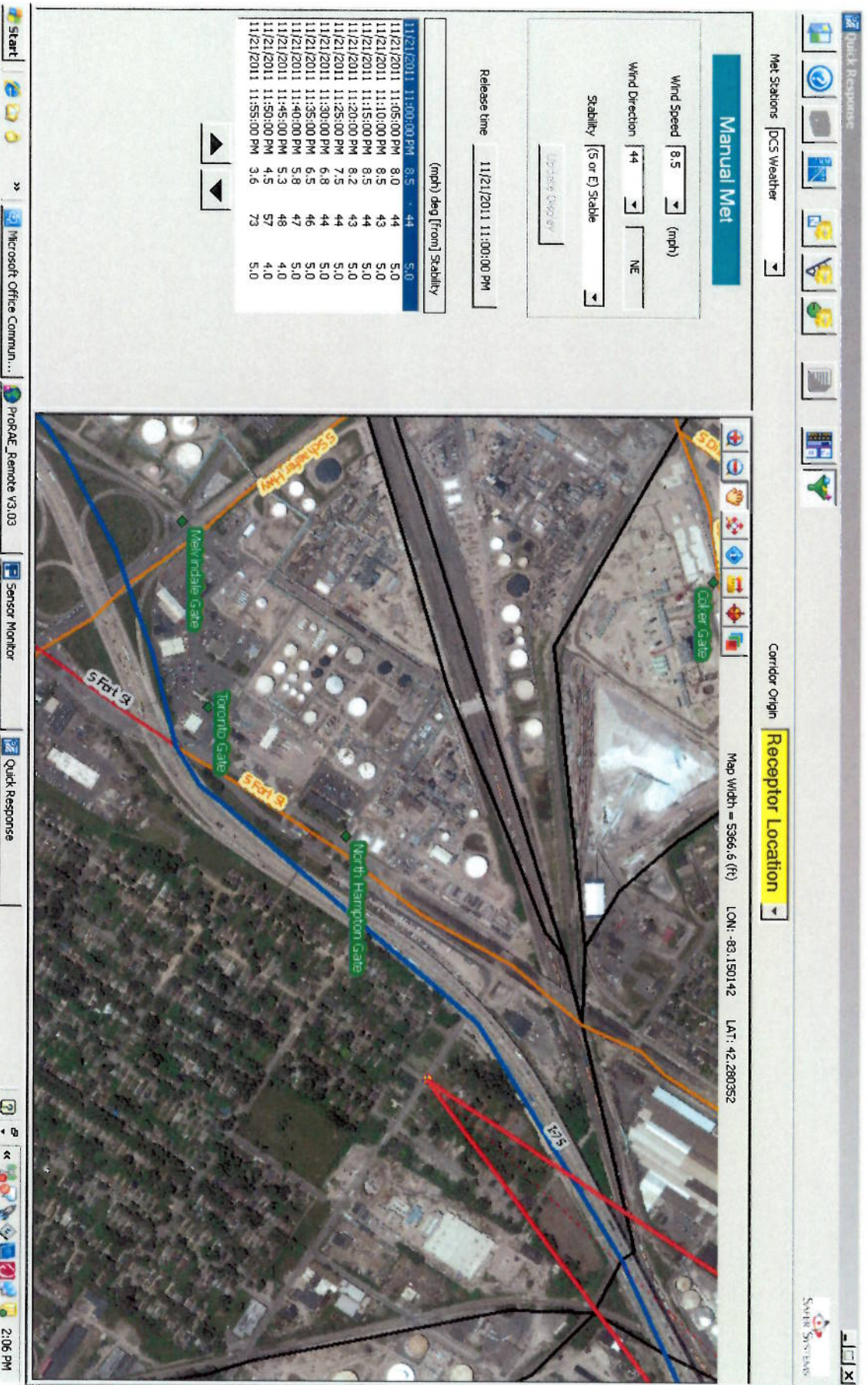


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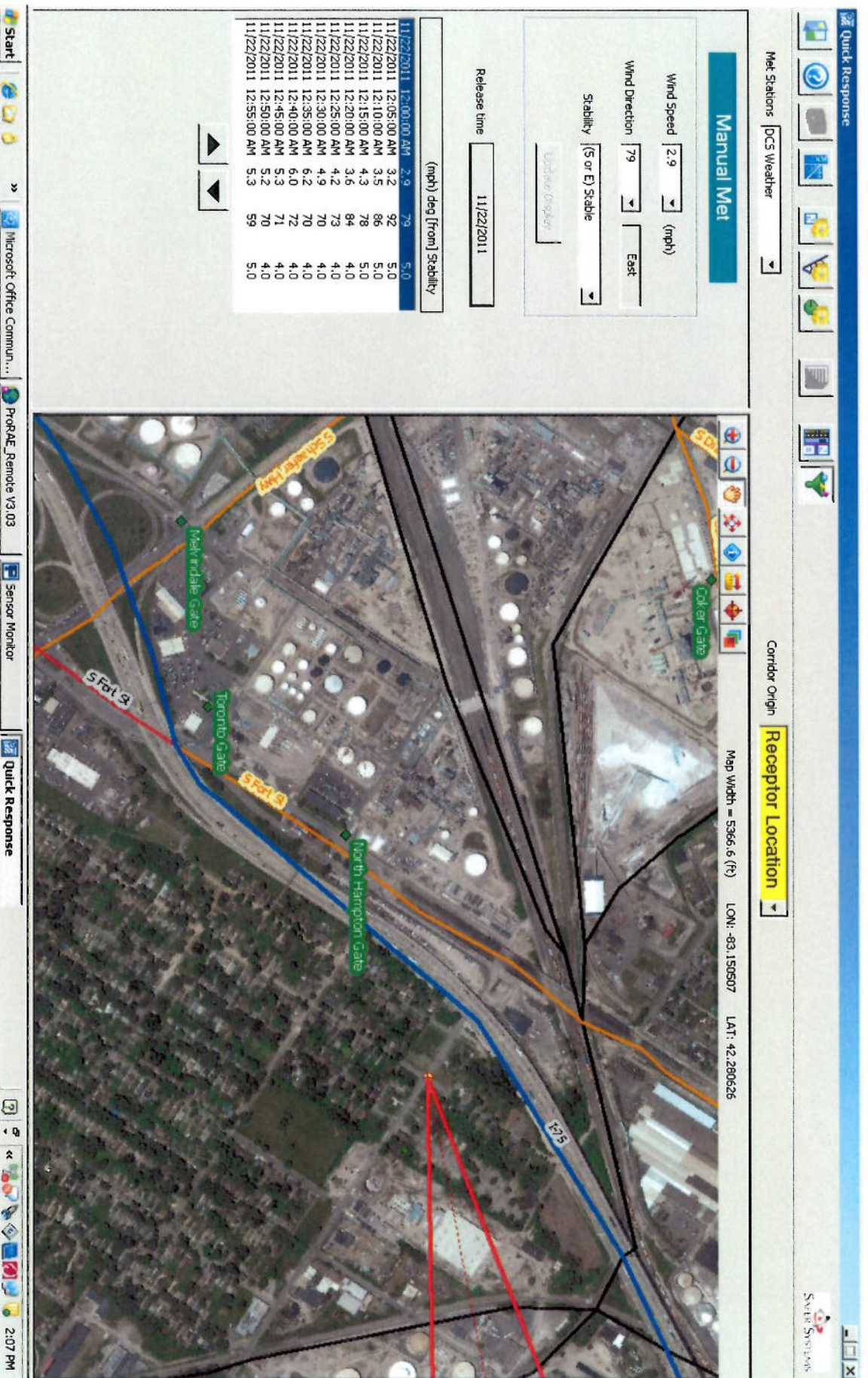


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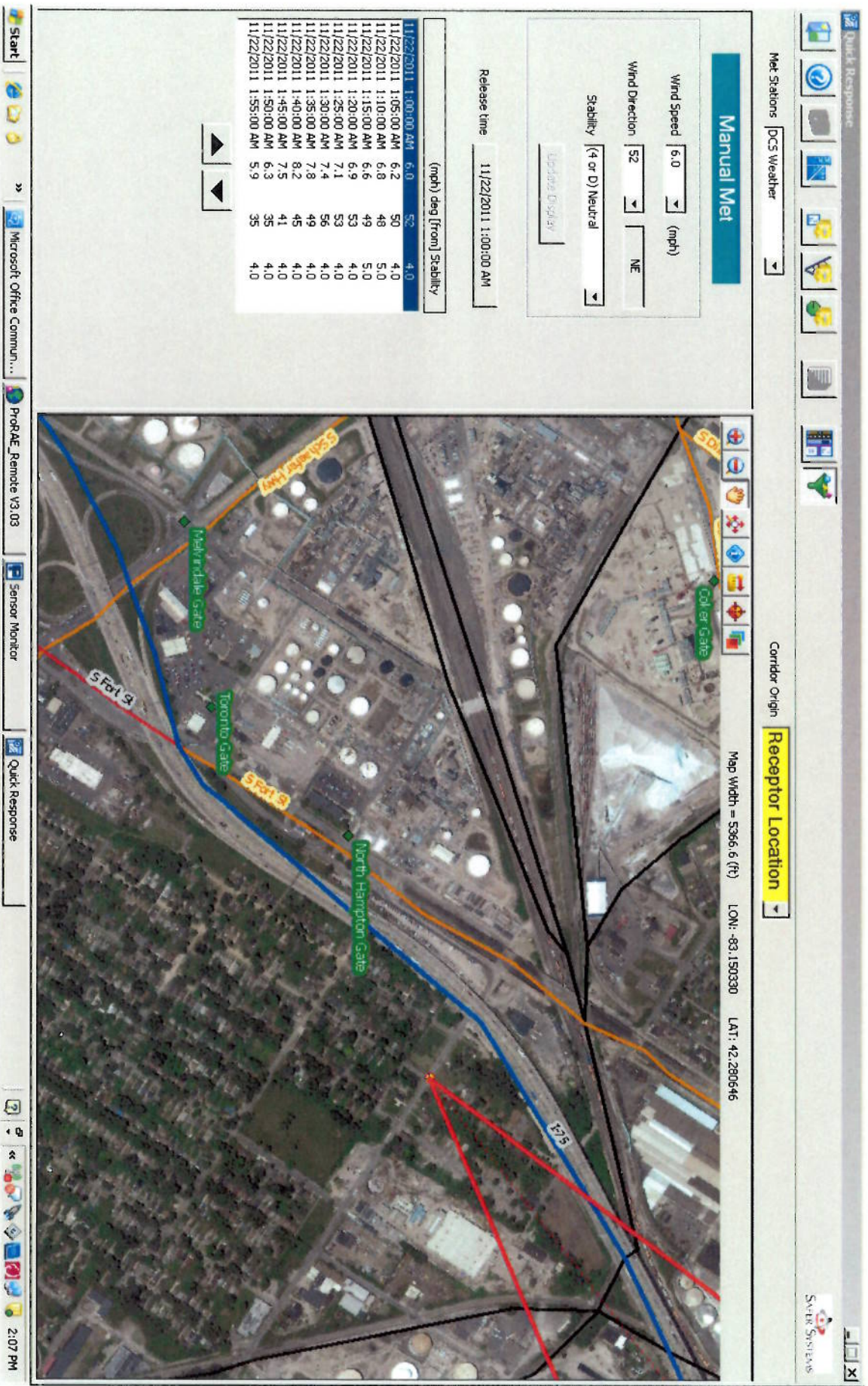
November 21 2011 11:00 pm



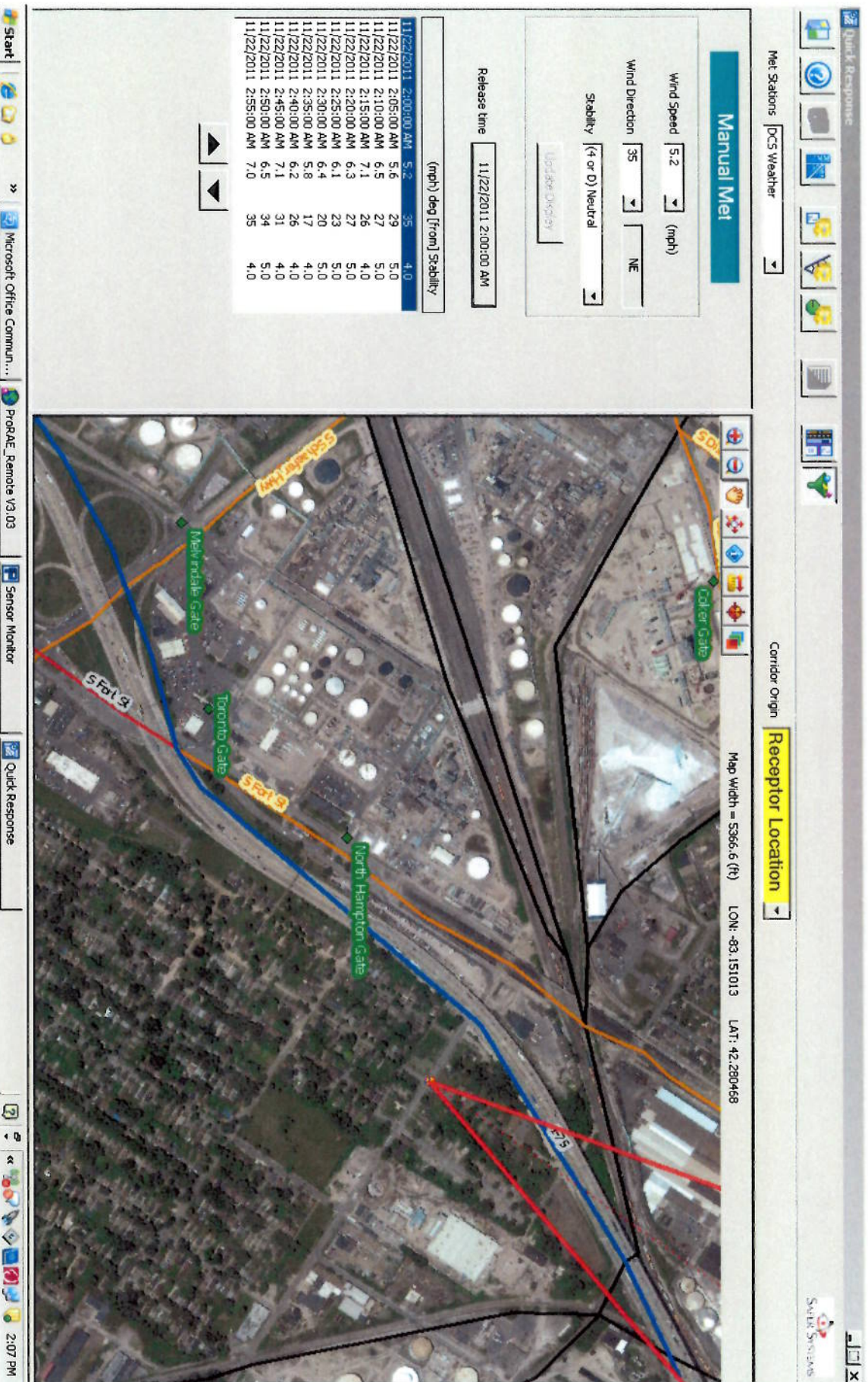
November 22 2011 12:00 am



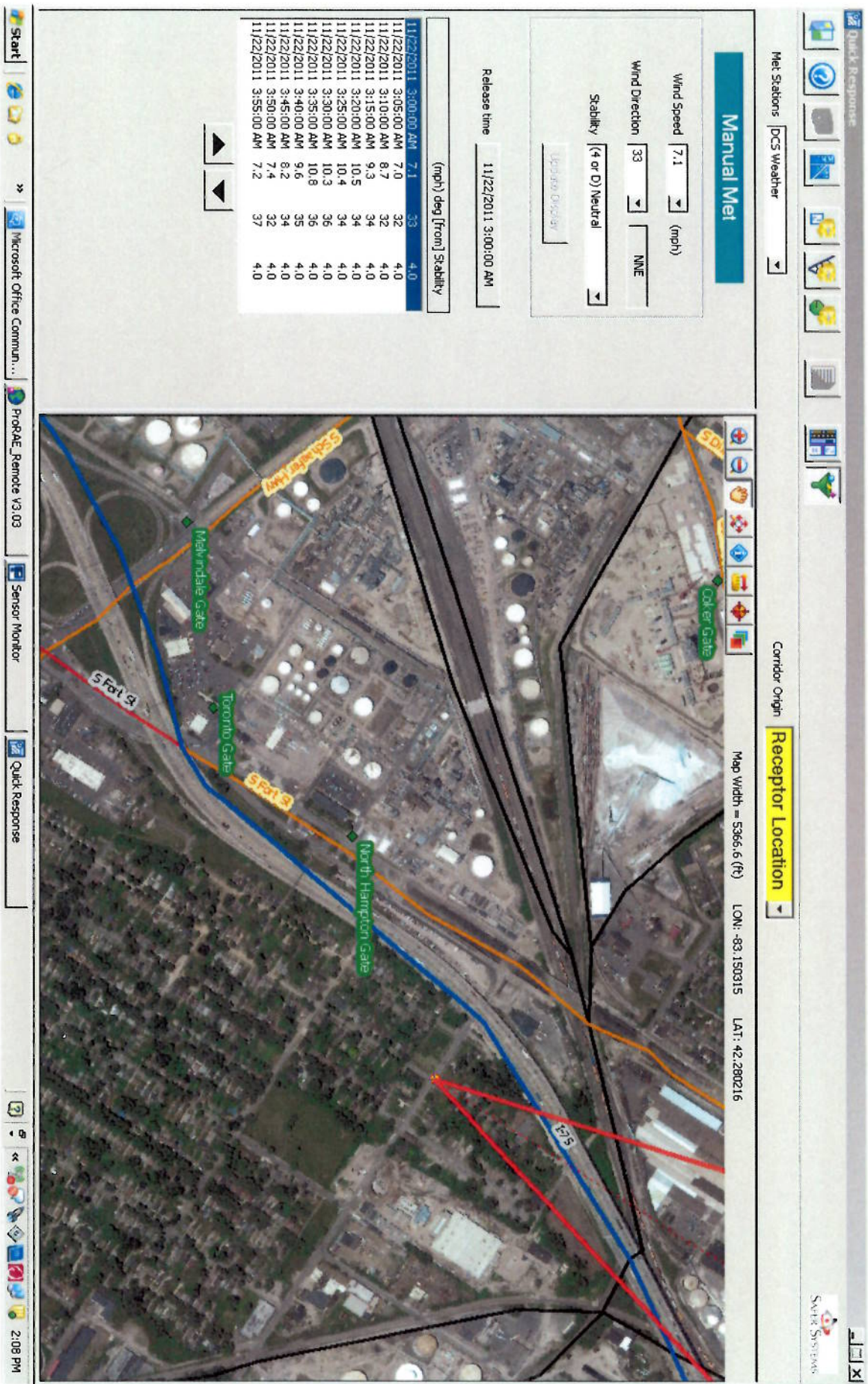
November 21 2011 1:00 am



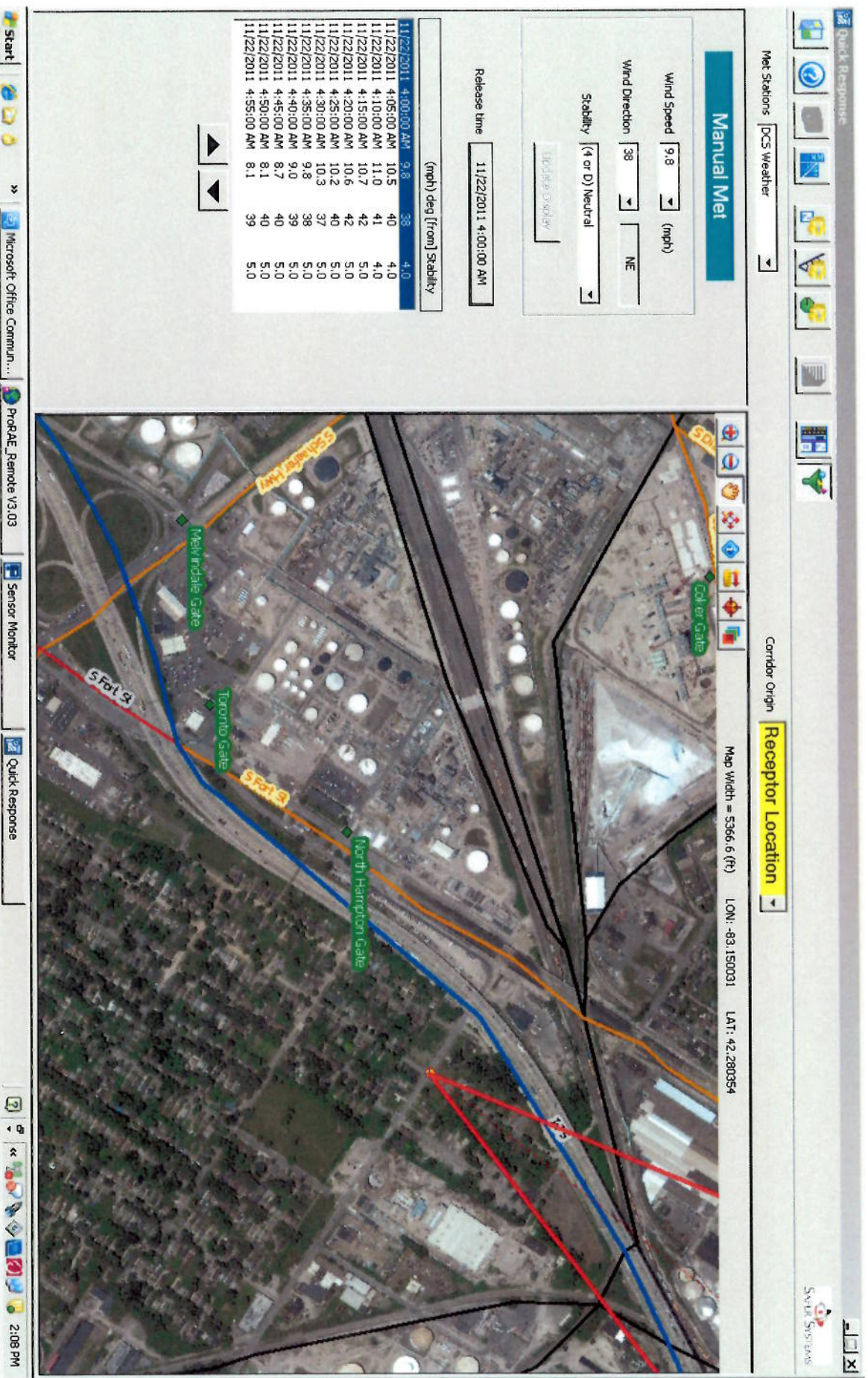
November 22 2011 2:00 am



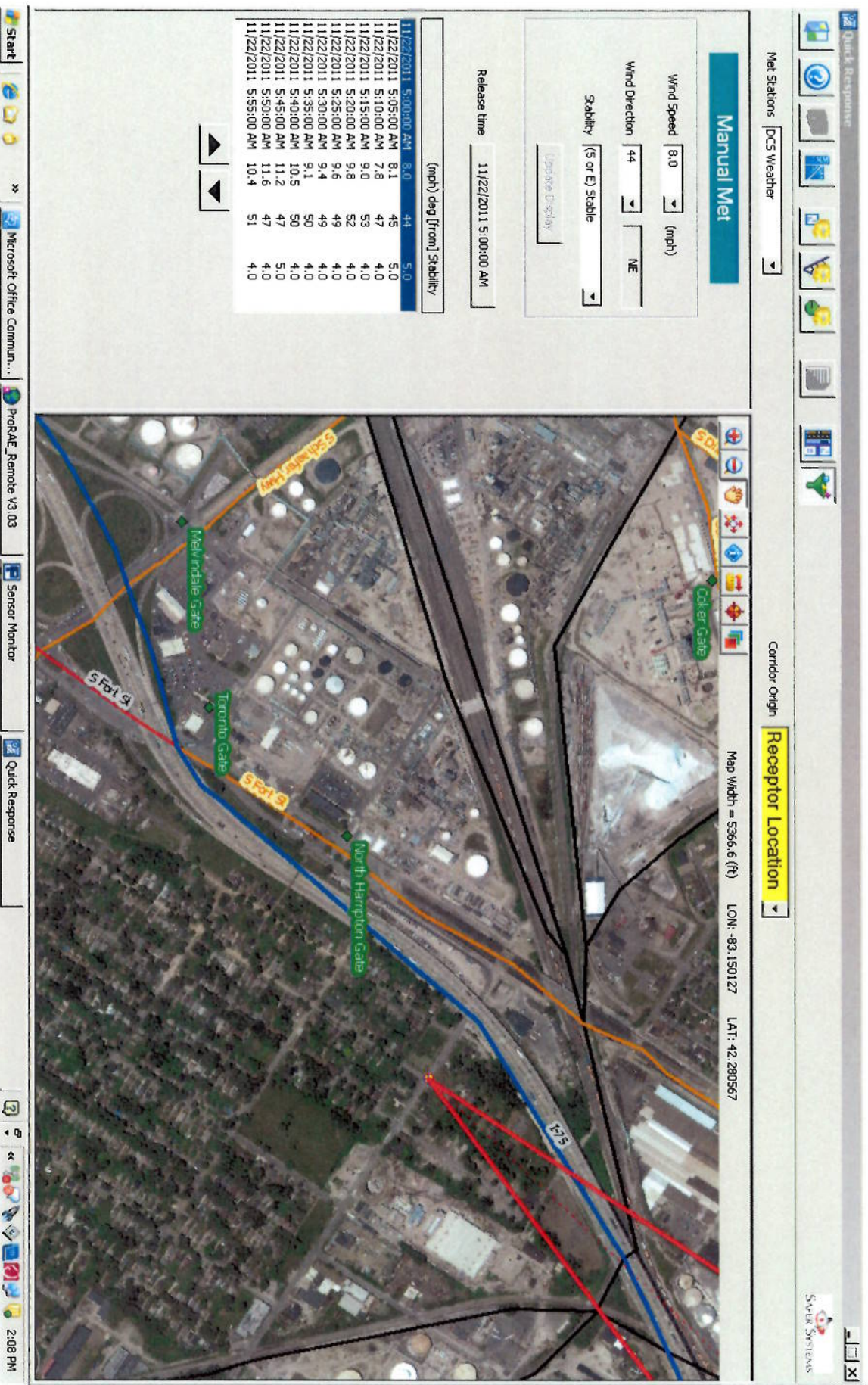
November 22 2011 3:00 am



November 22 2011 4:00 am



November 22 2011 5:00 am



Corridor Origin

Receptor Location ▼

Manual Mot

Wind Speed (mph)

Wind Direction 52 NE

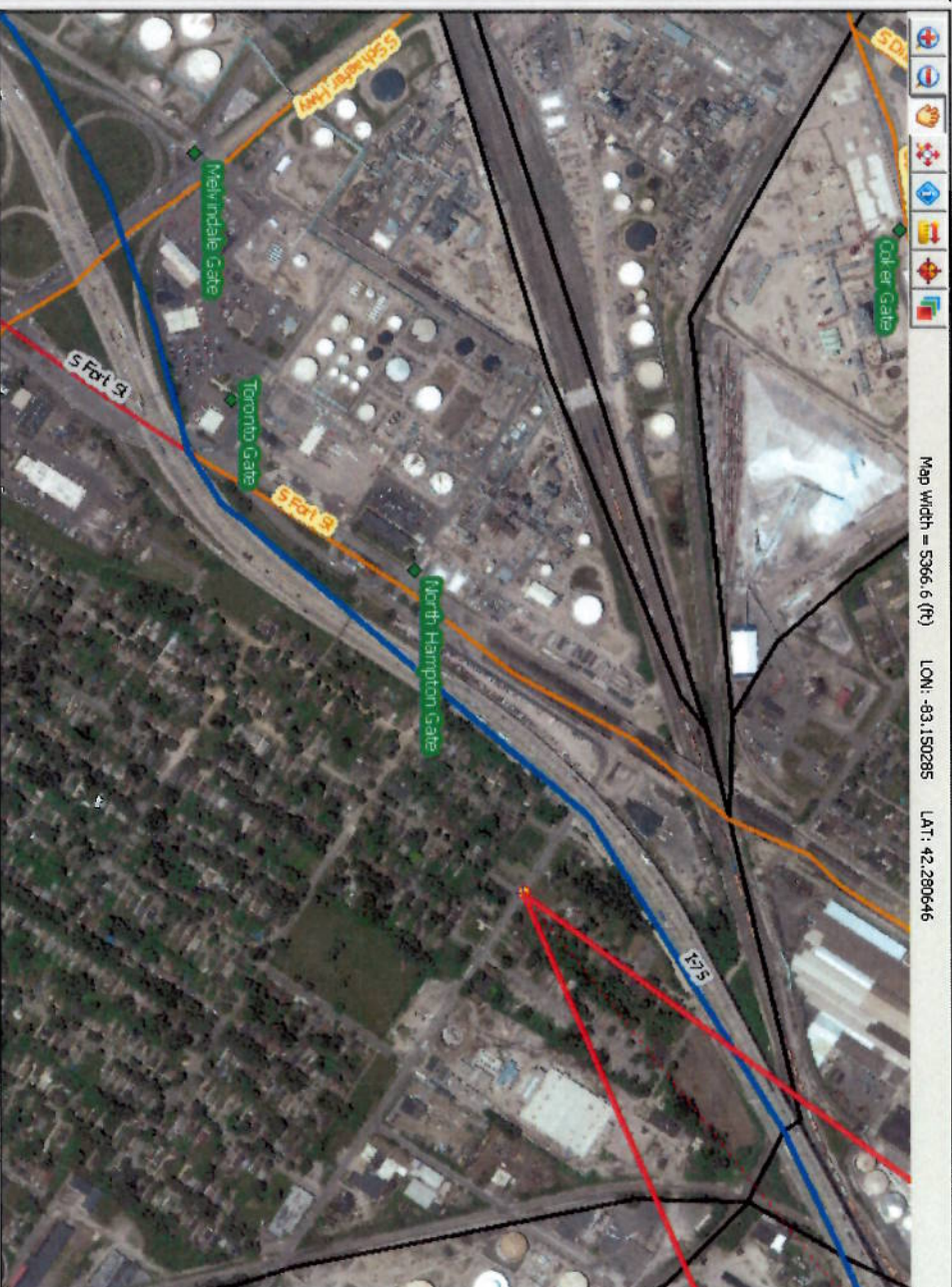
Stability (4 or D) Neutral

Interactive Display

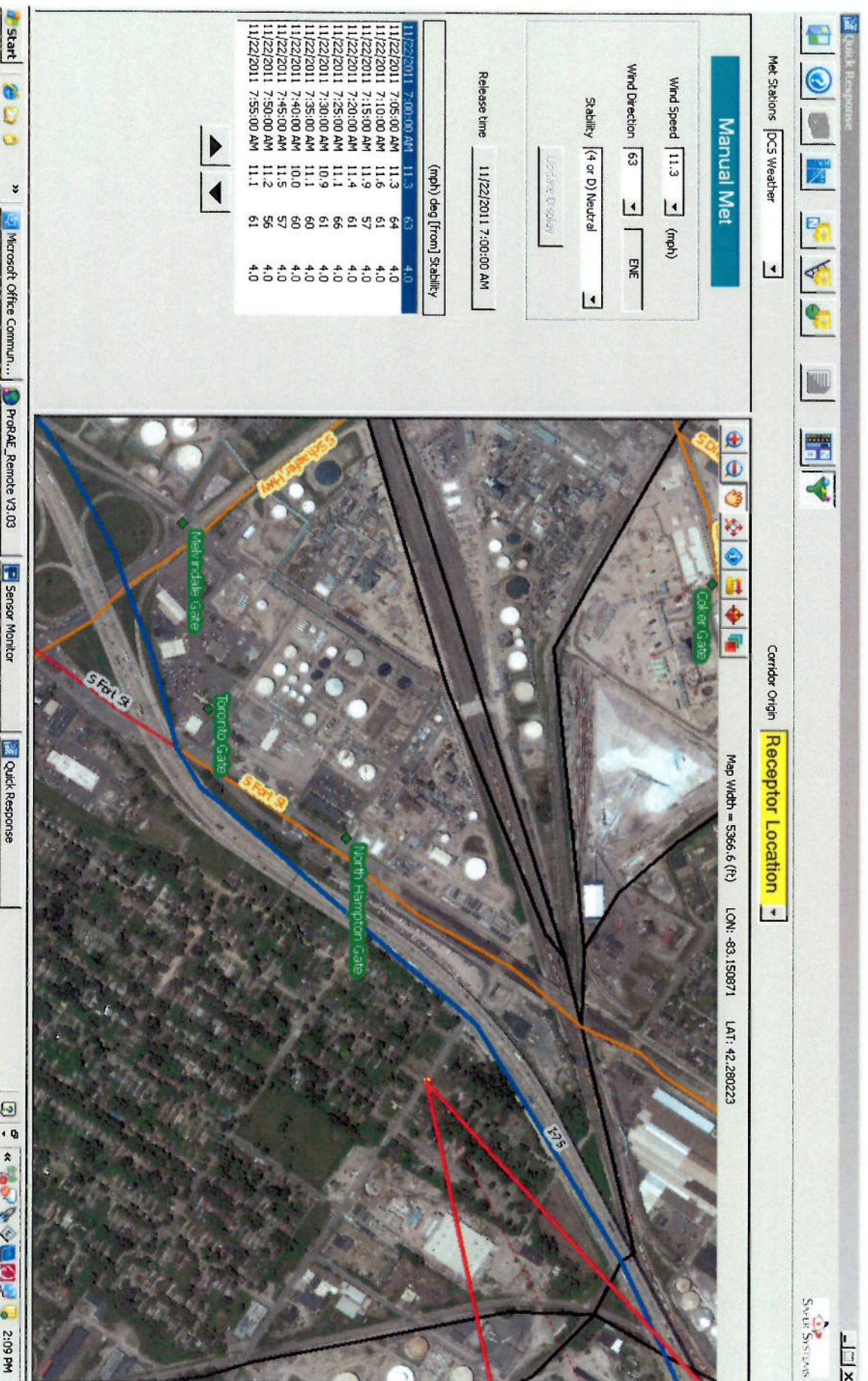
Release time	11/22/2011 6:00:00 AM
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(mph) deg [from] Stability

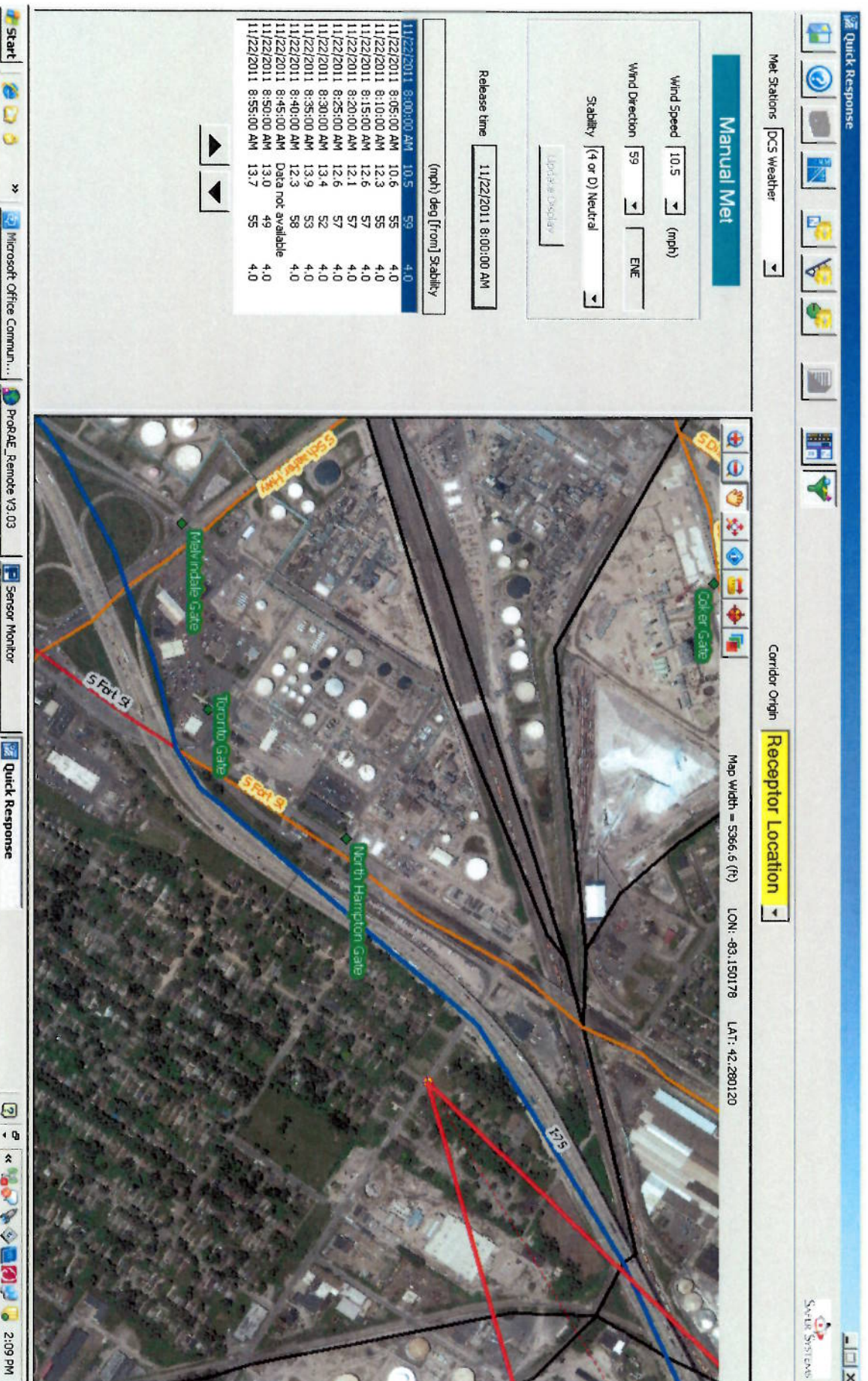
11/22/2011	6:00:00 AM	12.5	52	4.0
11/22/2011	6:05:00 AM	11.7	49	4.0
11/22/2011	6:10:00 AM	12.4	53	4.0
11/22/2011	6:15:00 AM	12.2	54	4.0
11/22/2011	6:20:00 AM	11.7	56	4.0
11/22/2011	6:25:00 AM	10.4	55	4.0
11/22/2011	6:30:00 AM	9.8	58	4.0
11/22/2011	6:35:00 AM	11.8	59	4.0
11/22/2011	6:40:00 AM	13.4	57	4.0
11/22/2011	6:45:00 AM	14.9	57	4.0
11/22/2011	6:50:00 AM	14.2	58	4.0
11/22/2011	6:55:00 AM	12.6	61	4.0



November 22 2011 7:00 am



November 22 2011 8:00 am



Attachment 5 - Ambient Air and Wastewater Sample results March 2011 through November 2011

Location	3/25/2011 (ppb)	4/13/2011 (ppb)	5/20/11 (ppb)	6/13/11 (ppb)	7/13/11 (ppb)	8/16/11 (ppb)	9/15/11	10/10/11	11/21/11
I-75	Non-Detect	0.305	Non-Detect	0.37	0.554	0.32	0.30	1.1	0.39
Patricia	Non-Detect	0.37	6.87	0.302	1.72	0.22	0.29	0.86	0.30
Liebold	Non-Detect	0.431	Non-Detect	0.308	1.48	0.28	0.29	1.93	0.26
Liddesdale	Non-Detect	0.286	0.4	0.305	0.493	0.29	<0.20 (1)	1.2	0.37
Background: East Fort	Non-Detect	0.37	N/A	0.431	N/A	0.32	0.41		
Background: West Fort	Non-Detect	0.431	N/A	0.493	N/A		0.28		
Background: Deacon & Pleasant	N/A	N/A	0.493	N/A	1.69			0.78	0.62
Background: Deacon & Leonard	N/A	N/A	Non-Detect	N/A	0.554			1.3	--(2)
Background: Patricia & Edsel						0.28			
Carbon East Effluent*	2.1 and 1.8	No Sample	Non-Detect	N/A	No Sample Off-Line	No Sample	Non-Detect	Non-Detect	Non-Detect
Carbon West Effluent*	Non-Detect	No Sample	Non-Detect	N/A	Non-Detect	Non-Detect (8/17/11)	Non-Detect	Non-Detect	Non-Detect
Peroxide Only Effluent*	N/A	N/A	N/A	97	N/A				

*Results are waste water samples collected for analysis under EPA Method 8260. All other samples are a TO-15 analysis for air samples.

Notes:

- (1) The 9/15/11 sample at Liddesdale only decreased by 4" of Hg; a full sample was not taken by the regulator.
- (2) The 11/21/11 sample at Deacon and Leonard had a regulator problem which prevented a sample during the time period.

