

**UNITED STATES DEPARTMENT OF THE INTERIOR  
BUREAU OF SAFETY AND ENVIRONMENTAL ENFORCEMENT  
GULF OF MEXICO OCS REGION**

NTL No. 2018-G01

Effective Date: August 7, 2018

NOTICE TO LESSEES AND OPERATORS OF FEDERAL OIL AND GAS LEASES  
AND PIPELINE RIGHT-OF-WAY HOLDERS  
ON THE OUTER CONTINENTAL SHELF, GULF OF MEXICO OCS REGION

**Ocean Current Monitoring**

This Notice to Lessees and Operators (NTL) replaces NTL No. 2009-G02, which was effective January 27, 2009. This NTL updates the information contained in NTL No. 2009-G02, including changes resulting from the issuance of the Blowout Preventer Systems and Well Control Rule on April 29, 2016 (81 FR 25887).

**Background**

The goals of NTL No. 2009-G02 and its predecessors were to:

- Identify the ocean current data needed for planning, designing, and operating mobile offshore drilling units (MODUs), permanent floating production platforms, and their ancillary equipment (i.e., drilling risers, production risers, flowline and pipeline risers, tension leg platform (TLP) tendons, mooring systems).
- Identify the ocean current data needed to evaluate drilling risers, production risers, flowline and pipeline risers, TLP tendons, and mooring systems for fatigue.
- Ensure the sharing of ocean current data to develop a better understanding of ocean currents and bathymetry.
- Allow for the tracking of loop currents and eddy currents.

From the knowledge gained through implementing NTL No. 2009-G02 and its predecessors, the Bureau of Safety and Environmental Enforcement (BSEE) Gulf of Mexico OCS Region (GOMR) has determined that it is no longer necessary that you gather one year of site-specific ocean current data before you install a new floating production facility or that you monitor near-bottom ocean currents, except in areas near steep topography that may produce irregular or unsuspected current activities.

However, the BSEE GOMR has determined that compliance with the regulations requires that you continue to gather ocean current data for MODUs and new and existing floating production facilities, so that you can evaluate the potential for failure due to fatigue of drilling risers, production risers, flowline and pipeline risers, TLP tendons, and mooring systems.

## Authority

Pursuant to 30 CFR 250.900(a), you must consider the specific environmental conditions at the platform location to ensure structural integrity for the safe conduct of operations, and in accordance with 30 CFR 250.901(a), you must meet the following industry standards when you plan, design, and construct OCS platforms:

- API RP 2A-WSD, Planning, Designing, and Constructing Fixed Offshore Platforms – Working Stress Design (§ 250.901(a)(7))
- API Bulletin 2INT-DG, Interim Guidance for Design of Offshore Structures for Hurricane Conditions (§ 250.901(a)(4))
- API Bulletin 2INT-EX, Interim Guidance for Assessment of Existing Offshore Structures for Hurricane Conditions (§ 250.901(a)(5))
- API Bulletin 2INT-MET, Interim Guidance on Hurricane Conditions in the Gulf of Mexico (§ 250.901(a)(6))
- API RP 2FPS, Planning, Designing, and Constructing Floating Production Systems (§ 250.901(a)(8))
- API RP 2RD, Design of Risers for Floating Production Systems (FPSs) and Tension Leg Platforms (TLPs) (§ 250.901(a)(10))
- API RP 2SK, Design and Analysis of Station Keeping Systems for Floating Structures (§ 250.901(a)(11))
- API RP 2SM, Design, Manufacture, Installation, and Maintenance of Synthetic Fiber Ropes for Offshore Mooring (§ 250.901(a)(12))
- API RP 2T, Planning, Designing, and Constructing Tension Leg Platforms (§ 250.901(a)(13))

In accordance with 30 CFR 250.282, the Regional Supervisor may direct you to conduct monitoring programs and may require you to: submit monitoring plans for approval before you begin work; and prepare and submit reports that summarize and analyze data and information obtained or derived from your monitoring programs. This provision allows the Regional Supervisor to specify requirements for preparing and submitting these reports.

If you are using a MODU for well operations in water depths greater than 400 meters (1,312 feet), the regulations under 30 CFR 250.713(g) provide that for current monitoring you must provide in your APD or APM: a description of the specific current speeds that will cause you to implement rig shutdown, move-off procedures, or both; and a discussion of the specific measures you will take to curtail rig operations and move off location when such currents are encountered, using such criteria as current velocities, riser angles, watch circles, and remaining rig power to describe when these procedures will be implemented.

This NTL is written to clarify what the Regional Supervisor requires for preparing and submitting monitoring reports for ocean current monitoring and data collection for ocean current monitoring.

## Ocean Current Monitoring and Data Collection

BSEE GOMR has established and is implementing the following program to monitor ocean currents and share the data for *all floating production facilities and all MODUs* operating or installed in water depths greater than 400 meters (1,312 feet).

### A. MODUs

1. Questions for MODUs should be directed to the BSEE District Operations Support Section.

2. For MODU operations, continuously monitor and gather ocean current data on a real time basis from near the ocean surface (~30 meters (100 feet) to ~1,000 meters (3,280 feet)) using an appropriate current monitoring device (CMD). At least once every 12 hours, report the data from the CMD to the National Data Buoy Center (NDBC) Internet website. Information on obtaining your user name and password from NDBC is included in Appendix No. 1 of this NTL. Use the criteria described in Appendix No. 2 of this NTL for your data submittal, including the monitoring equipment type, latitude and longitude (derived from a GPS signal), the OCS area/block, a time series of 20-minute averaged speed and direction, and other information. Update the latitude and longitude derived from the GPS signal at least every 20 minutes so that any measurements taken inadvertently while the MODU is in motion can be identified and removed from the NDBC data.

3. For MODU operations located within 10 kilometers (6.2 miles) north and 25 kilometers (15.5 miles) south of the Sigsbee Escarpment or near other areas of steep topography, and for which you suspect bottom currents with speeds 1.0 knot or greater, install a CMD near the ocean bottom (~100 meters (328 feet) from the seafloor). This CMD is in addition to the ocean surface monitoring system described in Item No. 2 above. Record the data with at least one measurement every 20 minutes. At least once every 6 months (and each time you bring the near- bottom CMD to the surface), retrieve and examine the data. Within 30 days after data retrieval, report the data to the NDBC Internet website.

4. If, during drilling operations, you measure currents with 24-hour averaged speeds greater than 1.0 knot at the maximum range of the CMD, monitor and gather all current data below the maximum range of the CMD while you conduct your normal remotely operated vehicle (ROV) operations or inspections. Within 30 days after data retrieval, report the data to the NDBC Internet website.

5. During rig moves or non-stationary operations such as drifting, do not report the current data. Notify the NDBC via email that your system will be out of service with an estimate of when the rig will be back on location. You do not need to notify the BSEE GOMR that the CMD is out of service during these times.

### B. New and Existing Floating Production Facilities

1. Questions for New and Existing Floating Production Facilities should be directed

to the BSEE Technical Assessment Section.

2. For new and existing floating production facilities, continuously monitor and gather ocean current data on a real-time basis from near the surface (~30 meters (100 feet) to ~1,000 meters (3,280 feet)) using an appropriate CMD. At least once every 12 hours, report the data from the CMD to the NDBC Internet website. Information on obtaining your user name and password from NDBC is included in Appendix No. 1 of this NTL. Use the criteria described in Appendix No. 2 of this NTL for your data submittal, including the monitoring equipment type, latitude and longitude (derived from a GPS signal or manually input), the OCS area/block, a time series of 20-minute averaged speed and direction, and other information. You do not need to notify the BSEE GOMR whenever the CMD is out of service. If the CMD is out of service for greater than 30 days, you must provide a plan to BSEE that details the repair timing and the alternative methods used to collect the current monitoring data.

3. For new and existing floating production facilities located within 10 kilometers (6.2 miles) north and 25 kilometers (15.5 miles) south of the Sigsbee Escarpment or near other areas of steep topography, and for which you suspect bottom currents with speeds 1.0 knot or greater, install a CMD near the ocean bottom (~100 meters (328 feet) from the seafloor). This CMD is in addition to the ocean surface monitoring system described in Item No. 2 above. Record the data with at least one measurement every 20 minutes. At least once every 6 months (and each time the near-bottom CMD is brought to the surface), retrieve and examine the data. Within 30 days of data retrieval, report the data to the NBDC Internet website. You do not need to notify the BSEE GOMR whenever the CMD is out of service. If the CMD is out of service for greater than 30 days, you must provide a plan to BSEE that details the repair timing and the alternative methods used to collect the current monitoring data.

4. In your deepwater operations plan (DWOP) for a floating production facility, include information on both the type of monitoring equipment and the depth range of the monitoring equipment you plan to use to collect ocean current information.

## **Exclusions**

A. The BSEE GOMR will consider for exclusion from near-surface (~30 meters (100 feet) to ~1,000 meters (3,280 feet)) current monitoring those MODUs and floating production facilities located within 30 kilometers (18.6 statute miles) of an existing near-surface monitoring system as described in this NTL if: (1) the water depth at the site does not vary by more than 20 percent from the water depth at the monitoring location, and (2) the owner of the monitoring system agrees with the dispensation and use of its data.

B. The BSEE GOMR will consider for exclusion from near-bottom (~100 meters (328 feet) from the seafloor) current monitoring those MODUs and floating production facilities located within 10 kilometers (6.2 statute miles) of an existing near-bottom monitoring system as described in this NTL if: (1) the water depth at the site does not vary by more than 20 percent from the water depth at the monitoring location, and (2) the owner of the monitoring system agrees with the dispensation and use of its data.

C. To obtain an exclusion from conducting near-surface or near-bottom current monitoring, submit to the BSEE GOMR Technical Assessment Section (TAS) or District Operations Support (DOS) Section for review and approval a written request that includes:

1. The location and water depths of the existing monitoring system;
2. The location and water depths of the MODU or production facility to be excluded;
3. The water column depths that are covered by the existing monitoring system;
4. The maximum current velocities for all recorded depths at the existing site; and
5. A letter from the owner of the existing monitoring system granting permission to use the existing monitoring information.

D. After you have obtained two (2) years of near-bottom current data on a floating production facility, you may elect to discontinue monitoring the near-bottom currents as long as: (1) the return rate was at least 70 percent; and (2) the 10-year return interval current you calculated from the measurements is within 20 percent of that in the facility design standard. If you elect to discontinue near-bottom current monitoring, you do not need to notify the BSEE GOMR. It should be noted that additional near-bottom current monitoring would further support operators with future extension of life requests.

#### **Additional Current Data (Optional)**

If you collect any current data not specified by this NTL, the BSEE GOMR requests that you voluntarily report that data to the NDBC Internet website within 30 days of data retrieval.

#### **Weather (Optional)**

The BSEE GOMR encourages you to supply other ocean and meteorological information to the NDBC. Wind, weather, and wave data will supplement the NDBC's information available to the offshore industry. If you are interested in supplying data, please notify the NDBC by e-mail.

#### **Site Photo (Optional)**

The NDBC includes photos of their monitoring stations on each Internet website post. If you would like to include a photo of your facility, please send an electronic copy to the NDBC.

#### **Operational**

A. Install and begin operating the current monitoring system as soon as practicable, but, for MODUs, no later than 7 days after arriving at the drilling site, and for floating production facilities, no later than 30 days after production begins. You do not need to notify the BSEE GOMR when the CMD becomes operational.

B. Use the current data you obtain for your daily operations, forecasting, and hindcasting as necessary during all ongoing drilling and production activities. See 30 CFR

250.713(g) for specific requirements for MODUs operating in water depths greater than 400 meters.

C. Make sure that the technology and equipment you use for these current monitoring systems are optimized to avoid interference from risers, moorings, and thrusters. Additionally, design these systems so that they do not interfere with existing acoustic systems used on dynamically positioned vessels, such as position measurement systems or blowout preventer (BOP) controls.

D. Make sure that all current time series and data collected as part of your current monitoring activities are submitted to the NDBC Internet website. Further, make sure that all data meet the standards and protocols mutually agreed upon by industry, BSEE, and the NDBC for current monitoring data gathering, reporting, dissemination, and QA/QC as described in Appendices Nos. 1 and 2 of this NTL. If you are currently conducting operations in water depths greater than 400 meters (1,312 feet), submit the information described in Appendix No. 1 of this NTL to the NDBC for each of your systems.

E. If you are unable to publish in a timely fashion the oceanographic data to the publicly available NDBC Internet website because of communications or equipment failure, do so as soon as communications are reestablished or the equipment has been repaired. You do not need to submit system failure information to the BSEE GOMR.

F. If you find that data that you have submitted are corrupt or suspect, notify the NDBC immediately. NDBC will insert a flag on the web page to identify that the data are suspect. Use reasonably diligent effort to determine the validity of the data and rectify any situation that may be causing corrupted data.

G. In hurricane or other evacuation conditions, gather the oceanographic data where possible and publish it when activities have returned to normal. You do not need to provide emergency power or additional equipment to keep your current monitoring system operational during hurricane or other evacuation conditions.

### **Applications for Permits to Drill (APDs) and Applications for Permits to Modify (APMs)**

BSEE GOMR has determined that drilling activities using some riser/facility designs may be severely hampered by excessive loop or eddy currents, causing these drilling activities to temporarily cease. In your APD or APM, you must include the information required by 30 CFR 250.713(g) when using a MODU for well operations.

### **Guidance Document Statement**

BSEE issues NTLs as guidance documents in accordance with 30 CFR 250.103 to clarify and provide more detail about certain BSEE regulatory requirements and to outline the information you must provide in your various submittals. Under that authority, this NTL sets forth a policy on and an interpretation of a regulatory requirement that provides a clear and consistent approach to complying with that requirement.

## Paperwork Reduction Act of 1995 (PRA) Statement

The Office of Management and Budget (OMB) has approved the information collection requirements in 30 CFR Part 250, Subparts A, B, G, and I, as well as those associated with APDs, and assigned OMB Control Numbers 1014-0022, 1014-0024, 1014-0028, 1014-0011, and 1014-0025, respectively. This NTL does not impose any additional information collection requirements subject to the Paperwork Reduction Act of 1995 (44 U.S.C. 3501 *et seq.*).

### Contacts

A. If you have questions concerning floating production facilities, please contact the Technical Assessment Section by telephone at (504) 736-5776.

B. If you have questions concerning MODUs, please contact the District Operations Support Section by telephone at (504) 736-2400.

C. Provide detailed information of your systems as described in Appendix No. 2 of this NTL to the NDBC at [ndbc.mms.gom@noaa.gov](mailto:ndbc.mms.gom@noaa.gov). Other information and out-of-service notifications and reports can also be sent to this address.

D. Send all letters with system details and requests for exclusion for New or Existing Floating Production Facilities to:

BSEE  
Regional Supervisor, Regional Field Operations  
Technical Assessment Section  
1201 Elmwood Park Blvd.  
New Orleans, Louisiana 70123-2394

E. Send all letters with system details and request from exclusion for MODUs to

BSEE  
Regional Supervisor, District Field Operations  
District Operations Support Section  
1201 Elmwood Park Blvd.  
New Orleans, LA 70131-2394

/s/ Lars T. Herbst  
Lars T. Herbst  
Regional Director

## **Appendix No. 1 (Obtaining Your Internet ID)**

The National Data Buoy Center (NDBC) will store and post the reported current data for BSEE on its Internet website. You should contact the NDBC via e-mail at [ndbc.mms.gom@noaa.gov](mailto:ndbc.mms.gom@noaa.gov) and provide the following information for each of your locations. After you have submitted this information, the NDBC will issue an FTP Account ID, a Station ID, and GTS Routing Identifiers and will provide you with a password for access.

### **1. Operator Information**

- Operator Name (text for “Owned and Maintained by” credit on NDBC website)
- Operator URL (Optional, will be hyperlinked from NDBC website to Owner)
- Name of Operator Contact
- Phone Number of Operator Contact
- E-mail address for future NDBC notification of outages and for BSEE contact
- IP address of FTP delivery server

### **2. Unique Station Information**

- Station Type (e.g., SPAR, TLP, SEMI, MODU, Mooring, Fixed Platform )
- Platform/MODU/Project Name
- OCS-G Block and Area (e.g., High Island - HI-334B)
- OCS-G Lease Number
- Latitude (deg min sec)
- Longitude (deg min sec)
- Datum used for Lat/Long
- Water depth (ft)

### **3. Instrument Information (for *each* unit at your site)**

- Instrument ID (instrument number in RTADCP ftp config e.g. 0, 1, 2, etc.)
- Instrument model (e.g., RDI 75 kHz BB)
- Recovery time (real-time; recovered bi-annually, etc.)
- Transducer depth (meters)
- Coordinate system of data (beam, inst or earth)
- Compass reference (True required)
- Specify if the heading of the transponder is fixed. If fixed, specify if the actual compass value is used for orientation or if it is manually set.
- Vertical Datum Reference – Degrees from vertical looking down (i.e., 0 degrees = downward, 90 degrees = horizontal, 180 degrees = upward)
- Specify if the angle of the transponder is fixed and the tilt value is calculated when installed or if the tilt sensor value is used for orientation.
- Number of bins

- Bin size (meters)
- Specify first bin depth (meters), bin depth assumed to represent center of bin
- Indicate if otherwise (top or bottom)
- Time data reference (GMT required)
- Number of sampling periods per hour
- Specify sampling period (minutes)
- Specify if clock time represents middle, beginning, or end of period
- List any obstructions such as risers, moorings, tendons, or umbilicals that may affect the ADCP information
- Specify any beams taken out of service to accommodate obstructions

## **Appendix No. 2 (BSEE NDBC File Format)**

The format is based on the RDI broadband ADCP binary format as described in the RDI broadband ADCP Technical Manual. The files must contain for each ensemble: a Header, a Fixed Leader, a Variable Leader, and Velocity Profile data as described in the Technical Manual. The velocity data must be stored in earth coordinates and include echo amplitude, correlation magnitude, and a percent good field for all beams.

The BSEE GOMR strongly encourages you to store individual ping data in beam coordinates on your local data acquisition computer for at least 180 days from date of retrieval. Individual ping data can be used to verify system integrity and for in depth analysis of current anomalies. In addition, make sure that a BSEE/NDBC Leader Data Block (described below) accompanies each ensemble. In this data block, include ancillary data such as location of measurements, type of instrument, platform name, and operator. Existing RDI software is able to display the data from these files, although it will not display information within the BSEE/NDBC Leader Block.

Convert narrowband RDI ADCP data to broadband binary format. For non-ADCP instruments, the owner can use an XML format specified by NDBC or the same binary format described above. In the case of single point instruments, the binary files would only include a single "bin" of data, and many of those fields such as echo amplitude would be blank.

### **BSEE/NDBC Leader Data Format**

<b>Binary Byte</b>	<b>Size (bytes)</b>	<b>Field</b>	<b>Description</b>
1-2	2	BSEE/NDBC Leader ID	BSEE/NDBC Leader identification word (1861h)
3	1	BSEE/NDBC version	Version number of the BSEE/NDBC Leader data (01h)
4-33	30	Operator (e.g., Universal Oil Corp.)	Name of the ADCP operator (Null-terminated ASCII string)
34-63	30	Platform Name (e.g., Perseus Spar)	Name of the ADCP deployment platform (Null-terminated ASCII string)
64-67	4	Latitude (decimal degrees)	Nominal latitude of observations. Range: -90.0000 to +90.0000 (4-byte IEEE floating point)
68-71	4	Longitude (decimal degrees)	Nominal longitude of observations. Negative longitudes indicate western hemisphere. Range -180.0000 to +180.0000 (4-byte IEEE floating point)
72-75	4	Water depth (meters)	Nominal water depth at observations site (4-byte IEEE floating point)
76-79	4	Transducer depth (meters)	Depth below surface of the ADCP transducer head (4-byte IEEE floating point)
80-99	20	Reserved	User option
100-119	20	ADCP model (e.g., RDI 75 kHz BB)	Model of ADCP (Null-terminated ASCII string)
120-126	7	Transducer Serial No.	Not mandatory
127-131	5	Station Number	NDBC Station Identifier supplied by NDBC
132	1	Bad Beam Indicator	= to show all beams are good; Other number indicates bad or out-of-service beam location
133-134	2	Reserved	User option

