

**40355 Braithwaite, LA
Stolthaven Terminal Facility
Summary of Air Monitoring and Sampling Results
September 16, 2012
PO# 12-H0408-MR**

This data report discusses real-time air monitoring data collected between September 15th 00:00 and September 15th 23:59 in support of mitigation and remediation operations conducted near Stolthaven's facility near Braithwaite, LA.

Real-time air monitoring during entry activities resulted in reports of detections exceeding the chemical specific action level required for donning of respiratory protection. All workers not present in respiratory protection prior to initiating these tasks were present in respiratory protection during these events until the task was completed, or after air concentrations reached a level below which respiratory protection was required. Workers having VOC detections above the chemical specific action level and not in respiratory protection notified CTEH[®] personnel and took appropriate action to prevent further exposures. Two detections of LEL were recorded in association with elevated VOCs. Detections of chlorobenzene and formic acid were recorded; all workers were present in respiratory protection.

Real-time air monitoring for VOCs, LEL, formic acid, methyl acrylate, styrene, chlorobenzene, and amines was conducted using stationary AreaRAEs and/or hand-held instruments such as the MultiRAE, and colorimetric detector tubes. Table 1 and Table 2 display data summaries for AreaRAE and handheld MultiRAE data, respectively. Appendix 1 shows incident site maps.

**Table 1
AreaRAE Summary – September 15th 00:00 – 23:59**

Unit	Analyte	Number of Readings	Number Of Detections	Concentration Range
Unit 1	LEL	4771	0	0.0 – 0.0 %
	VOC	4771	563	0.1 – 1.2 ppm
Unit 2	LEL	5119	0	0.0 – 0.0 %
	VOC	5119	2	0.1 - 0.1 ppm
Unit 3	LEL	5245	0	0.0 – 0.0 %
	VOC	5245	0	0.0 – 0.0 ppm
Unit 4	LEL	5542	0	0.0 – 0.0 %
	VOC	5542	27	0.2 – 0.5 ppm
Unit 9	LEL	5526	0	0.0 – 0.0 %
	VOC	5526	99	0.3 – 1.1 ppm
Unit 10	LEL	687	0	0.0 – 0.0 %
	VOC	687	189	0.1 – 0.5 ppm
Unit 11	LEL	3943	0	0.0 – 0.0 %
	VOC	3943	317	0.1 – 1.0 ppm
Unit 12	LEL	5346	0	0.0 – 0.0 %
	VOC	5346	0	0.0 – 0.0 ppm
Unit 13	LEL	5508	0	0.0 – 0.0 %
	VOC	5508	33	0.1 – 0.5 ppm

***Detections may include drift events** - Drift is defined as any interference in the electrochemical sensor's ability to accurately report the concentration of a chemical in the atmosphere. Humidity and temperature changes throughout the monitoring period are typical sources of drift.

**Table 2
Hand-held MultiRAE Real-time Summary – September 15th 00:00 – 23:59**

Community				
Analyte	Number of Readings	Number of Detections	Average Concentration of Detections	Highest Concentration
Formic Acid	20	0	NA	< 0.52 ppm
H2S	4	0	NA	< 0.1 ppm
LEL	240	0	NA	< 1.0 %
VOC	252	0	NA	< 0.1 ppm
Entry Activities				
Analyte	Number of Readings	Number of Detections	Average Concentration of Detections	Highest Concentration
Amines(Low Range)	2	2	5.0 ppm	5.0 ppm
Formic Acid	4	3	6.07 ppm	10.4 ppm
LEL	565	0	NA	< 1.0 %
VOC	746	25	4.9 ppm	88.2 ppm
Work Area				
Analyte	Number of Readings	Number of Detections	Average Concentration of Detections	Highest Concentration
Chlorobenzene	1	1	50.0 ppm	50.0 ppm
Formic Acid	2	1	11.2 ppm	11.2 ppm
LEL	164	2	4.0 %	6.0 %
Methyl Acrylate	2	0	NA	< 2.0 ppm
Styrene	4	0	NA	< 0.5 ppm
VOC	189	6	302.3 ppm	855.0 ppm

NA = not applicable

* In addition to the tabulated real-time data, additional air monitoring for the purpose of worker protection was performed throughout the work area. These data are used for task-specific decision-making, but may not be recorded in the tabulated data represented above.

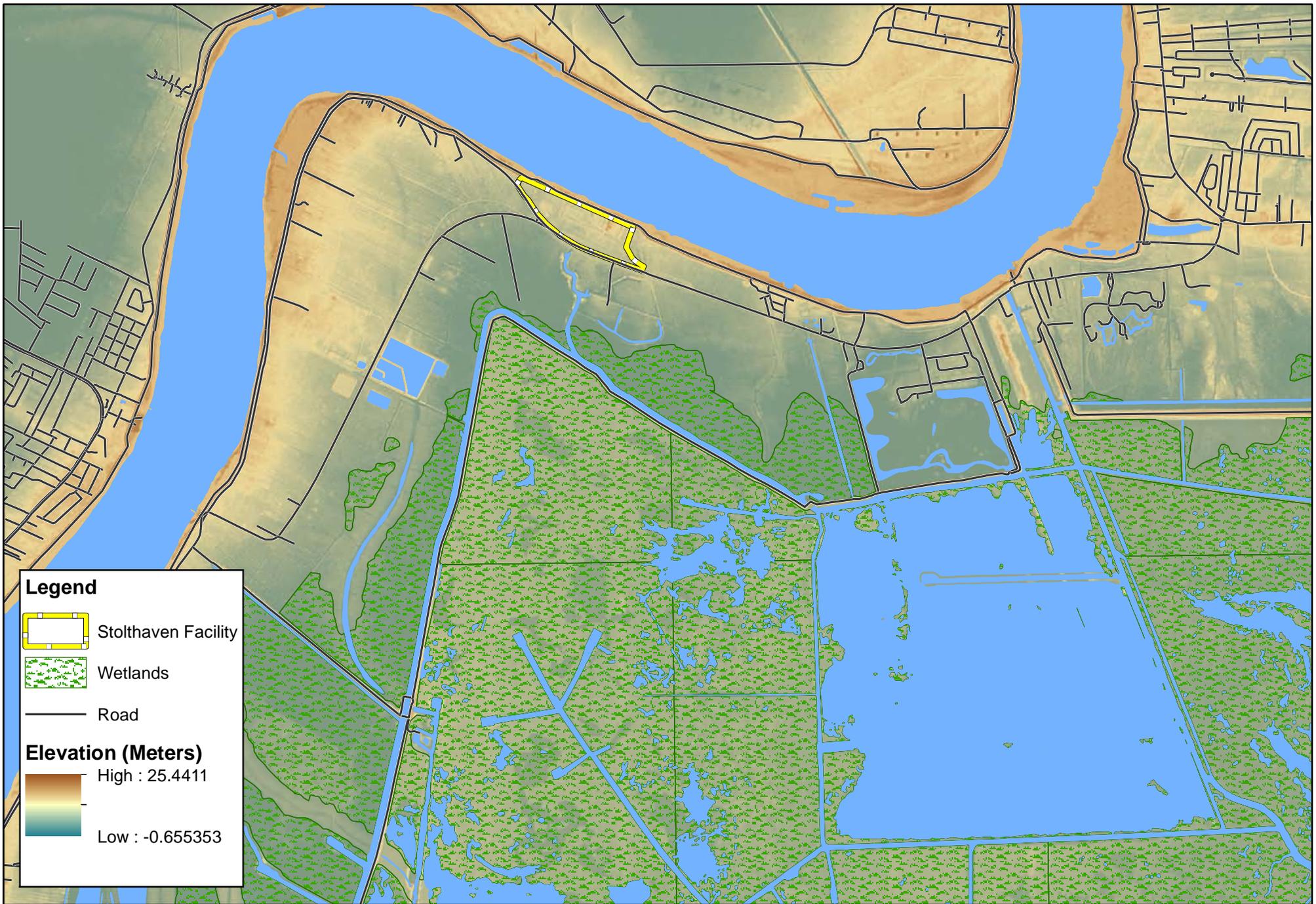
**Table 3
Analytical Sample Counts – September 15th 00:00 – 23:59**

Matrix	Number of Samples
Air	30
Soil	0
Waste Characterization	4
Water	6

References:

LDEQ. Title 33: Environmental Quality. Part III. Air. Baton Rouge, LA: Louisiana Department of Environmental Quality; 2007 Jun.

Appendix 1: Incident Maps



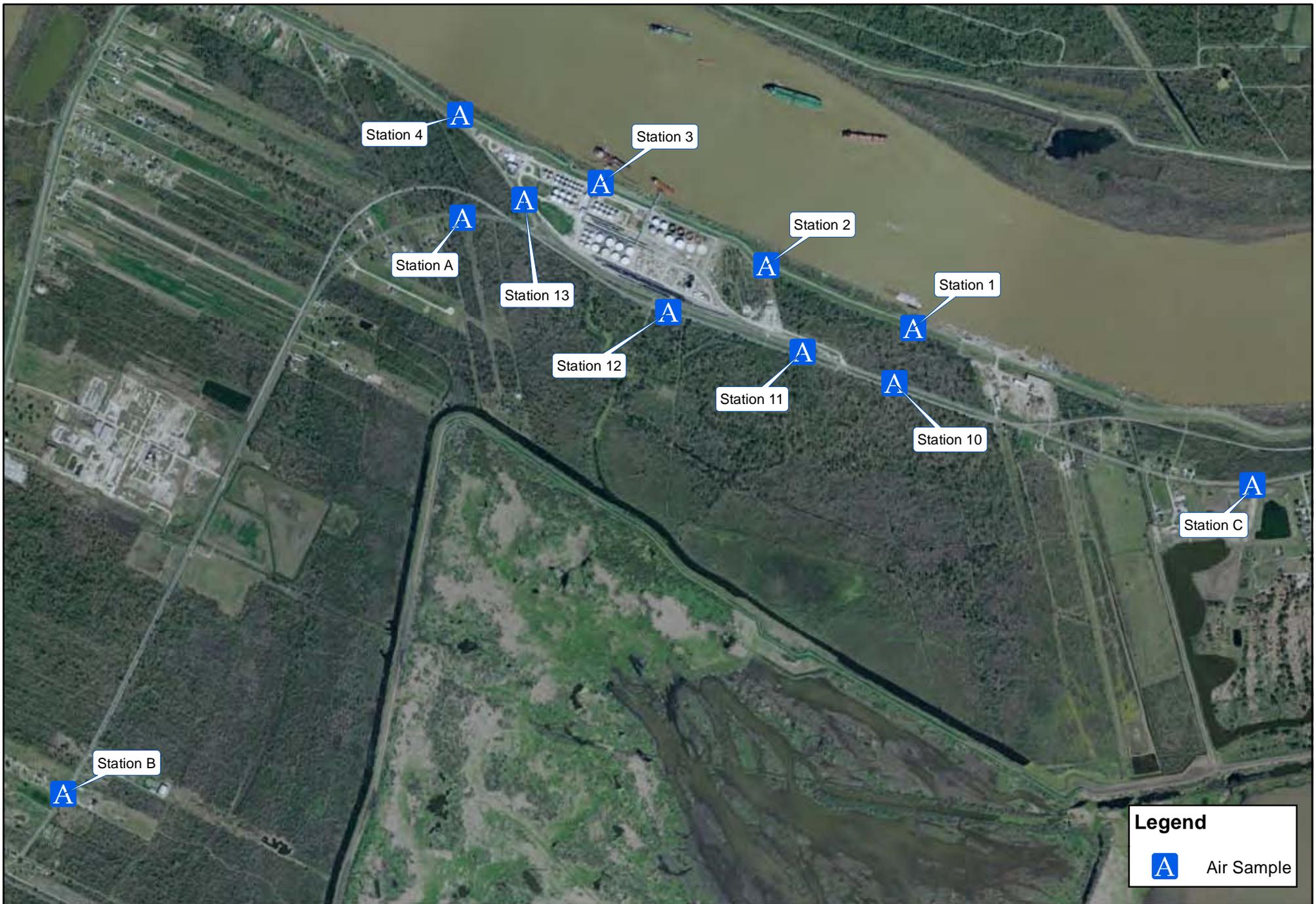
**Stolthaven Facility
Shaded Relief of Elevation**



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Legend

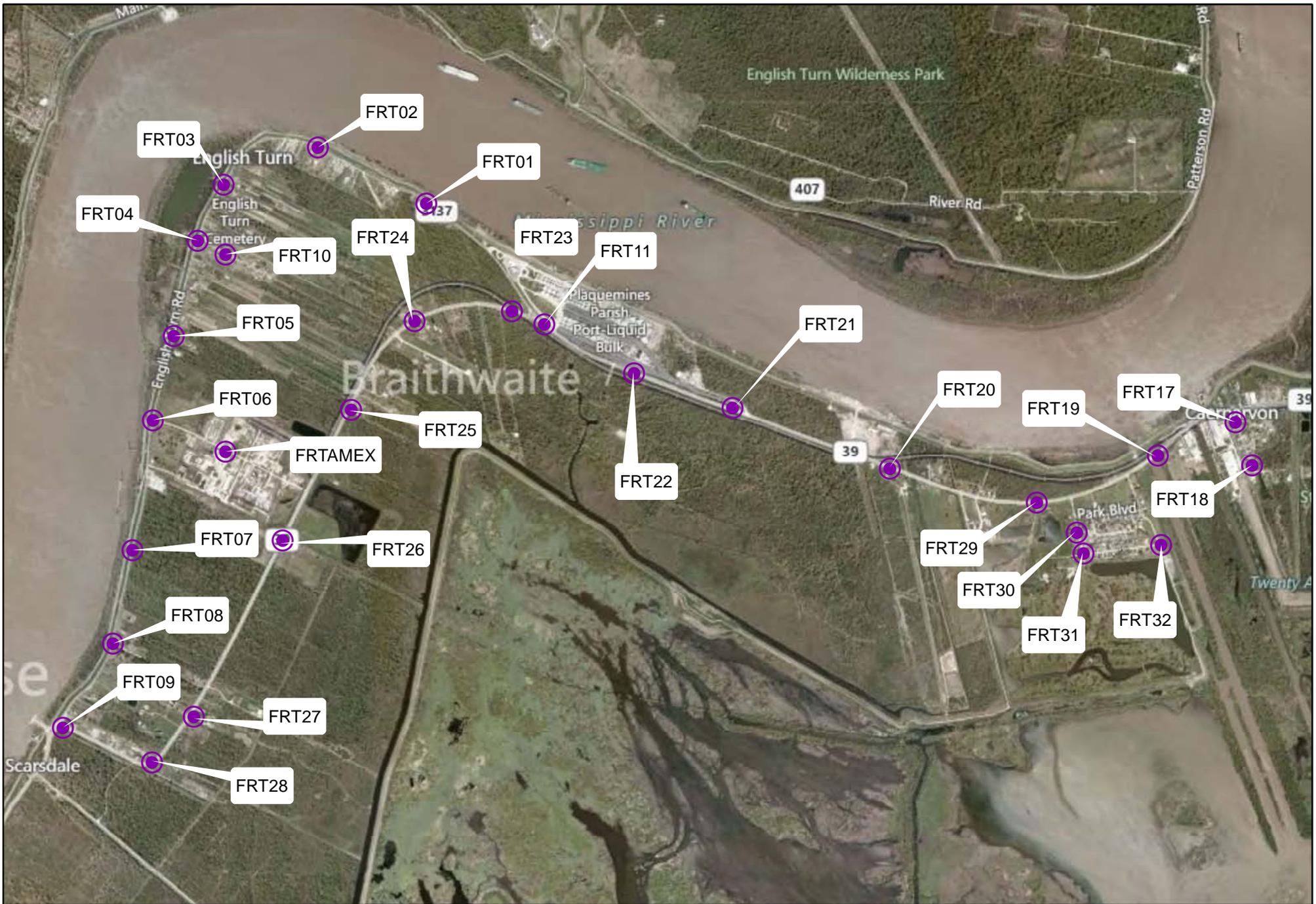
 Air Sample

**Analytical Air
Sampling Locations**

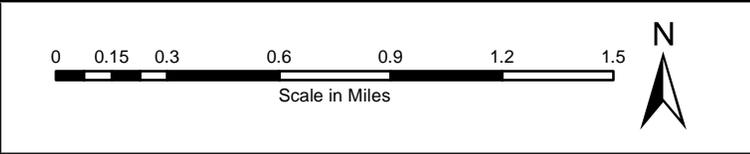


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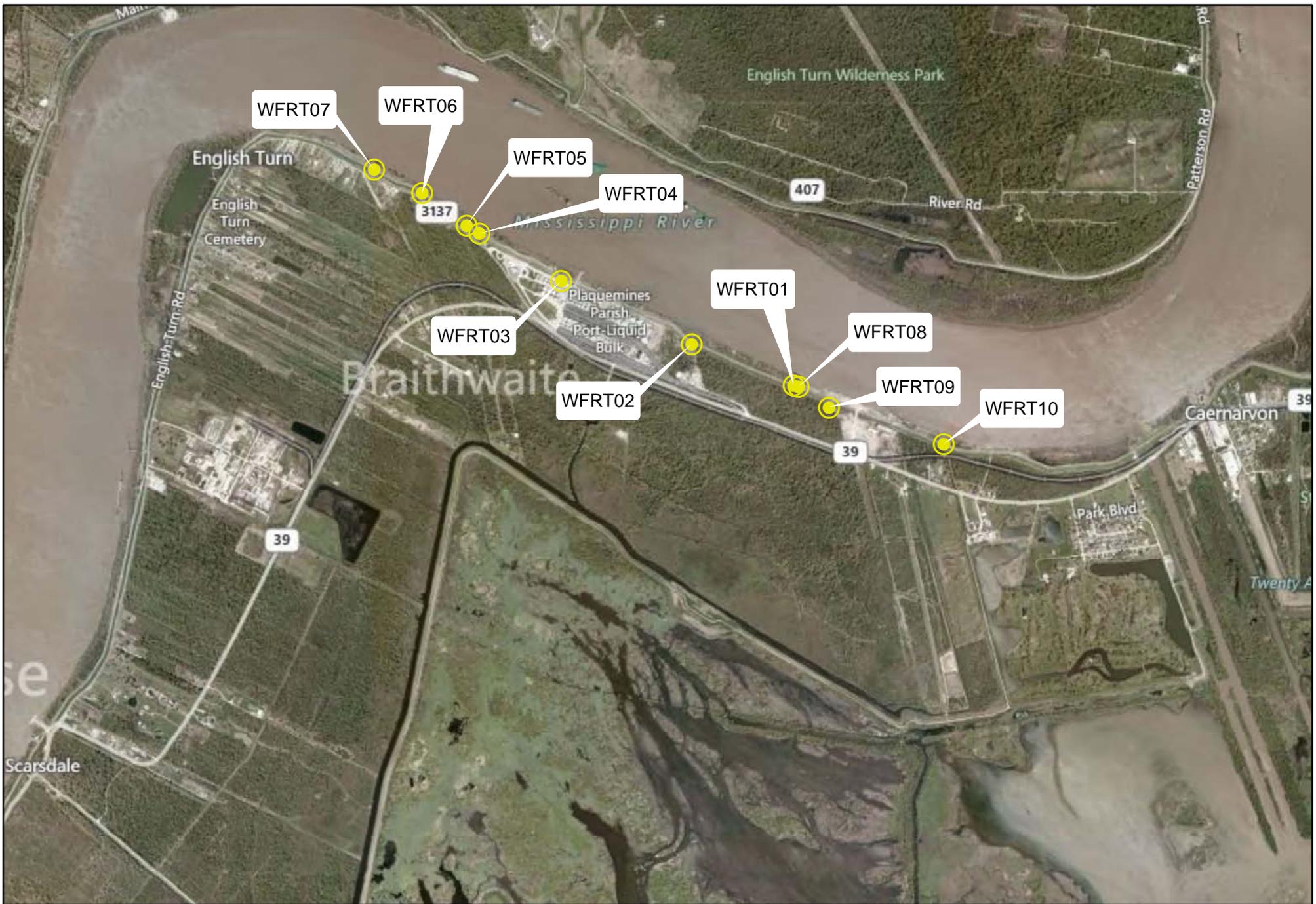
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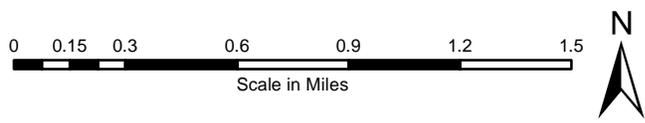
Community Fixed Real-Time Monitoring Locations



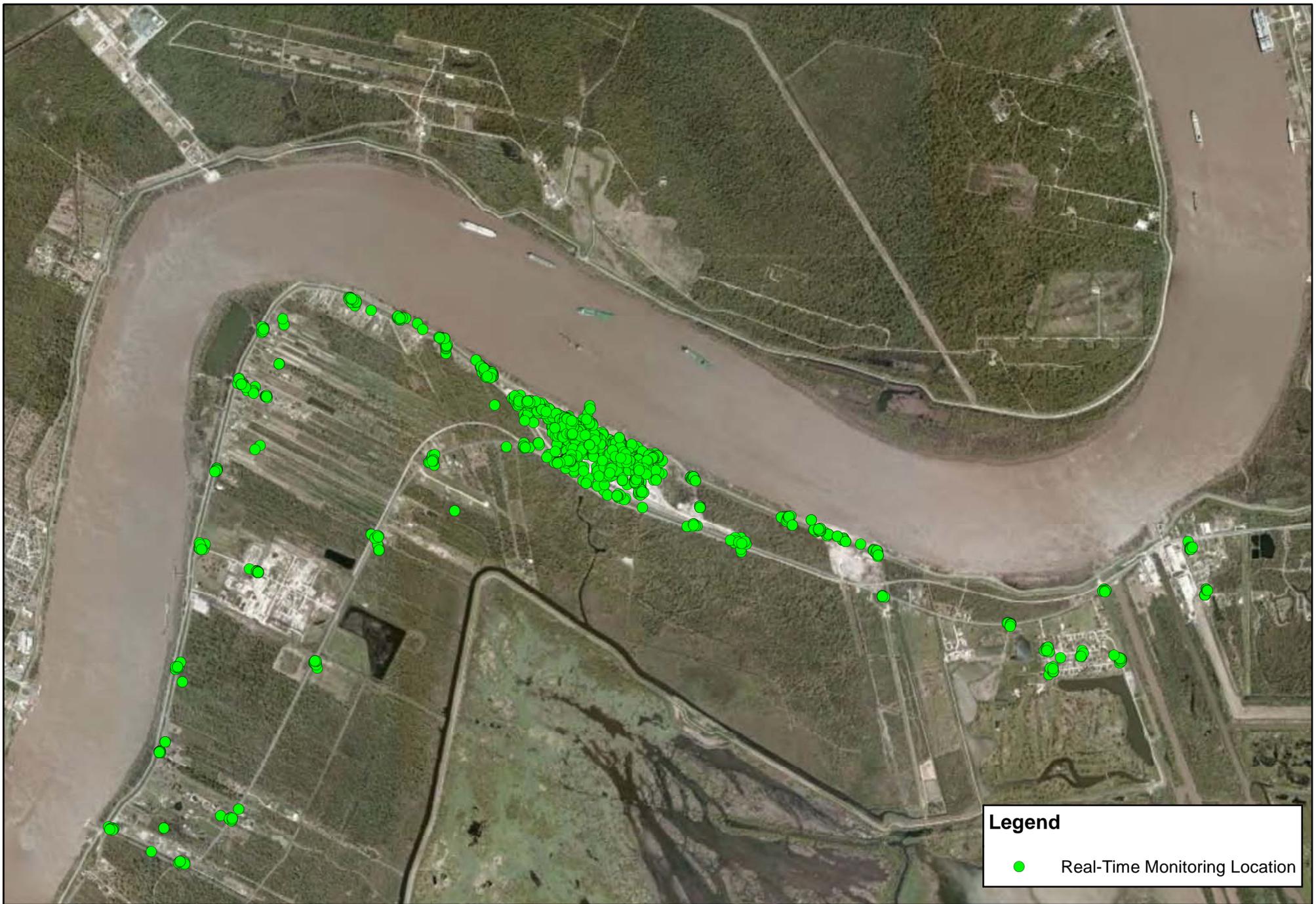
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Work Area Fixed Real-Time Monitoring Locations



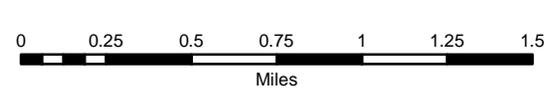
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Legend

- Real-Time Monitoring Location

Real-Time Monitoring Locations
9/15/12 00:00 to 9/15/12 23:59



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Legend

VOC Concentration

- <0.1 ppm
- 0.1 - 2 ppm
- 3 - 10 ppm
- 11 - 40 ppm
- >40 ppm

**Manually-Logged
VOC Concentrations**
9/15/12 00:00 to 9/15/12 23:59



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Amines (Low Range) Readings

- Detection
- No Detection

**Amines (Low Range)
Reading Locations**

9/15/2012



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Chlorobenzene Readings

- Detection
- No Detection

**Chlorobenzene
Reading Locations**
9/15/2012



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Formic Acid Readings

- Detection
- No Detection

Formic Acid Reading Locations
9/15/2012



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