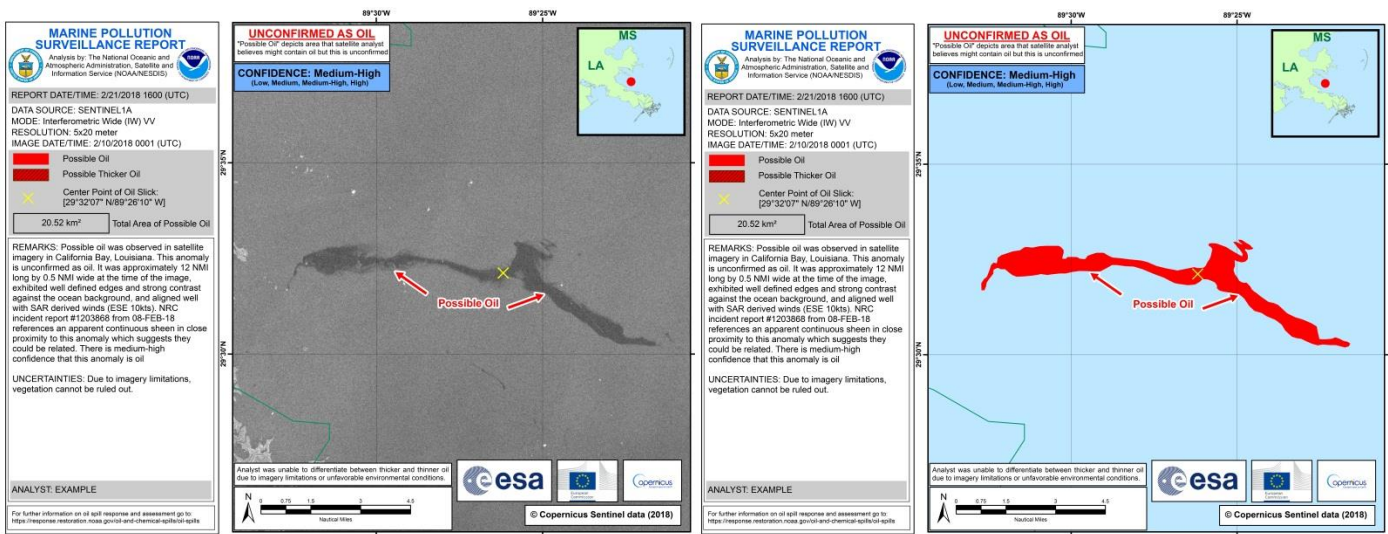


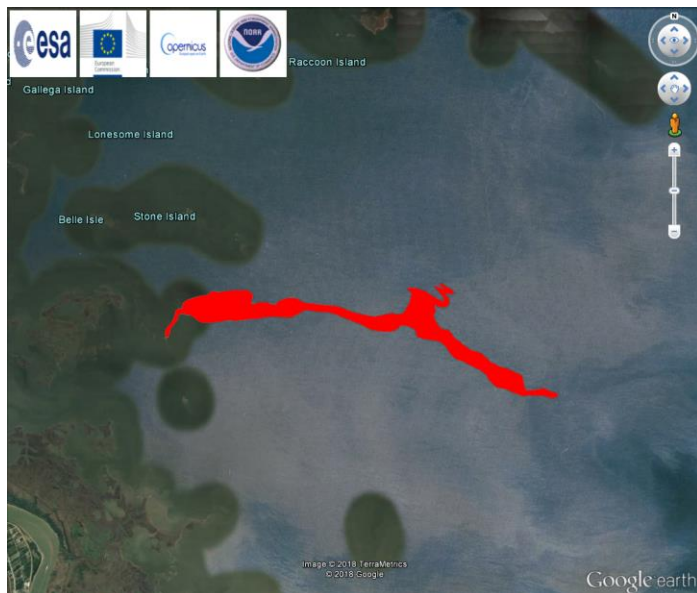
The Marine Pollution Surveillance Report

OVERVIEW: The Marine Pollution Surveillance Report (MPSR) is a product package created in the NESDIS Satellite Analysis Branch (SAB) when a marine anomaly is identified in U.S. waters or approaches that's believed to be the result of an accidental or intentional crude oil discharge. Reports are also generated for marine debris fields on an event driven, requested basis. Possible oil slicks are most often detected through the analysis of multispectral satellite imagery and synthetic aperture radar, but are sometimes identified through other surveillance mechanisms such as aerial photography. Anomaly identification is based on visual inspection, and a variety of ancillary datasets including an automated oil spill mapping tool. The complete MPSR package includes 2 JPEG maps, 1 KML, GIS files, and a text file. Oil spill monitoring operations are supported 24x7x365.

EXAMPLE MPSR PACKAGE:

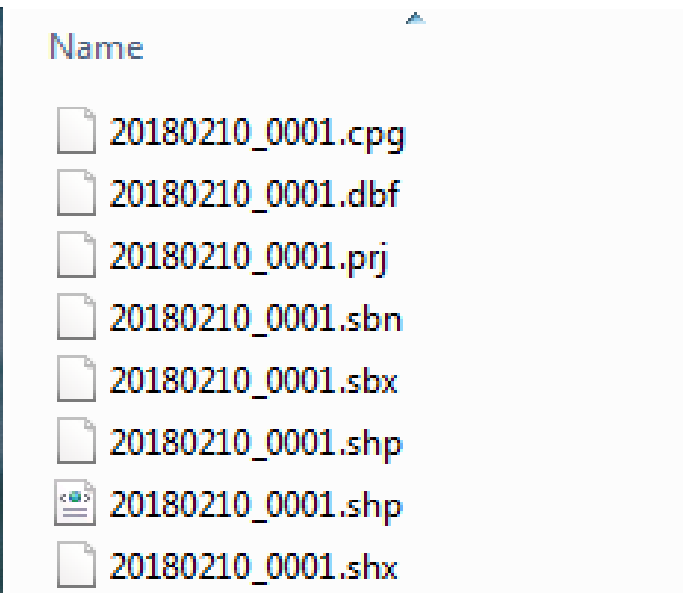


JPEG 1: Satellite image with annotations



KML

JPEG 2: No satellite image with shapefile turned on



GIS Files

REPORT DATE: 02-21-2018

REGION: GULF OF MEXICO

SUB REGION: N/A

IMAGE DATE: 02-10-2018

IMAGE TIME: 0001z

DATA SOURCE: SENTINEL1A

MODE: Interferometric Wide (IW) VV

RESOLUTION: 5x20 meter

LOCATION: 29°32'07" N/89°26'10" W

AREA: 20.52 square kilometers

CONFIDENCE: Medium-High

REMARKS: Possible oil was observed in satellite imagery in California Bay, Louisiana. This anomaly is unconfirmed as oil. It was approximately 12 NMI long by 0.5 NMI wide at the time of the image, exhibited well defined edges and strong contrast against the ocean background, and aligned well with SAR derived winds (ESE 10kts). NRC incident report #1203868 from 08-FEB-18 references an apparent continuous sheen in close proximity to this anomaly which suggests they could be related. There is medium-high confidence that this anomaly is oil

UNCERTAINTIES: Due to imagery limitations, vegetation cannot be ruled out.






ANALYST: EXAMPLE

For further information on oil spill response and assessment go to:

<https://response.restoration.noaa.gov/oil-and-chemical-spills/oil-spills>

TEXT FILE

INFORMATION IN THE MAP

| MARINE POLLUTION SURVEILLANCE REPORT | |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------|
|   | Analysis by: The National Oceanic and Atmospheric Administration, Satellite and Information Service (NOAA/NESDIS) |
| REPORT DATE/TIME: 2/21/2018 1600 (UTC) | |
| DATA SOURCE: SENTINEL1A MODE: Interferometric Wide (IW) VV RESOLUTION: 5x20 meter IMAGE DATE/TIME: 2/10/2018 0001 (UTC) | |
|  | Possible Oil |
|  | Possible Thicker Oil |
|  | Center Point of Oil Slick: [29°32'07" N/89°26'10" W] |
| 20.52 km ² | Total Area of Possible Oil |
| <p>REMARKS: Possible oil was observed in satellite imagery in California Bay, Louisiana. This anomaly is unconfirmed as oil. It was approximately 12 NMI long by 0.5 NMI wide at the time of the image, exhibited well defined edges and strong contrast against the ocean background, and aligned well with SAR derived winds (ESE 10kts). NRC incident report #1203868 from 08-FEB-18 references an apparent continuous sheen in close proximity to this anomaly which suggests they could be related. There is medium-high confidence that this anomaly is oil</p> <p>UNCERTAINTIES: Due to imagery limitations, vegetation cannot be ruled out.</p> | |
| ANALYST: EXAMPLE | |
| For further information on oil spill response and assessment go to: https://response.restoration.noaa.gov/oil-and-chemical-spills/oil-spills | |

← Header

← Issuance date and time

← Satellite information

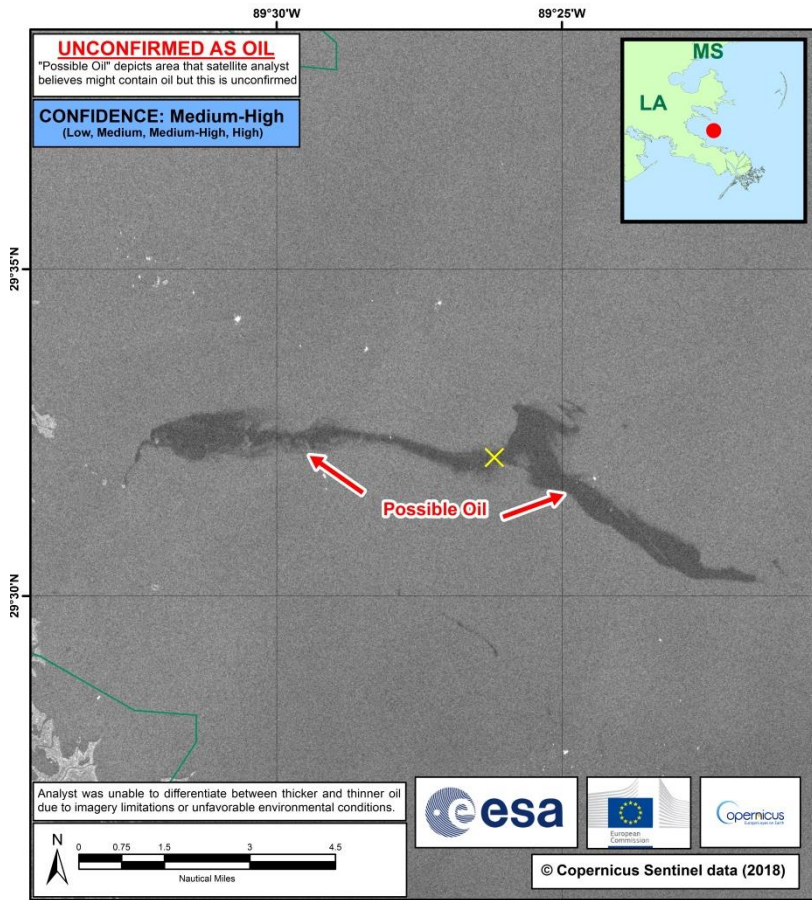
← Legend with coordinates of source point or center location and the spatial extent of possible oil

← Remarks section that may include the anomaly dimensions, distance from closest land feature, color, its definition and contrast against the background, and orientation compared to surface winds. The analyst may also report the lease area and block, when applicable, and if the anomaly could possibly be associated with an existing report from the National Response Center (NRC)

← Uncertainties section that elaborates on the possibility of the anomaly being a false positive

← Analyst last name

← URL to the NOS/Office of Response and Restoration (ORR)



TOP LEFT:

- Disclaimer stating that the possibly oil anomaly being reported on is “unconfirmed as oil”
- Confidence**

TOP RIGHT:

- Map inset

BOTTOM LEFT:

- Disclaimer stating that relative thickness was not assessed due to imagery limitations, and not because there wasn't thickness variability. This disclaimer is removed when analysis does contain relative thickness information
- Compass and scale

BOTTOM RIGHT:

- Copyrights and logs

**Confidence Criteria: This is a summary of the features that the analyst is looking for when assigning confidence. MPSRs are not generated for Low confidence anomalies

HIGH:

- When there is a recent report (e.g. NR C report, hotline) that has confirmed oil slicks in the vicinity of an anomaly, and it is distinguishable from natural phenomena, has well defined edges and appears 'out of place', and its orientation aligns well with surface winds.

or

- When the anomaly exhibits feathering or unnatural sharp turns.

or

- In SAR imagery, when there is a vessel with a well-defined trailing anomaly that appreciably widens with distance.

or

- In multispectral imagery with sunglint, when there is a white shimmery color embedded within the larger, darker footprint.

MEDIUM HIGH:

- When there is a recent report (e.g. NR C report, hotline) that has confirmed oil slicks in the vicinity of an anomaly, but there are natural phenomena/false positives nearby or the anomaly has somewhat diffuse edges and only moderate contrast against the ocean background.

- When there is a point source connected to the anomaly but it exhibits moderate to low contrast, less well defined edges, lacks feathering, and lacks *appreciable* widening with distance.

MEDIUM:

- When there is no discernible source, known spill or recently analyzed report, but the anomaly exhibits well defined edges, good contrast, and is away from natural phenomena. Additionally, if observed in multispectral imagery, the anomaly is dark (e.g. lacks the white shimmery appearance), but tests negative for vegetation.

LOW:

- The anomaly looks out of place or unnatural based on experience but there is no discernible source, no previously reported oil spill, the anomaly exhibits low contrast with its surroundings or is in the vicinity of natural phenomena.