

**40355 Braithwaite, LA  
Stolthaven Terminal Facility  
Onsite Summary of Air Monitoring and Sampling Results  
September 21, 2012  
PO# 12-H0408-MR**

This data report discusses real-time air monitoring data collected within the work area between September 20<sup>th</sup> 00:00 and September 20<sup>th</sup> 23:59 in support of mitigation and remediation operations conducted near Stolthaven’s facility near Braithwaite, LA.

Real-time air monitoring conducted within the work area and during entry activities resulted in reports of detections exceeding the action level required for the donning of respiratory protection. All workers not present in respiratory protection at the time of the action level exceedence were advised to don appropriate respirators or egress from the area. A maximum VOC detection of 5.7 ppm was observed around tank H30-6 (1-octene). As previous field investigations identified the 1-octene tank (H30-6) as a source of elevated VOC readings, a chemical-specific action level for the donning of respiratory protection was derived based on one-half the AIHA Workplace Environmental Exposure Level (WEEL) for 1-octene. The maximum detection of 5.7 ppm did not exceed this octene-specific action level value.

While stationary AreaRAE results indicate VOC detections at nine locations within the work area, these results are preliminary and include drift in the instrument’s chemical sensor. AreaRAE Unit 15 reported a maximum VOC detection of 100 ppm. At the time of this reading, a calibrated hand-held MultiRAE instrument was used to confirm sensor drift. The VOC detections on the unit were confirmed as drift and AreaRAE Unit 15 was recalibrated. No detections of formic acid, LEL, methyl acrylate, or styrene were observed within the work area.

Real-time air monitoring for VOCs, LEL, formic acid, methyl acrylate, and styrene 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 hand-held instruments and AreaRAEs respectively. Table 3 highlights analytical sample counts collected in onsite air and waste characterization. Appendix 1 shows incident site maps.

**Table 1: Hand-held Real-time Summary – September 20<sup>th</sup> 00:00 – 23:59**

<b>Entry Activities</b>				
<b>Analyte</b>	<b>Number of Readings</b>	<b>Number of Detections</b>	<b>Average Concentration of Detections</b>	<b>Highest Concentration</b>
LEL	616	0	NA	< 1.0%
VOC	753	22	0.8 ppm	5.7 ppm
<b>Work Area</b>				
<b>Analyte</b>	<b>Number of Readings</b>	<b>Number of Detections</b>	<b>Average Concentration of Detections</b>	<b>Highest Concentration</b>
Formic Acid	1	0	NA	< 0.52 ppm
LEL	155	0	NA	< 1.0 %
Methyl Acrylate	2	0	NA	< 2.0 ppm
Styrene	1	0	NA	< 0.5 ppm
VOC	173	0	NA	< 0.1 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 2: AreaRAE Summary – September 20<sup>th</sup> 00:00 – 23:59**

Unit	Analyte	Number of Readings	Number Of Detections	Concentration Range
Unit 14	LEL	1492	0	0 - 0 %
	VOC	1492	0	0 - 0 ppm
Unit 15	LEL	1120	0	0 - 0 %
	VOC	1120	237	33.3 - 100 ppm
Unit 16	LEL	1407	0	0 - 0 %
	VOC	1407	531	0.1 – 0.6 ppm
Unit 17	LEL	1457	0	0 - 0 %
	VOC	1457	1	0.7 – 0.7 ppm
Unit 18	LEL	1313	0	0 - 0 %
	VOC	1313	348	0.1 – 0.9 ppm
Unit 19	LEL	1347	0	0 - 0 %
	VOC	1347	413	0.1 -1.7 ppm
Unit 20	LEL	1045	0	0 - 0 %
	VOC	1045	219	0.1 -5.9 ppm
Unit 21	LEL	1218	0	0 - 0 %
	VOC	1218	610	0.1 –1. 0 ppm
Unit 22	LEL	1445	0	0 - 0 %
	VOC	1445	0	0 – 0 ppm
Unit 23	LEL	1383	0	0 – 0 ppm
	VOC	1383	0	0 – 0 ppm
Unit 24	LEL	799	0	0 – 0 ppm
	VOC	799	126	0.1 – 0.4 ppm
Unit 25	LEL	754	0	0 – 0 ppm
	VOC	754	13	0.1 – 0.1 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.

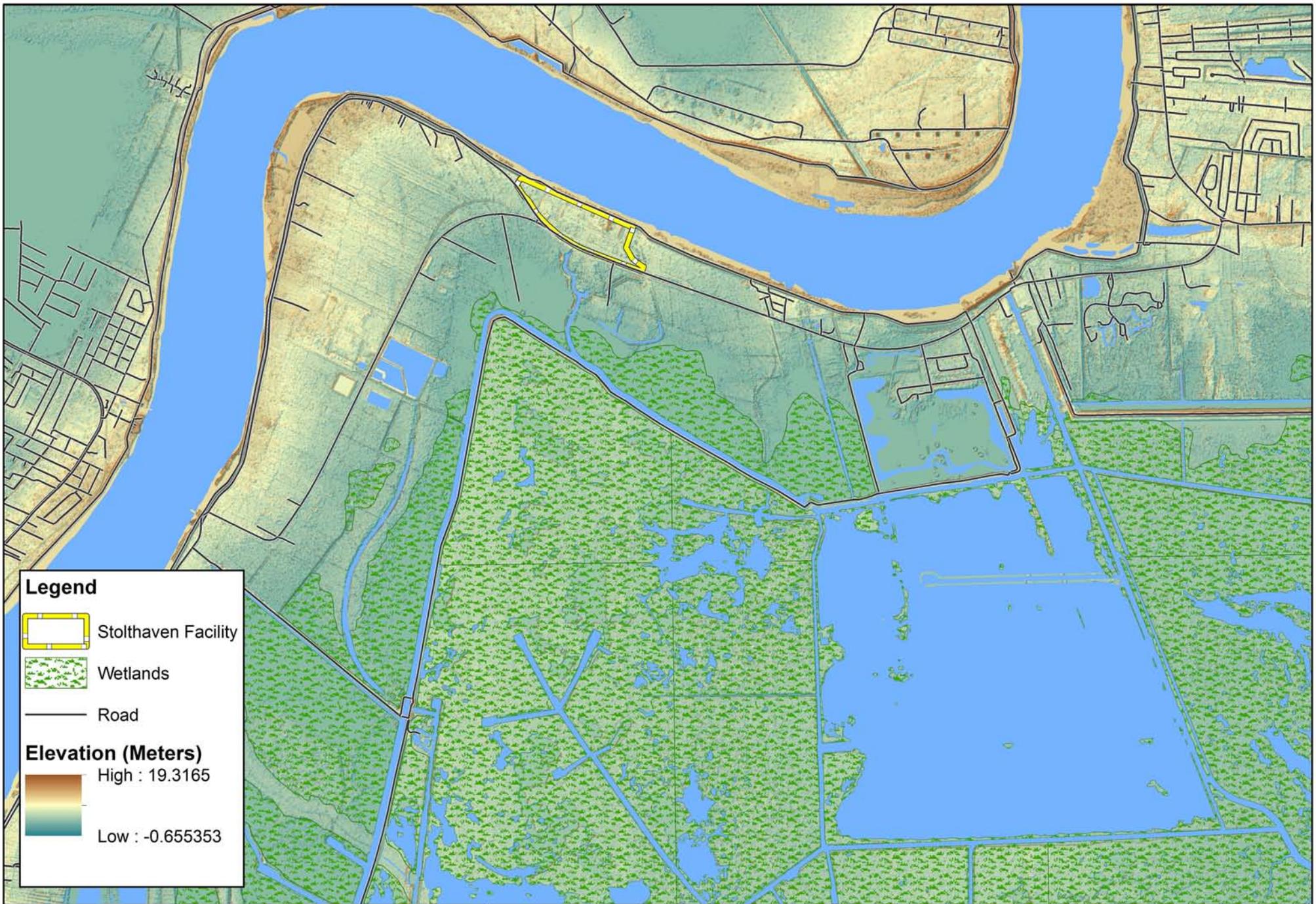
**Table 3**  
**Analytical Sample Counts – September 20<sup>th</sup> 00:00 – 23:59**

<b>Matrix</b>	<b>Number of Samples</b>
Air	4
Waste Characterization	4

**References:**

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

# Appendix 1: Incident Maps



**Legend**

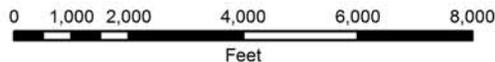
-  Stolthaven Facility
-  Wetlands
-  Road

**Elevation (Meters)**

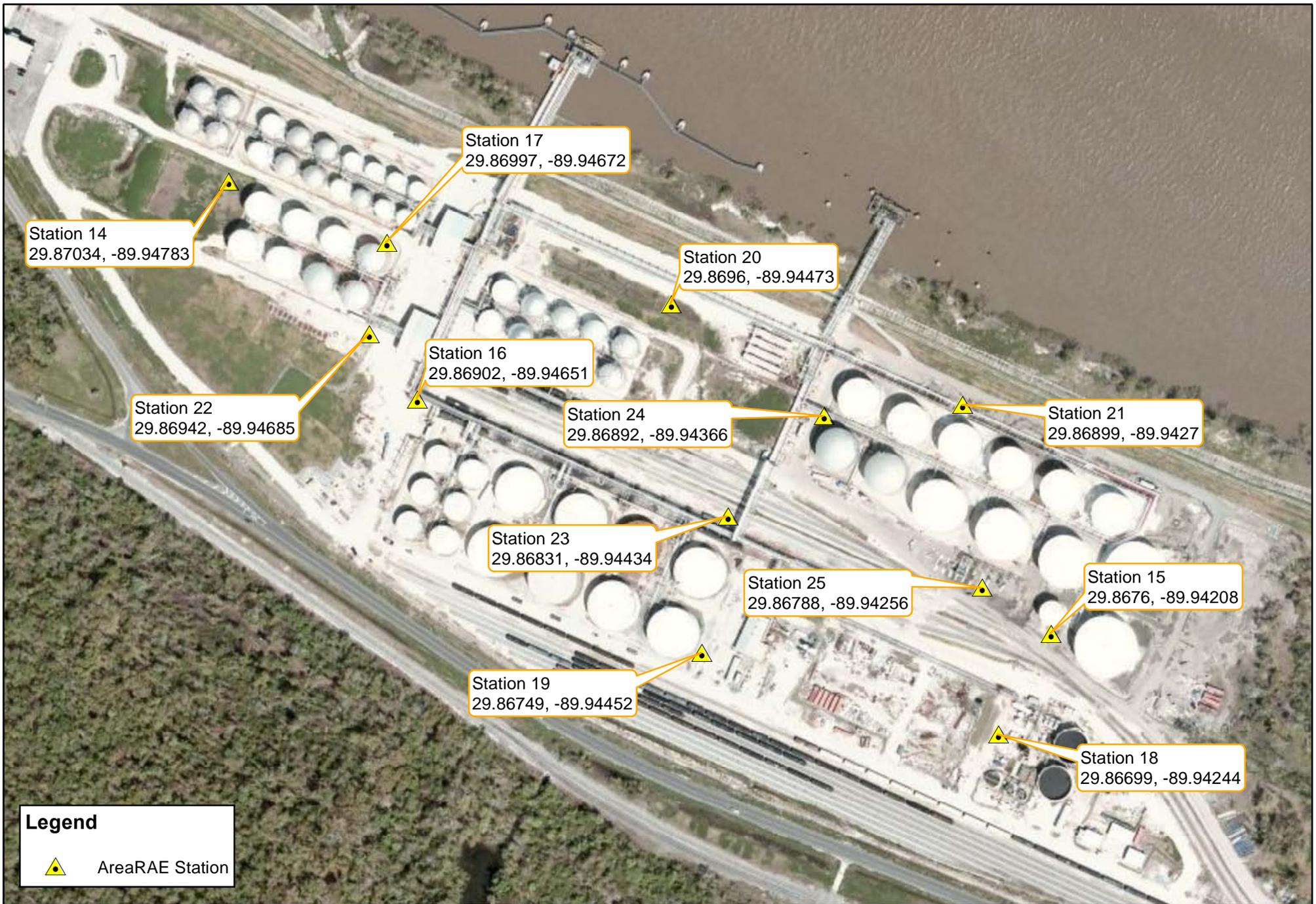
High : 19.3165

Low : -0.655353

**Stolthaven Facility  
Shaded Relief of Elevation**



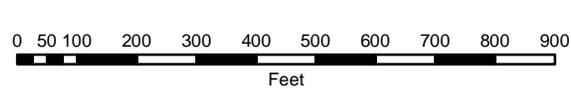
<b>CTEH</b> <small>Project No. 40355</small>	<b>Stolthaven</b>
	<b>Braithwaite, LA</b>
	<b>Plaquemines Parish</b>
<b>Print Date: 9/17/2012</b>	



**Legend**

 AreaRAE Station

**Work Area**  
**AreaRAE Station Locations**  
 September 20, 2012



 Project No. <b>40355</b>	<b>Stolthaven</b> <b>Braithwaite, LA</b>
	<b>Plaquemines Parish</b> <b>Print Date: 9/21/2012</b>



**Legend**

 Air Sample Location

**Ambient Air  
Analytical Sampling Locations**



 Project No. <b>40355</b>	<b>Stolthaven</b>
	<b>Braithwaite, LA</b>
	<b>Plaquemines Parish</b>
	<b>Print Date: 9/18/2012</b>



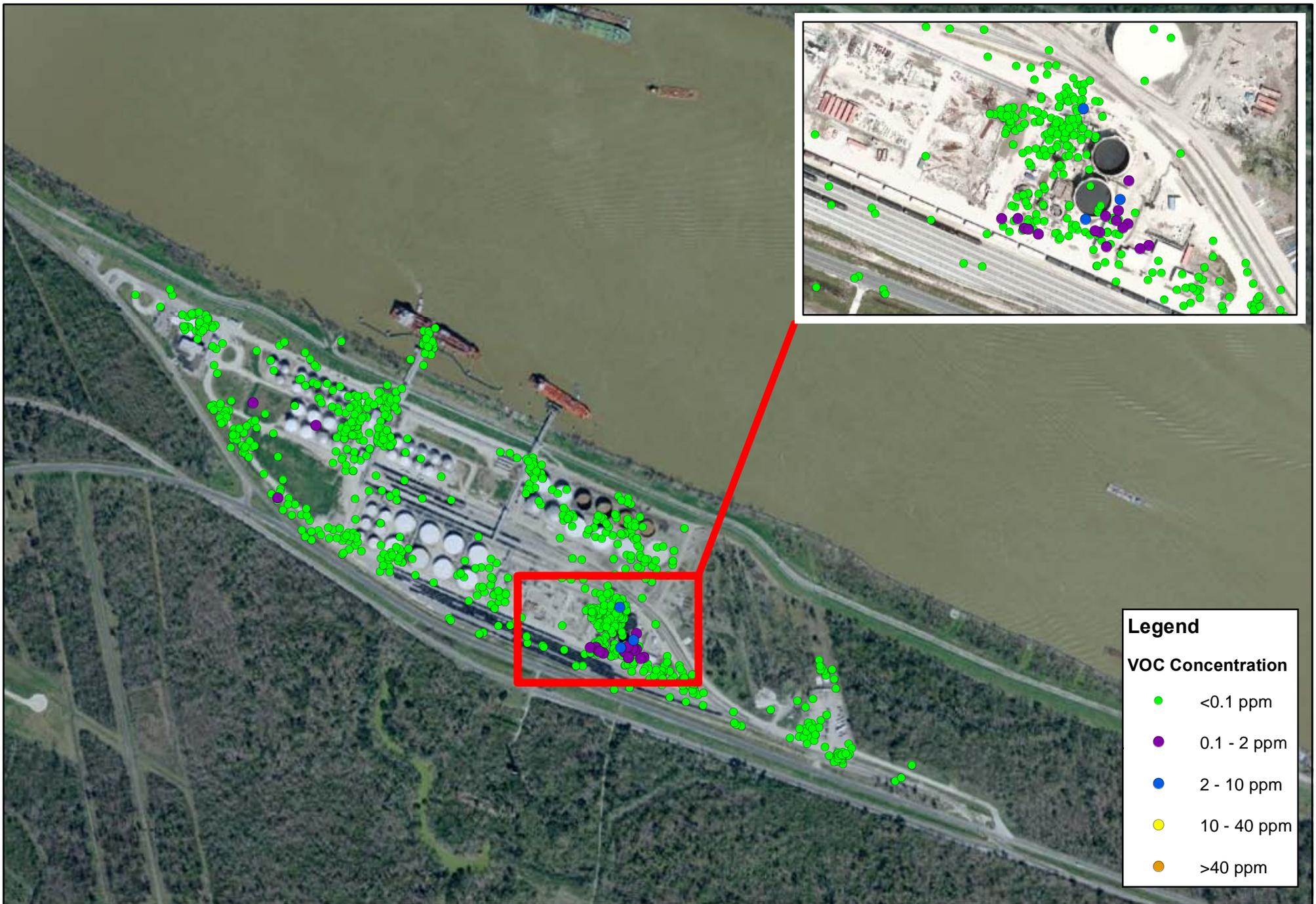
**Legend**

- Real-Time Monitoring Location

**Real-Time Monitoring Locations**  
9/20/2012



 Project No. <b>40355</b>	<b>Stolt Haven</b> <b>Braithwaite, LA</b>
	<b>Plaquemines Parish</b> <b>Print Date: 9/21/2012</b>



**Legend**

**VOC Concentration**

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

**Manually-Logged  
Work Area VOC Concentrations**  
9/20/2012



**CTEH<sup>®</sup>**  
Project No.  
**40355**

**Stolthaven**  
**Braithwaite, LA**  
**Plaquemines Parish**  
**Print Date: 9/21/2012**