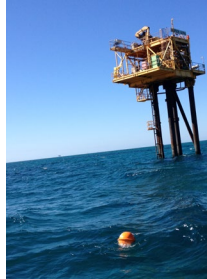


Standard Operating Procedure

Satellite Tracking Buoy



Equipment Description

The iSPHERE Satellite Tracking Buoy is a drifting buoy, providing essential real-time sea surface temperature data and GPS positional data that can be deployed from a vessel or an oil platform.

Specification

Container Length: 0.7m

Container Width: 0.45m

Container Height: 0.45m

Gross Weight: 20kg

Health and Safety



To safely operate this equipment, 1-2 people are required.

Note: The above listed Personal Protective Equipment (PPE) is to be used as a guide. A life jacket may or may not be required, dependent on the deployment platform.

Safe Operating Requirements

- A Job Safety Analysis (JSA) is to be conducted prior to work commencing. Identification of the following safety factors are critical, but not limited to: Manual Handling, Slips/Trips/Falls, Vessel Movements, Pinch Points and Personnel Contamination/Decontamination
- Ensure adequate Personal Protective Equipment (PPE) is worn. * Life jackets must be worn near water
- All incidents, accidents and near misses must be reported as per AMOSC company policy.

Operational Instructions

Pre operation

- Remove the tracking buoy from its packaging.
- Identify and record the "Asset Name" e.g. Buoy_10 (to facilitate online tracking)
- Remove the on/off magnet and place it in a safe location for reuse (See Diagram 1)
- Carry the buoy and position yourself nearest to the oil on the water.
- **Check the buoy is transmitting locations by accessing the Joubeh website and noting the buoy location corresponds with your own location. Once this is proved, the buoy can be deployed.**



Diagram 1

Operations

Deployment of tracking buoy

- Deploy the buoy into the thickest section of the oil on the water; **the buoy cannot be dropped at heights over 5m**

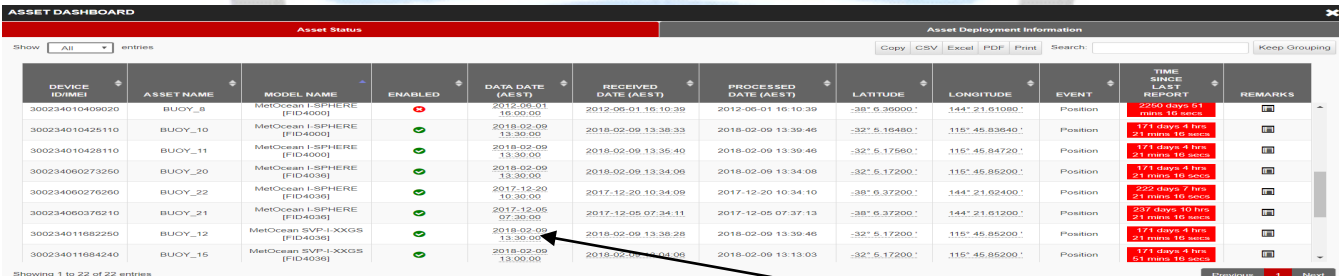
Note: if there are multiple buoys, then deploy the first buoy on the leading edge of the spill then the other buoys at various time intervals into the spill

- Monitor the "Asset Name" data transmission via the online portal (e.g. Joubeh)

Accessing AMOSC Joubeh portal

- Access to the Joubeh website: <https://linc.metocean.com/>
- Enter Username and Password as per the website prompt:
 - Username: **amosc**
 - Password: **amosc29**
- Once logged on you will access the "linc" menu, information pertaining to the deployed tracking buoy can be accessed using this menu. Specific information required to assist with response planning can be accessed from the following pages:

Select "Dashboard" from the main menu.
 This will bring up the Asset Dashboard.



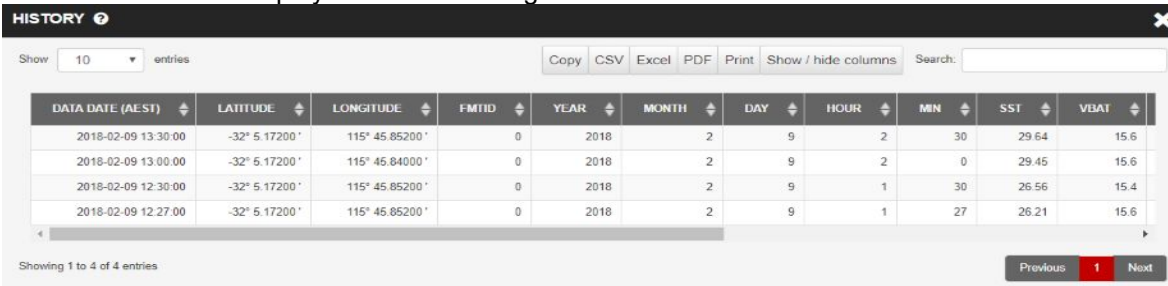
DEVICE ID#(M#)	ASSET NAME	MODEL NAME	ENABLED	DATA DATE (AEST)	RECEIVED DATE (AEST)	PROCESSED DATE (AEST)	LATITUDE	LONGITUDE	EVENT	TIME SINCE LAST REPORT	REMARKS
300234010406020	BUOY_8	MetOcean I-SPHERE [FID4000]	🔴	2012-09-01 16:00:00	2012-09-01 16:10:39	2012-09-01 16:10:39	-38° 5.36500°	144° 21.61080°	Position	206 days 01 hrs 10 secs	
300234010425110	BUOY_10	MetOcean I-SPHERE [FID4000]	🟢	2018-02-09 13:30:00	2018-02-09 13:36:33	2018-02-09 13:39:46	-32° 5.16480°	115° 45.83640°	Position	171 days 4 hrs 24 mins 40 secs	
300234010428110	BUOY_11	MetOcean I-SPHERE [FID4000]	🟢	2018-02-09 13:30:00	2018-02-09 13:36:40	2018-02-09 13:39:46	-32° 5.17660°	115° 45.84720°	Position	171 days 4 hrs 24 mins 40 secs	
300234060273260	BUOY_20	MetOcean I-SPHERE [FID4036]	🟢	2018-02-09 13:30:00	2018-02-09 13:34:06	2018-02-09 13:34:08	-32° 5.17200°	115° 45.85200°	Position	171 days 4 hrs 21 mins 10 secs	
300234060276260	BUOY_23	MetOcean I-SPHERE [FID4036]	🟢	2017-12-20 10:30:00	2017-12-20 10:34:09	2017-12-20 10:34:10	-38° 6.37200°	144° 21.62400°	Position	222 days 7 hrs 21 mins 10 secs	
300234060376210	BUOY_21	MetOcean I-SPHERE [FID4036]	🟢	2017-12-05 07:36:00	2017-12-05 07:34:11	2017-12-05 07:37:13	-38° 6.37200°	144° 21.61200°	Position	237 days 10 hrs 24 mins 10 secs	
300234011682250	BUOY_12	MetOcean SVP-I-XXGS [FID4036]	🟢	2018-02-09 13:30:00	2018-02-09 13:38:28	2018-02-09 13:39:46	-32° 5.17200°	115° 45.85200°	Position	171 days 4 hrs 24 mins 10 secs	
300234011684240	BUOY_15	MetOcean SVP-I-XXGS [FID4036]	🟢	2018-02-09 13:30:00	2018-02-09 13:38:00	2018-02-09 13:13:03	-32° 5.17200°	115° 45.85200°	Position	173 days 4 hrs 51 mins 10 secs	

Select the appropriate buoy from the list and click on the Data Date info displayed.

This will bring up the History options.

Select a date range and click on the Table option

- Once submitted the following data page will be displayed, with key information being displayed in the following fields:



DATA DATE (AEST)	LATITUDE	LONGITUDE	FMTID	YEAR	MONTH	DAY	HOUR	MIN	SST	VBAT
2018-02-09 13:30:00	-32° 5.17200°	115° 45.85200°	0	2018	2	9	2	30	29.64	15.6
2018-02-09 13:00:00	-32° 5.17200°	115° 45.84000°	0	2018	2	9	2	0	29.45	15.6
2018-02-09 12:30:00	-32° 5.17200°	115° 45.85200°	0	2018	2	9	1	30	26.56	15.4
2018-02-09 12:27:00	-32° 5.17200°	115° 45.85200°	0	2018	2	9	1	27	26.21	15.6

- Data Date – Date & time of tracking buoy positional data (Note: the tracking buoy will only transmit on initial activation and then every 30mins, also ensure that the relevant time-zone is applied from Eastern Standard Time (EST) which is the default setting)
- Latitude & Longitude – the buoys location (Note: the minus symbol (-32°) indicates a Southern Hemisphere latitude)
- SST – Sea surface Temperature
- VBAT – Battery Voltage

Exporting of Tracking Buoy positional data – if required positional data can be exported into either an Excel spreadsheet (CSV) or into a Keyhole Markup Language file (KML) which can be viewed using Google Earth.

- Selection of either the CSV or KML file can be made using the **EXPORT** selection at the far right of the Asset History page.
-
- **Alert Recipients**
 - “Add Alert Recipient” – an email notification can be setup in order to provide email notification of the positional data while a buoy is active.

Retrieval of buoy

- Retrieve the tracking buoy from the water.
- Once the buoy is retrieved, re-fit the on/off magnet on the buoy.
- Stow the buoy back in the packaging
- If the buoy has been contaminated with oil, care must be exercised when retrieving the buoy to avoid causing secondary contamination. Wipe the excess oil from the buoy.

Additional Information

Maintenance

- All maintenance and repairs are to be completed in accordance with either the manufacturer or AMOSC procedures.
- All equipment must be left in an operational condition when not in use.
- All defects must be repaired or the equipment is to be “tagged out” for maintenance and repair.

Related Documents

AMOSC HSSE Plan

PN08 - HSSE Policy

AMOSC JSA Template

PN 11 AMOSC Vehicle Use Policy (AMOSC Vehicle Checklist / AMOSC Load Assessment Checklist)

SOP 1002 Ops; Loading and Securing of Cargo

SOP 1003 Ops; Transporting Equipment To/ From Warehouse