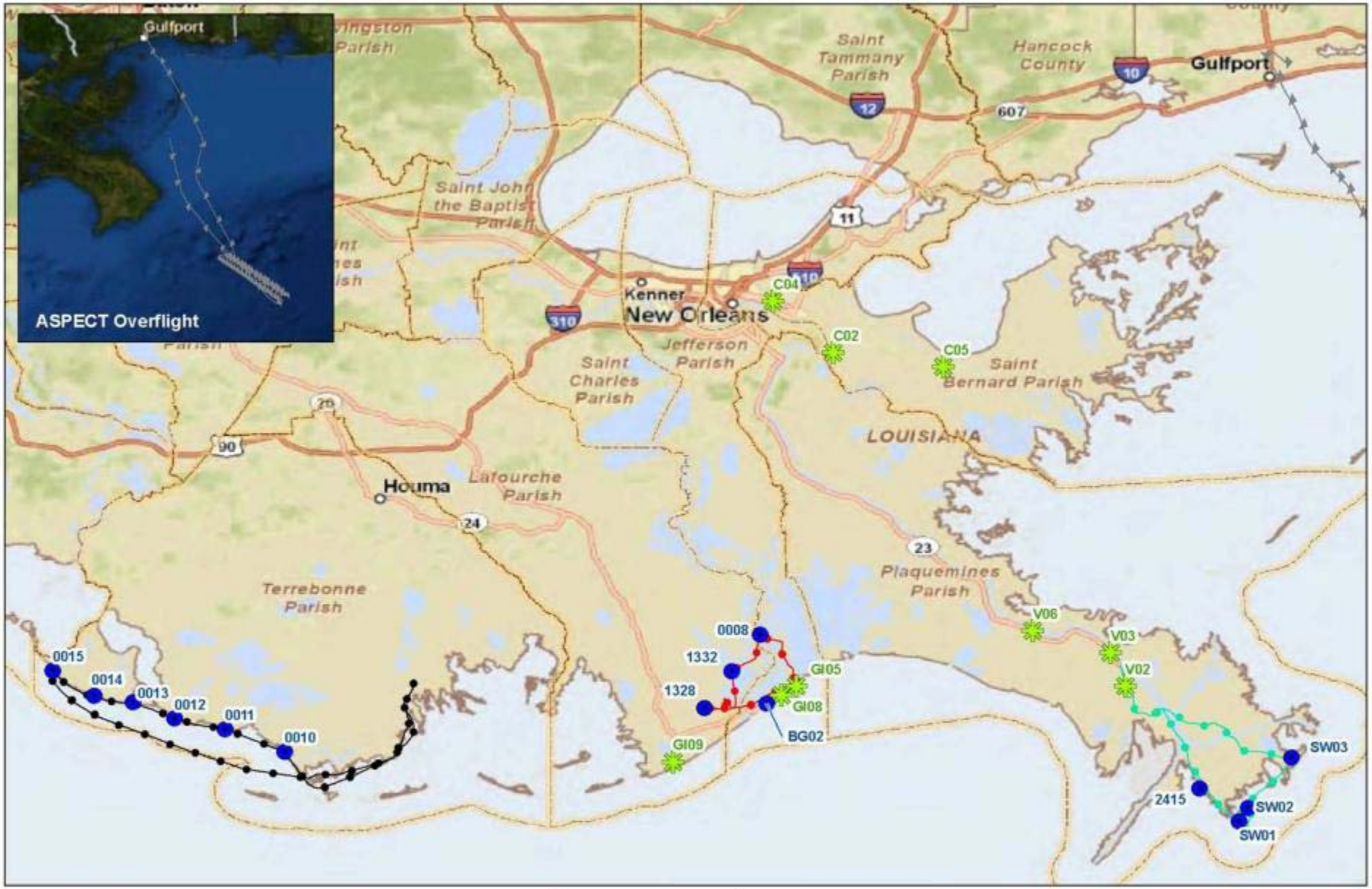
Summary of EPA's Sampling and Monitoring Activities Deepwater Horizon Incident

July 16, 2010

Data Reporting Period:
July 15, 2010 0000 – July 16, 2010 0000

6019545



Legend

Samples Collected

- Air
- Surface Water
- Sediment

Boat Tracks

- Cocodrie Division
- Grandisle Division
- Venice Division Team
- ASPECT Flight

N W E S

0 7.5 15 Miles

US EPA REGION 6
Air Monitoring and Sampling Locations for 07/15/2010

Deep Water Horizon Oil Spill

For Official Use Only

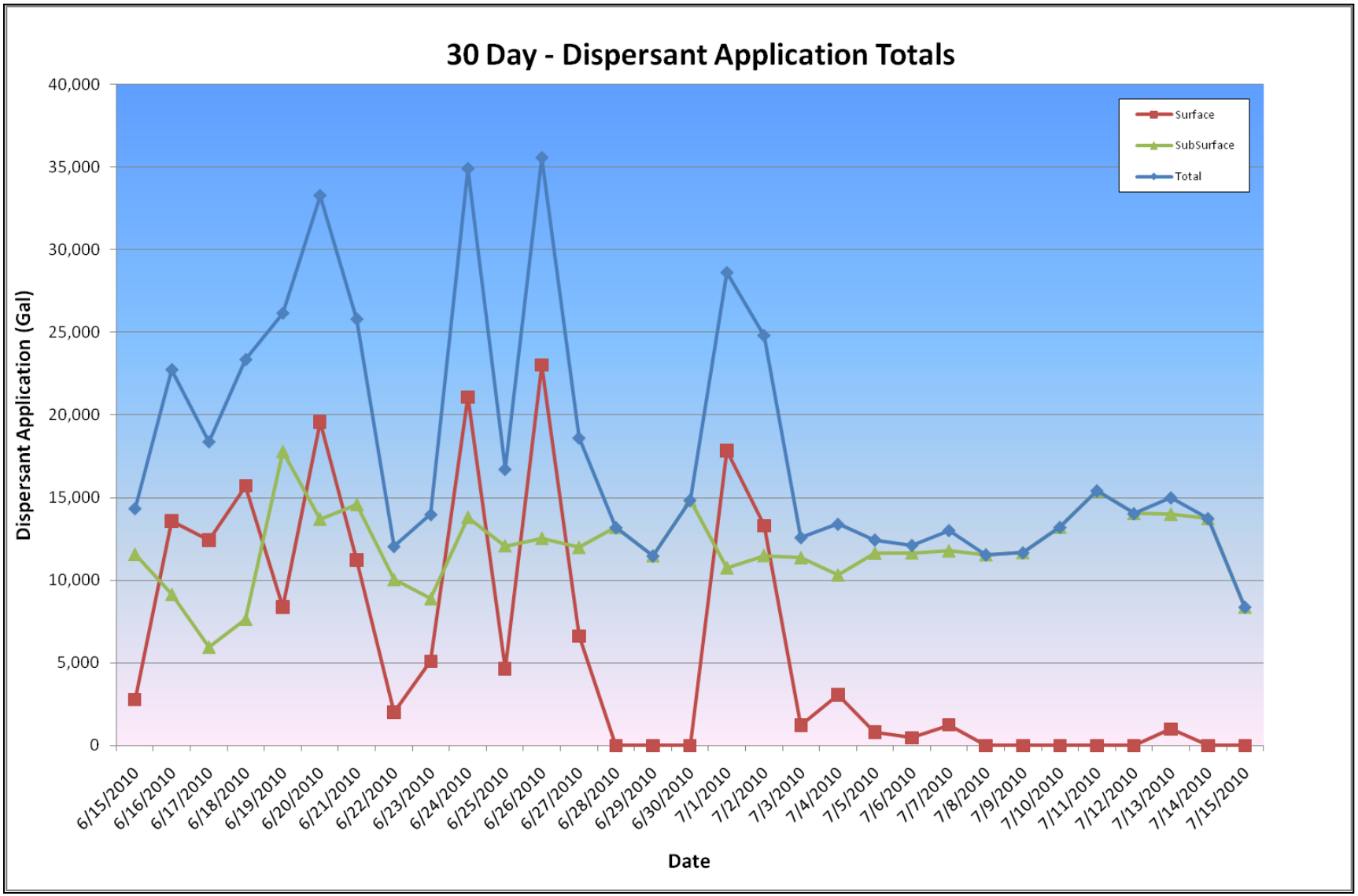
P 560

Dispersant Application

	TOTALS FOR 7/15 (gal.)	CUMULATIVE TOTALS (gal.)
Surface	0	1,072,314
Subsurface	8,391	771,186

Data as of 7/16

Dispersant Application Chart



Sample Summary Chart

	SUMMA Canisters	PQ200 (PM 2.5)	PUF	Water	Sediment	Waste	TOTALS for Reporting Period	TOTALS to date
Collected	8	9	3	14	0	3	36	2268
Shipped	8	9	3	14	0	3	36	2249

* Sample shipment delayed due to weekend and holidays (FedEx does not ship on Sunday); Samples collected on Saturday and Sunday will be shipped on Monday and reflected on that Sample Summary.

Water Sampling

Cocodrie Water Operations team collecting a surface water sample at Location 0011.

Air Monitoring Data

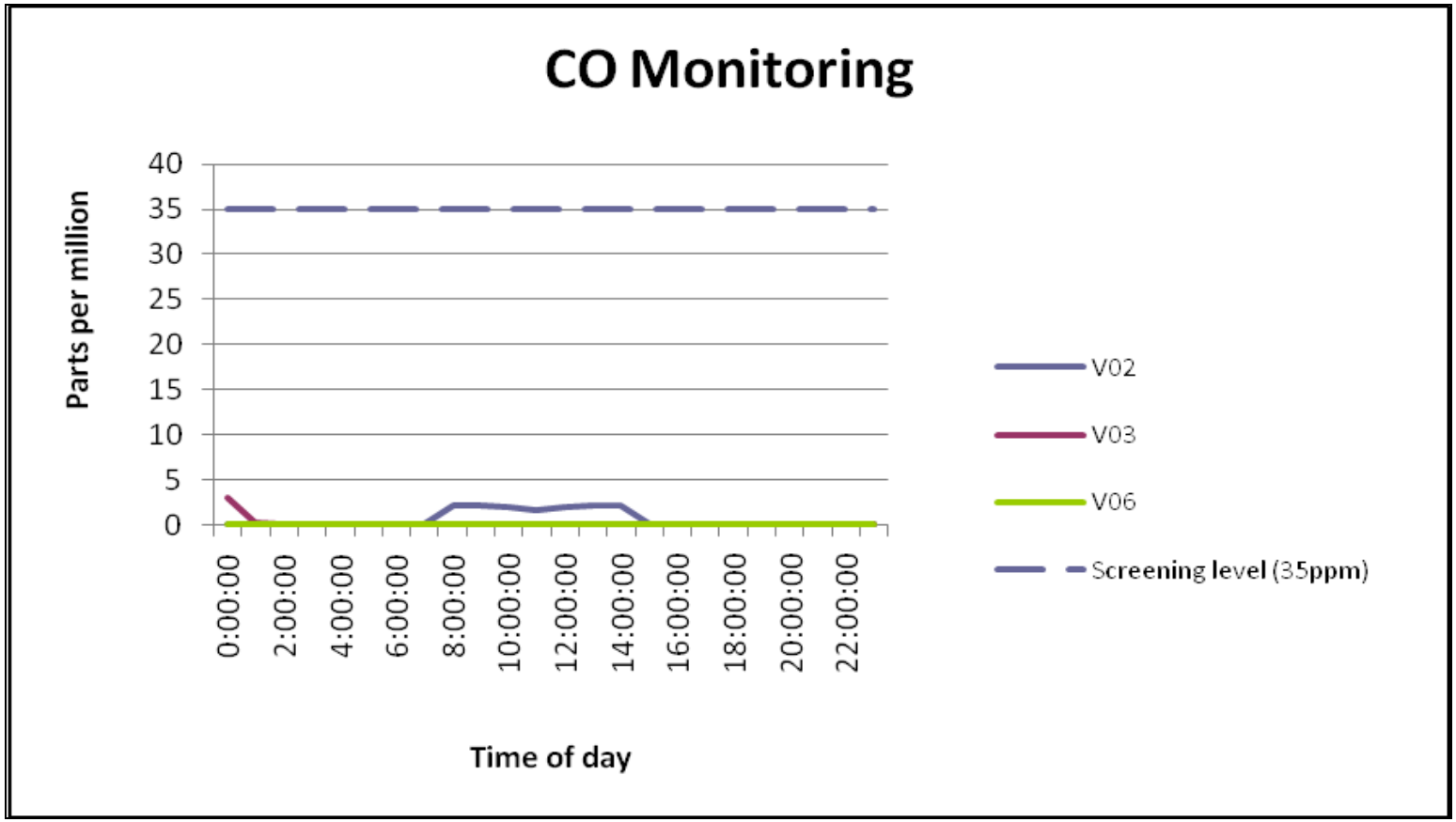
Location	CO	H2S	OXY	PM 10	VOC
C02	-	-	20.1	44.93	0.3
C04	-	-	20.6	41.05	0.3
C05	-	-	20.8	20.17	1.2
GI05	-	-	-	53.45	0.8
GI08	-	-	-	75.32	0.6
GI09	-	-	-	33.58	0.4
V02	0.6	0.1	20.9	60.18	0.8
V03	0.1	0.1	20.9	56.52	0.1
V03B	-	0.0	-	-	-
V06	0.0	0.1	20.9	51.86	0.3

Action Levels:
VOCs = 10 ppm; OXY (Oxygen) = acceptable range 19.5-23.5%, PM10 (particulates) = 150 ug/m3; H2S = 0.5 ppm; CO = 35 ppm
Note: Action Levels based on OSHA PEL (VOCs and OXY), ATSDR
Risk-Based Exposure Levels (PM10), and NIOSH RELs (H2S and CO)

* Data shown above is a 24-hour average
"-" indicates no data collected

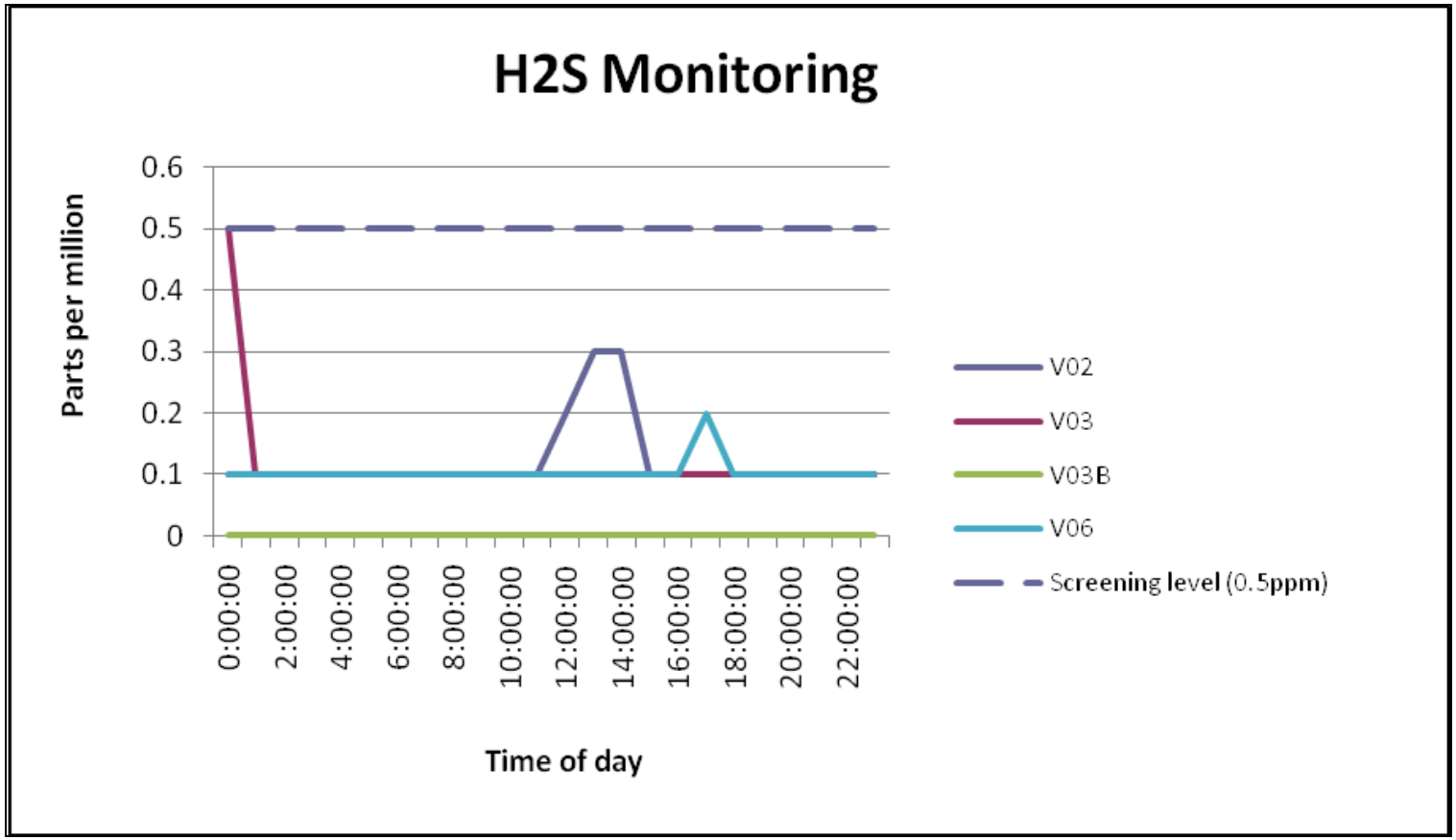
CO Monitoring

Note: Readings from different locations with the same value will result in overlapping lines



H_2S Monitoring

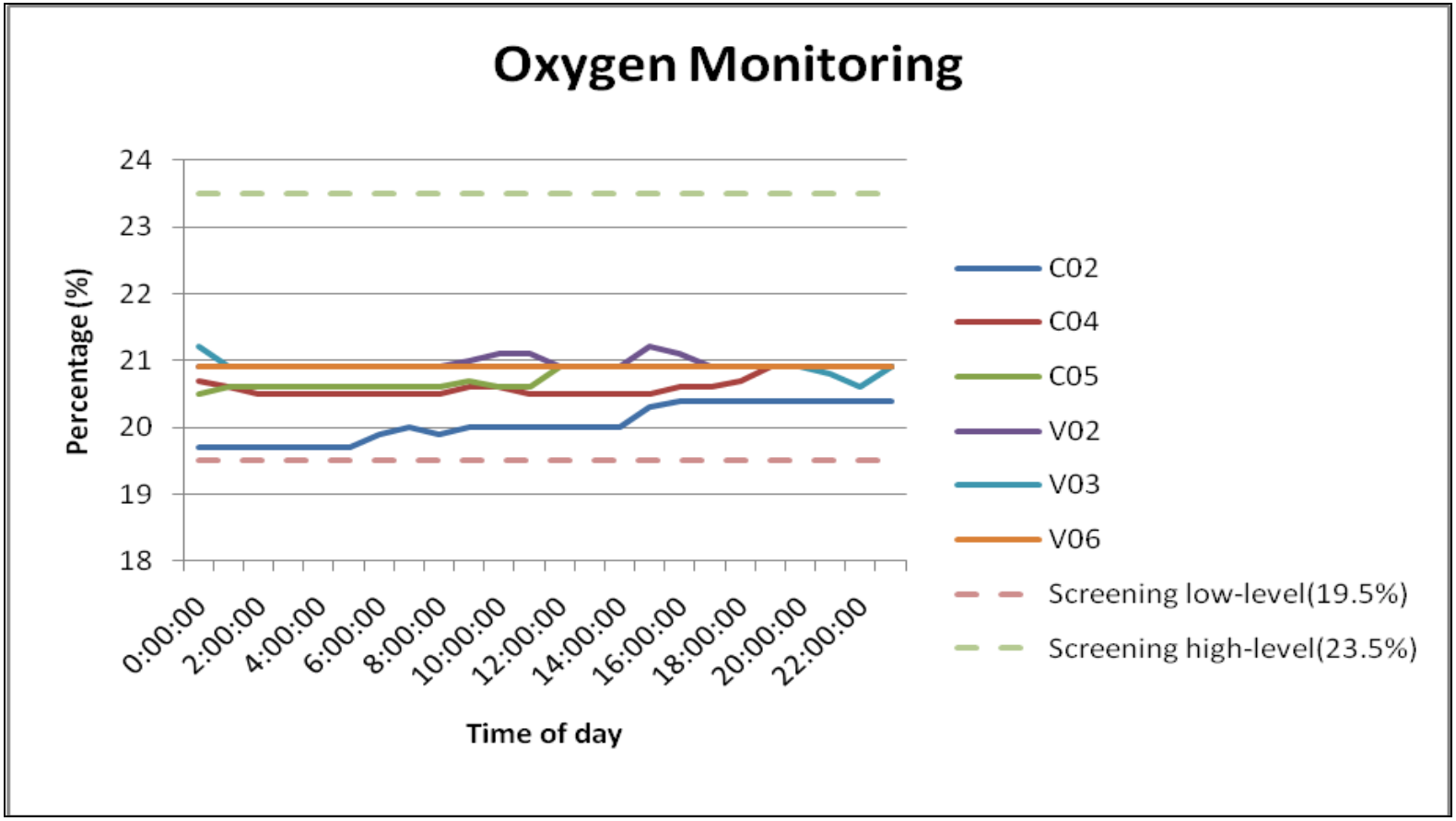
Note: Readings from different locations with the same value will result in overlapping lines



- A value equal to the H_2S screening level was noted at 0000 hours on 7/15. The cause of the reading is currently under review.

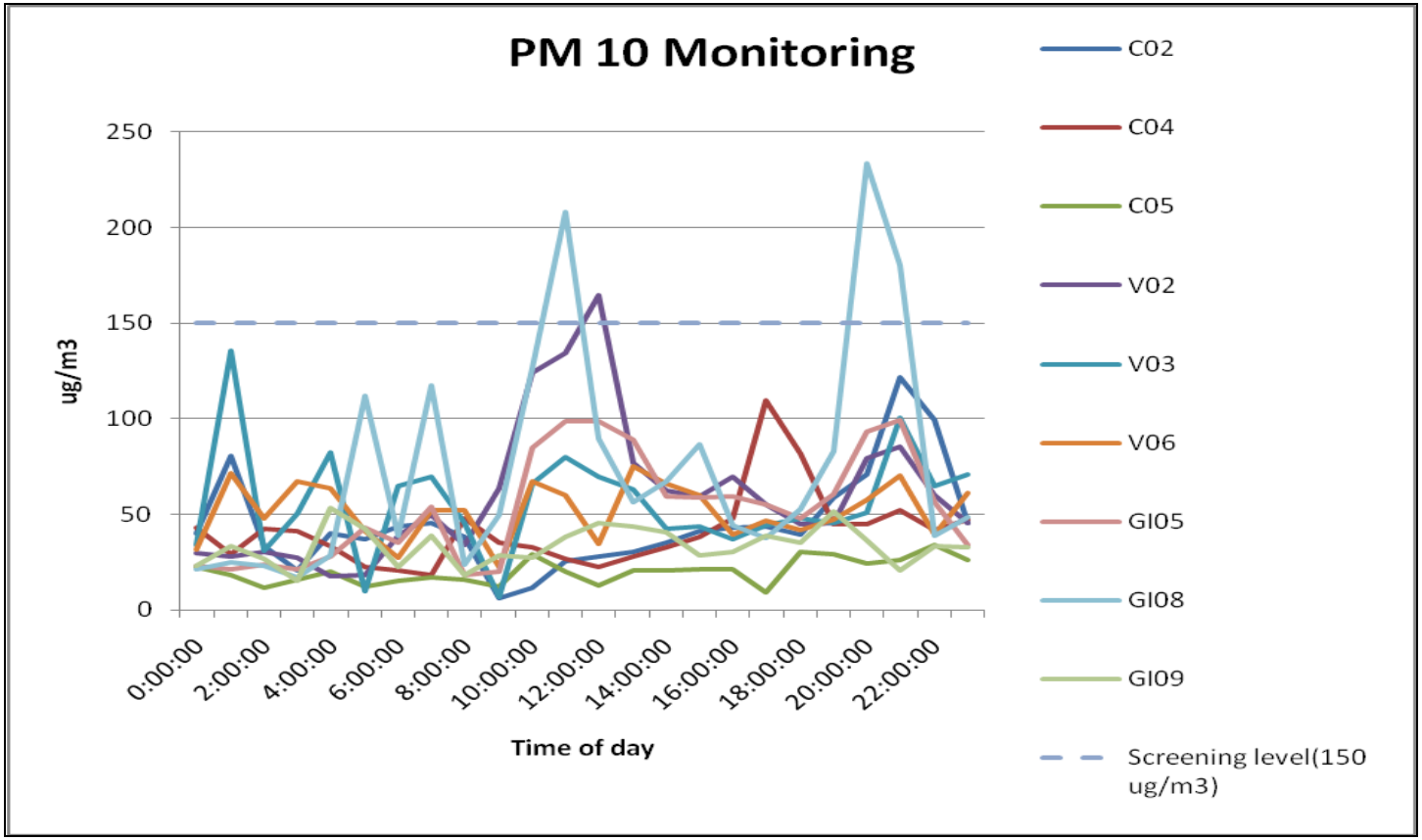
Oxygen Monitoring

Note: Readings from different locations with the same value will result in overlapping lines



PM 10 Monitoring

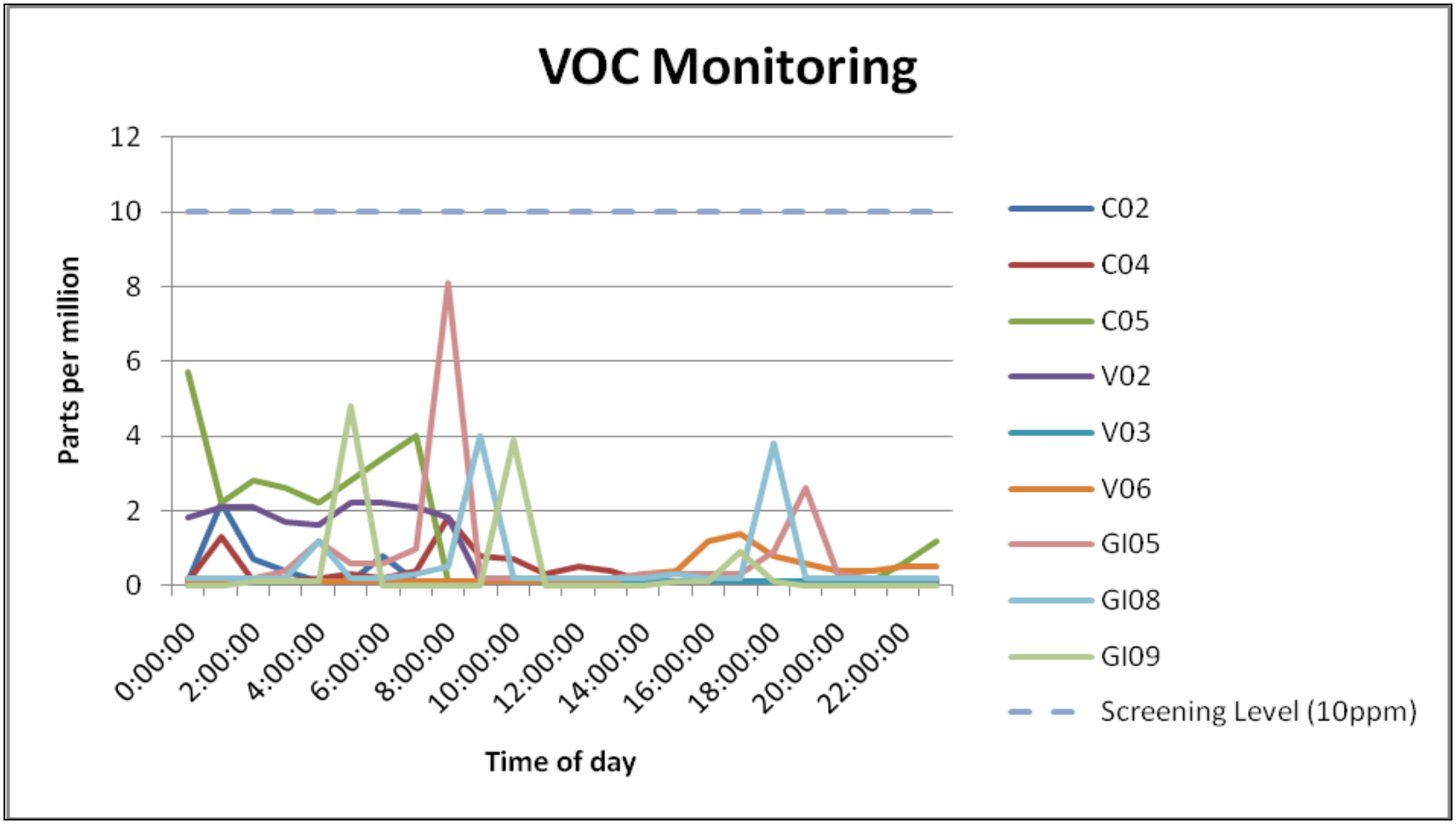
Note: Readings from different locations with the same value will result in overlapping lines



- Exceedences of the PM10 screening level were noted for Location GI08 at 1100, 2000, and 2100 hours on 7/15 due to beach cleaning operations.
- An exceedence of the PM10 screening level was noted for Location V02 at 1200 hours on 7/15 due to the Venice Air team cleaning the inlet head of the monitor.

VOC Monitoring

Note: Readings from different locations with the same value will result in overlapping lines



Explanation of Past Screening Level Exceedences/Data Gaps

- An exceedence of the PM10 screening level was noted for Location V02 at 1800 hours on 7/8. The exceedence was caused by the Venice Air team dislodging particulates when the EBAMs were opened.
- Exceedences of the PM10 screening level were noted for Location V03 at 0100 hours, 1800 hours, and 2000 hours on 7/8. The exceedences were caused by the Venice Air team dislodging particulates when the EBAMs were opened.
- Hourly averages for oxygen, CO, and H_2S are currently unavailable for Location V02 at 0100 hours on 7/9 due to instrument error.
- Exceedences of the PM10 screening level were noted for Location V02 at 1800 hours and at 2000 hours on 7/9. The exceedences were caused by the Venice Air team dislodging particulates when the EBAMs were opened.
- Hourly averages for CO and H_2S are currently unavailable at Location V03 from 1600 to 2300 hours on 7/13 due to instrument malfunction.
- Hourly averages for CO, H_2S, and oxygen are unavailable for Location V03 from 0000 to 0300 and from 1200 to 1400 hours on 7/14 due to instrument malfunction.
- The hourly average for H_2S is unavailable for Location V03B at 0900 hours on 7/14 due to routine audit of the monitoring equipment.
- Two screening level exceedences which occurred on 7/12 remain under review.
- One screening level exceedence and 3 data gaps which occurred on 7/13 remain under review.
- One screening level exceedence and 1 data gaps which occurred on 7/14 remain under review.

Ocean Veritas Summary

7/14

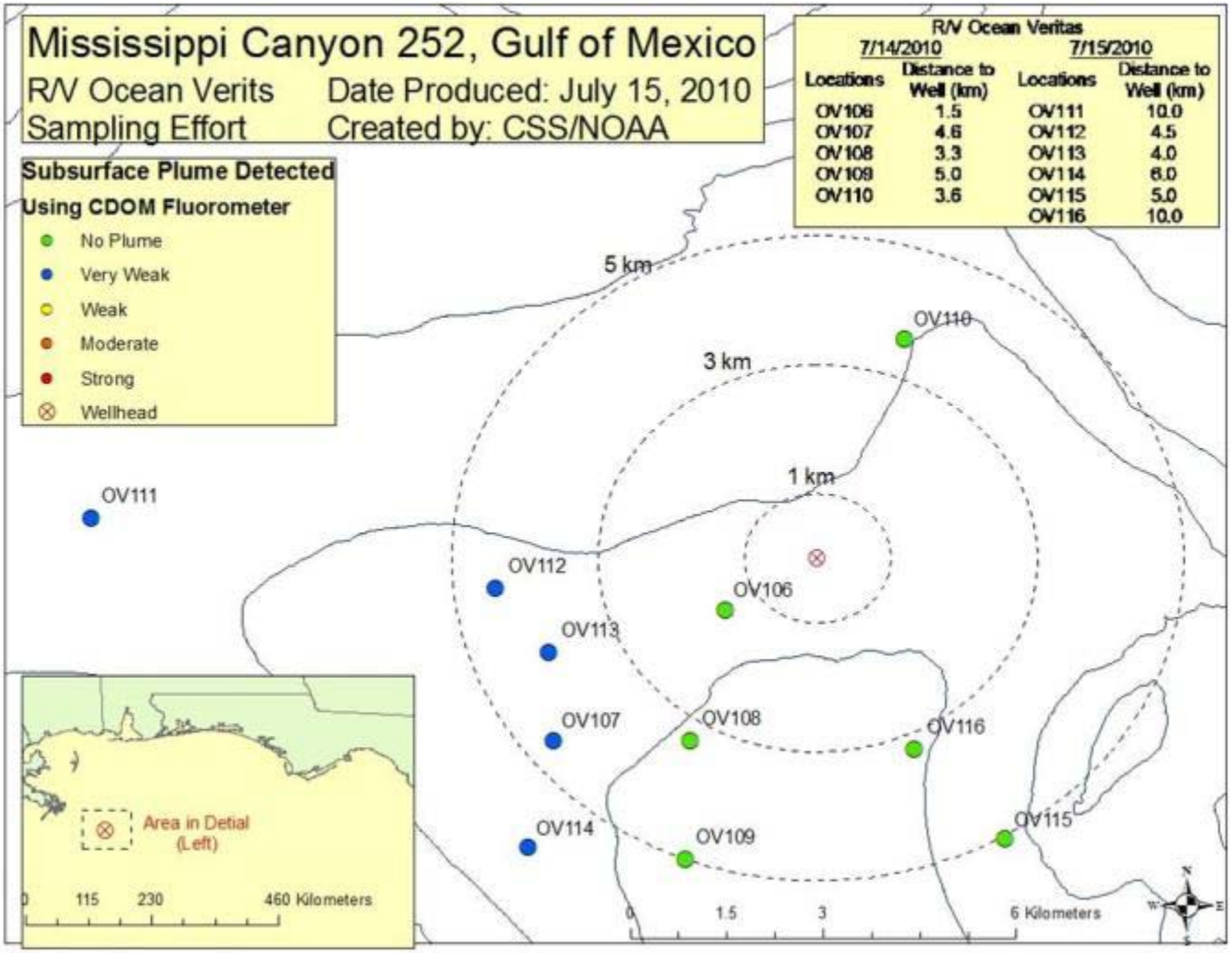
- The mission for 7/14 was to characterize the subsurface oil plume approximately 3-5 km southwest from the wellhead.
- No plume was detected at Stations OV106, OV108, OV109 and OV110. A very weak signal was detected at OV107.
- Samples for Rotoxkit M analysis were collected from stations OV106, OV107, and OV110.
- Stations OV106 – OV110 were sampled for TPH, VOA, CTD fluorometry, DO, and LISST analysis.
- Slightly elevated concentrations of small particles were detected at Station OV107, where the in situ CTD fluorometer detected a very weak subsurface plume. A plume was not evident at Stations OV106, and OV108 - OV110.
- Toxicity testing results of samples from Stations OV101 - OV103 did not reveal an aquatic toxic adverse effect.
- The Industrial Hygienist onboard conducted air monitoring for VOC, benzene, H_2S, and SO_2. None of these compounds were detected.

Ocean Veritas Summary

7/15

- Stations occupied on 7/15 include OV111 - OV116.
- Casts at Station OV111 - OV114 had very weak fluorometric signals at approximately 1200 m. Casts at Stations OV115 - OV116 did not show a fluorometric signal.
- Stations OV111 and OV113–OV115 were sampled for TPH, VOA, CTD fluorometry, DO, Rototox test, and LISST analysis. No samples were collected for OV112 since bottles were broken on the upcast.
- Moderately elevated concentrations of small particles were detected at Stations OV111, OV113, and OV114, where the *in situ* CTD fluorometer detected a very weak subsurface plume and a change in DO levels.
- Elevated particles were detected at Station OV115 where the CTD fluorometer did not detect a subsurface plume, but there was a change in DO levels.
- Highly elevated concentrations of small particles were detected at the surface at Stations OV111 and OV113. Highly elevated concentrations of small particles were detected at the surface at Stations OV114 and OV115.
- Results of samples for Rotoxkit M analysis, collected from stations OV106, OV107, and OV110, did not reveal an aquatic toxic adverse effect in any of the samples.

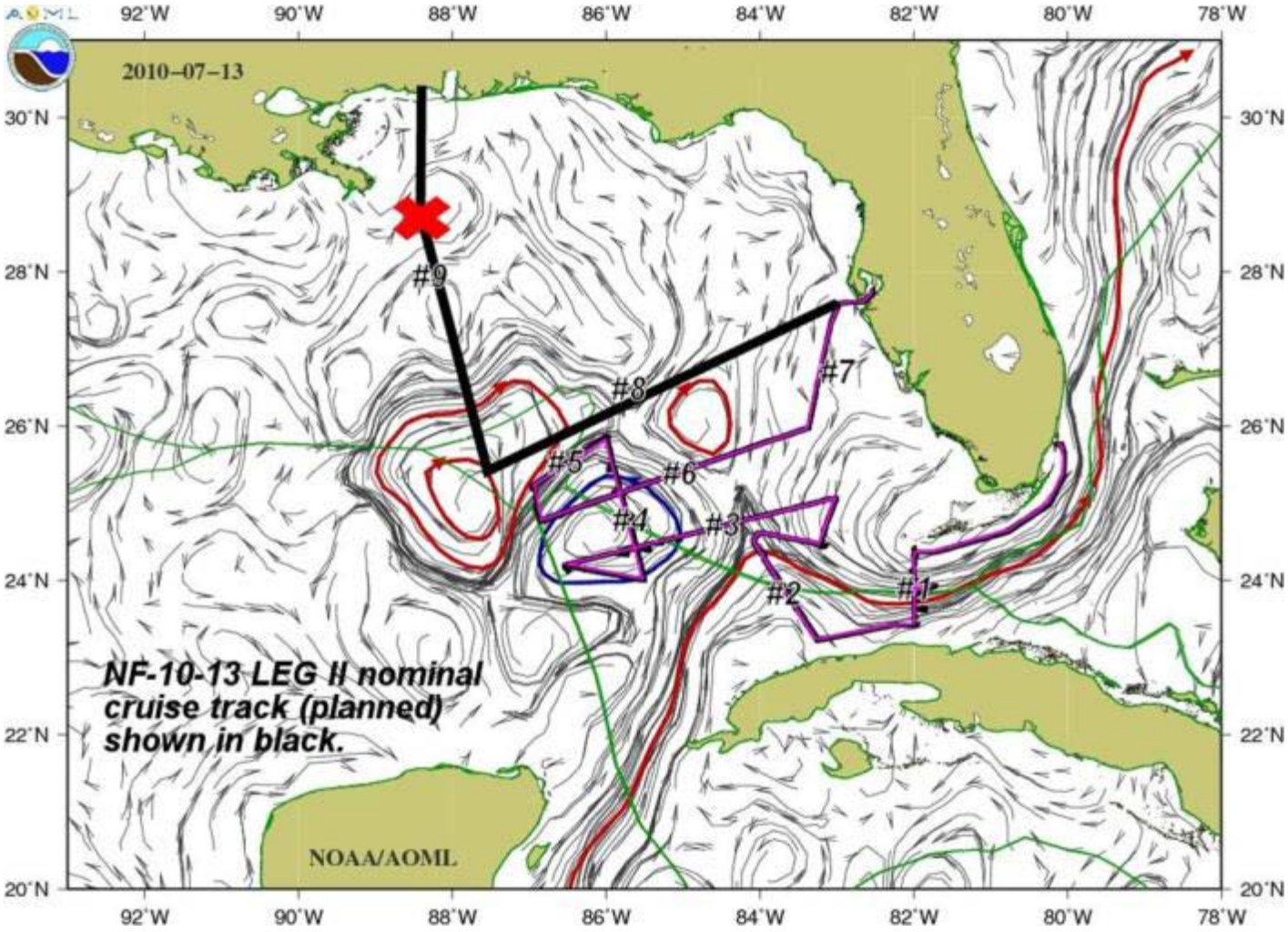
Ocean Veritas Map



Nancy Foster Summary

- Stations NF62-NF66 were sampled during the operational period.
- Stations were sampled for CTD fluorometry and DO.
- No samples were collected for VOAs, TPH, or bioassay using the Rototox test.
- No LISST data was provided.
- None of the CTD graphs showed significant data.
- No oil was observed.

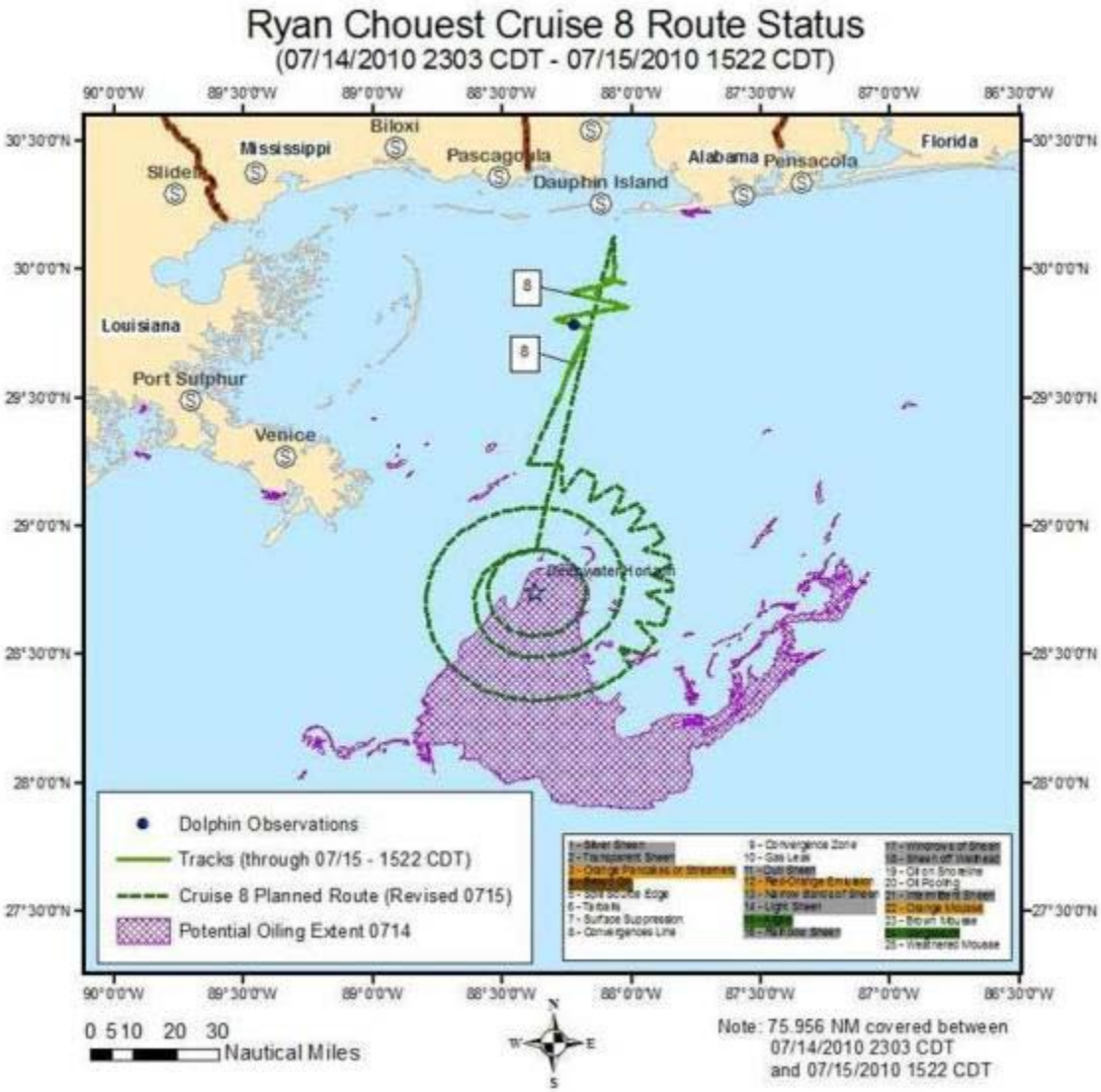
Nancy Foster Map



Ryan Chouest Summary

- The objectives for Cruise 8 are to sample water quality of common fisheries along the Gulf Coast, to monitor surface and deep hydrocarbon concentrations around the Deepwater Horizon incident site, and to sample natural hydrocarbon seeps.
- The Ryan Chouest will continue on their planned route and begin vertical casts on 7/16.

Ryan Chouest Map



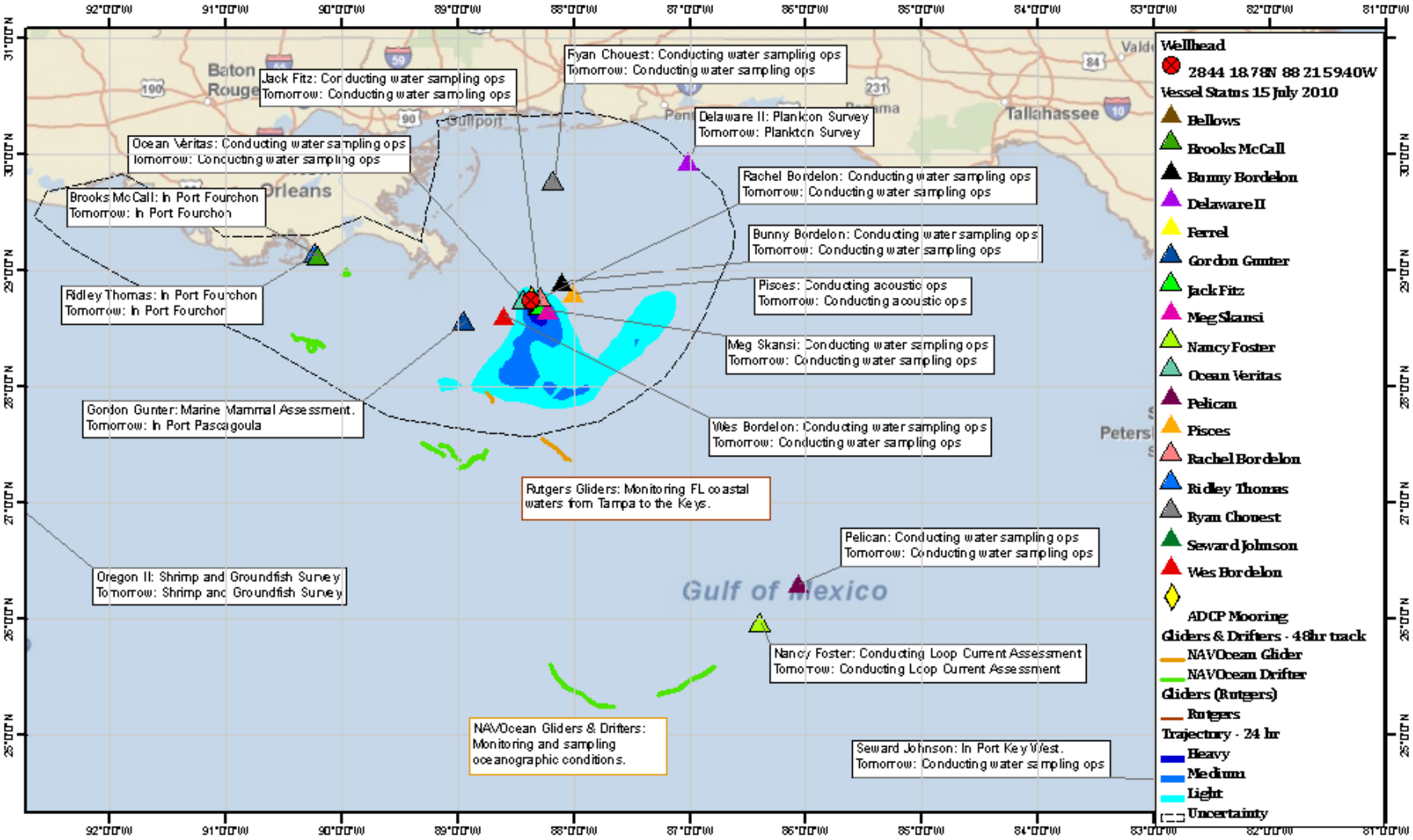
Date: 15-July-2010

Subsurface Monitoring Ship Locations

OFFSHORE

Preliminary findings based on daily communication between assets and Subsurface Monitoring Unit

Deepwater Horizon, Gulf of Mexico



Note: Offshore trajectories are no longer being produced by NOAA

https://www.st.nmfs.noaa.gov/confluence/display/OOP/Home

ASPECT Summary

- On 7/15, ASPECT conducted oil reconnaissance southeast of the rig location. The purpose of the survey was to test the ability of the system to collect data in support of night operations. Due to weather, the flight was aborted after completing three grid lines.
- On 7/16, ASPECT will conduct oil reconnaissance operations southeast of the rig location, pending weather conditions. ASPECT is currently on a weather hold due to thunderstorms in the area.

ASPECT Photograph

Aerial view of the rig location.

TAGA Summary

- On 7/15, the TAGA 1693 bus performed mobile air monitoring for BTEX from Slidell, LA to Hopedale, LA, to Grand Bay, MS.
- On 7/16, TAGA will perform mobile air monitoring in EPA Region 4.

ACTION PLAN

for

7/17/2010

- Subsurface water monitoring and sampling vessels will continue operation on 7/17.
- Water and oil sampling is planned for the Venice, Cocodrie, and Grand Isle Water Operations.
- ASPECT will conduct reconnaissance operations over oiled water.
- Air samples will be collected from 9 locations.

Deepwater Horizon/BP - Daily Oil Impact Assessment *DAY 87*

HOUMA SECTOR

Samples collected from Location SW01.

Iced samples from Location SW01.

Sample Location 0010

Sample Location 0010

Sample collected from Location 0010

Sample at Location 0012

Sample location 0011

Sampling at Location 0011

Sample collected at Location 0011

Sample Location 0012

Iced sample set from Location SW03.

Collected sample from Location 0012

Sampling at Location SW02

Sample location 0013

Collecting a sample at Location 0013

Collected sample from Location 0013

collected sample from Location 0014

Sample Location 0014

Collecting a sample from Location 0014

Collecting samples from Location SW01.

Sample Location 0015

Collecting a sample at Location 0015

Collected sample from Location 0015

Samples collected from Location 2415.

Grand Isle Waste Staging Area

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EPA Mathy Stanislaus coordinating with LDEQ

USCG briefing EPA Mathy Stanislaus, Sierra Club, and LA Restoration Network on waste management.