NPDES Discharge Monitoring Report (DMR) Instructions

GENERAL INSTRUCTIONS

1. Each mobile offshore drilling unit, or multi-service vessel (“rig”) having discharges covered under the OCS NPDES permit must complete the daily discharge monitoring report (DMR).
2. Every Monday, scan to .pdf and e-mail a copy of the completed form to:
   
   Steve Daigle – steve.daigle@apachecorp.com
   
   Barbara Lopez – barbara.lopez@apachecorp.com

3. At the end of each month, the end-of-month DMR must be signed by the mud engineer on duty and reviewed and signed by the Apache Deepwater well site supervisor on duty, scanned to .pdf along with the Barite Certificate(s) for mud products taken on board during the month, and e-mailed to the distribution list above, or Faxed to EH&S at (713) 954-5500.

4. At the end of the well or project, the Apache Deepwater well site supervisor will gather all well or project related files and ship them to the Houston office. All of the original monthly reports must be sent in at the end of each job.

5. QUESTIONS:
   a. Monitoring report or procedures:
      
      Call Steve Daigle (713) 296-7455 or (713) 842-0532 Mobile
      
      b. To order sample kits, or for questions on sampling, sample preparation, or scheduling shipment or pickup of samples:
      
      Environmental Enterprises, Slidell, LA (1-800-966-2788) or
      
      Sherry Laboratories, Lafayette, LA (1-800-737-2378).
COMPLETING THE MONTHLY MONITORING FORM

**Rig:** Enter the name of drilling rig.

**Area/Block:** Enter the lease no., well no., lease area, lease block.

**Outfall No.:** The outfall number (permit feature) is a unique number that will normally be incorporated into the electronic file prior to sending it to the rig. If no number has been issued, note “to be assigned”.

**Month/Year:** Enter the month and year (e.g., October 2012)

**Prepared By:** The Mud Engineer on duty will review the entries and sign.

**Checked By:** The Apache Deepwater Well Site Supervisor will review the completed monitoring form, will sign and verify that the information entered is accurate and representative for the monitoring period of the report.

**Completing Field Numbers**

1. **DAY:** Day of the month the observations or samples were taken.
2. **Monitored by:** Input initials of the person conducting the monitoring.
3. **Deck Drainage:** For rigs with deck drainage discharges, daily visual observations for free oil sheens are required. Deck drainage means any waste resulting from deck washings, spillage, rainwater, and run-off from curbs, gutters, drains, and drip pans. Enter “No” or “Yes” under the day in which each observation is made. For every “YES”, a “non-compliance Pollution Report Form must be completed, and the EH&S Dept. notified.
4. **Sanitary Waste:** Check the appropriate box, Manned, Unmanned or MSD in use. Note whether Floating Solids were observed with Yes No or NA.
   a. Sanitary waste means human body waste discharged from toilets and urinals. Enter “No” or “Yes” under the day on which the observation was made. For every “YES”, a Pollution Report Form must be completed, and the EH&S Dept. notified.
   b. For rigs discharging domestic and/or sanitary waste discharges, daily visible observations for floating solids are required during peak discharge times and in the vicinity of the discharge.
   c. Note: If the rig is operating an approved marine sanitation device (MSD) the requirements of this section can be skipped provided that a copy of the annual test results on the MSD is available on the rig and a photocopy is attached to the first discharge monitoring report for the current well.
5. **Domestic Waste:** Daily visible observation for floating solids is required following either the morning or midday meal at a time of maximum discharge. Note whether floating solids were observed in domestic waste with “Yes” or “No”. For every “YES”, a Pollution Report Form must be completed, and the EH&S Dept. notified.
a. Domestic waste means material discharged from galleys, sinks, showers, safety showers, eye wash stations, hand washing stations, fish cleaning stations, and laundries.

b. Note: The discharge of food wastes is prohibited within 12 nautical miles from nearest land. Comminuted food waste able to pass through a 25 mm mesh screen (approximately 1 inch) may be discharged more than 12 nautical miles from nearest land.

6. **Drilling Fluids/Cuttings:** A static sheen test is required weekly when discharging drilling fluids and/or drill cuttings. **This monitoring requirement also covers P&A jobs where drilling fluids contained in the casing annuli are discharged.**
   a. Perform the static sheen test in accordance with the test kit directions.
   b. If no sheen is observed, or the sheen covers less than 50 percent of the test container enter "No" under the appropriate date along with the time of the observation, and the first initial and last name of the observer.
   c. If a sheen covers 50 percent or more of the surface of the test container, repeat the test. If the second test results in a sheen covering more than 50 percent of the test container, cease discharging. Enter “Yes” along with the time of the observation and the first initial and last name of the observer. Determine the source of contamination and make preparations for proper disposal of the non-dischargeable drilling fluids and/or drill cuttings.
   d. If the rig does not discharge drill fluids or cuttings, enter “NA” for the dates no discharge is produced.

7. **Drilling Fluids Maximum Discharge Rate:** The maximum discharge rate allowed is 1,000 bbl/hr
   a. Each day that the rig actually discharges drilling fluids, estimate and record the maximum hourly discharge rate in bbl/hr (e.g., on the 5th the maximum rate of discharge is 400 bbl/hr, enter 400 under the 5th).
   b. If the rig is not discharging drilling fluids enter “0” in the space corresponding to that day.

8. **Well Fluids:** A **daily** static sheen test is required when discharging completion fluids, workover fluids (includes packer fluids), and well treatment fluids. No discharge of fluids containing priority pollutants is allowed (i.e., zinc bromide discharges prohibited). **This monitoring requirement also covers P&A jobs where casing annuli contain completion fluids, workover fluids, well treatment fluids, or packer fluids that will be discharged.**
   a. Perform the static sheen test in accordance with the test kit directions.
   b. If no sheen is observed, or the sheen covers less than 50 percent of the test container enter "No" under the appropriate date along with the time of the observation and the first initial and last name of the observer.
   c. If a sheen covers 50 percent or more of the surface of the test container, repeat the test. If the second test results in a sheen covering more than 50 percent of the test container, cease discharging. Enter “Yes” along with the time of the observation and the first initial and last name of the observer. Determine the source of contamination and make preparations for proper disposal of the non-dischargeable fluids.
   d. If the rig does not discharge well treatment, completion, or workover fluids for the entire week “X” out the entire section on static sheen testing for these fluids.
9. **Miscellaneous Discharges:** Miscellaneous discharges include: (a) desalinization unit discharge, (b) blowout preventer fluids, (c) uncontaminated ballast water, (d) uncontaminated bilge water, (e) uncontaminated freshwater, (f) mud, cuttings, cement at seafloor, (g) uncontaminated seawater, (h) boiler blowdown, (i) source water and sand, (j) diatomaceous earth filter media, (k) excess cement slurry, (l) bulk pipeline brine, (m) transfer powder, (n) subsea wellhead preservation fluids, (o) subsea production control fluid, (p) umbilical steel storage fluid, (q) leak tracer fluid, and (r) riser tensioner fluids.
   a. Rigs with these discharges are required to perform **weekly** visible observations for free oil sheens. Discharge only when visual sheen observation is possible, or use static sheen test method.
   b. Record a “No” or “Yes” indicating absence or presence of a visual sheen. If observations are made more frequently than weekly, the additional observation results should also be recorded.
   c. **Discharges of cement slurry from testing cement handling equipment are prohibited.**
   d. For every “YES” indicating a sheen, a Pollution Report Form must be completed, and the EH&S Dept. notified.

10. **Personnel on Board (POB):** Enter the number of personnel on board for that day.

11. **Mud Toxicity 96 Hr. (LC50):** Rigs with discharges of drilling fluids or drill cuttings are required to take at least one **monthly** fluid sample for toxicity analysis at a commercial laboratory. If synthetic base mud (SBM) is being used an **end-of-well** sample is also required. **Note:** For **P&A jobs:** if the casing annuli contain drilling fluids that are discharged, at least one **monthly** fluid sample must be collected for toxicity analysis at a commercial laboratory.
   a. A **representative** sample of the drilling fluid is a grab sample, taken from beneath the shale shaker, or if there are no returns across the shale shaker the sample must be taken from a location that is characteristic of the overall mud system to be discharged. The sample must be taken according to directions in the test kit, and stored in the refrigerator (not frozen!!) until ready for transport to shore. When ready for transport the sample is placed on ice and sent in.
   b. Complete all information on the sample containers and the chain of custody form at the time the sample is collected.
   c. Record the sample date, sample time, the sampler’s last name and first initial, and the laboratory name on the discharge monitoring report form in area 11.
   d. The laboratory will contact the rig and the EH&S Dept. with test results. Enter the “LC50 Lab Result” on the discharge monitoring report when available.

12. **Well Fluids Monthly Oil and Grease Analysis:** Completions, workovers, and well treatments are each separate operations under the offshore discharge permit. Rigs with discharges of well fluids (i.e., completion fluids, well treatment fluids, or workover fluids including packer fluids) are required to take a **monthly** fluid sample per each operation for oil and grease analysis at a commercial laboratory. **This monitoring requirement also covers P&A jobs where well fluids contained in the casing annuli are discharged.**

   **Well fluids cannot be discharged if they contain priority pollutants.** The rig must obtain certification from the fluid vendor stating that priority pollutants are not present in the fluids.
and attach the certification to the DMR. Make an entry at Section 21 on the report and attach the certification for each well fluid used. **Note: A review of well files for P&A jobs can be used to determine if well fluids may contain priority pollutants.**

a. A **representative** sample should be taken at the outlet of the final discharge point prior to commingling with other fluids.
b. Follow directions in the sample kit and use the “clean grab” sampling method to collect the sample which is acidified, stored in the refrigerator (**not frozen!!**) prior to shipment to shore, placed on ice, and sent to the shorebase for subsequent pickup by the laboratory.
c. Record the type of fluid, name of fluid, sample date, sampling time, last name and first initial of person taking sample, and the name of the laboratory on the Discharge Monitoring form (Area 12).
d. The laboratory will contact the rig and the EH&S Dept. with the sample results. Enter the “Lab Result” for oil and grease analysis when it is received.
e. **The permit limits for oil and grease in wellwork fluid discharges are 29 mg/L monthly average and 42 mg/L daily maximum. If any one sample exceeds 29 mg/l oil and grease, additional samples will be required to achieve the required monthly average.** (Note: When a sample exceeds the 42 mg/l maximum, a Pollution Report Form must be completed discussing the likely cause(s) of the excess oil and grease, and measures of prevention).

13. **Barite:** Each shipment of barite must be accompanied by the barite supplier’s verification of total mercury and cadmium levels in the barite. Enter date the certificate document is received on the rig and the batch and certification dates. **The NPDES permit prohibits the discharge of drilling fluids to which barite has been added if the barite contains more than 1mg/kg of mercury, or 3 mg/kg cadmium.**

14. **Sanitary Waste – Monthly Residual Chlorine:**
   a. Facilities continually manned by 10 or more people for more than 30 days are required to take a **monthly** sanitary waste water sample at the outlet of the MSD.
b. The sample is to be analyzed in the field for total residual chlorine using the Hach Method CN-66-DPD.
c. Record the date and time the sample is taken, the last name and first initial of the person taking the sample, and the chlorine test result on the DMR.
d. **The permit limit for chlorine in sanitary waste water discharges is 1 mg/L daily minimum. The chlorine concentration should be maintained as close to 1 mg/L as possible.** (Note: When a sample result is below 1 mg/l, the facility must complete a Pollution Report Form discussing the cause(s) of the failure).
e. **Note: If the rig is operating an approved marine sanitation device (MSD) the requirements of this section can be skipped provided that a copy of the annual test results on the MSD is available on the rig and a photocopy is attached to the first discharge monitoring report for the current well.**
15. **Drill Cuttings – Sediment Toxicity**: Once/Month and EOW (See item 11 for sample requirements)  
   **Note:** Not applicable to P&A jobs.

16. **Drill Cuttings – Formation of oil**: Prior to drilling and weekly. **Note:** Not applicable to P&A jobs.

17. **Base fluid Retained on Cuttings**: Monitoring performed at least once/day, up to three times per day maximum for all sections and SVDs and End of Well except when BMP conditions are met. **Note:** Not applicable to P&A jobs.

18. **Stock Based Fluids – PAH**: Once/Year. **Note:** Not applicable to P&A jobs.

19. **Stock Based Fluids – Sediment Toxicity**: Once/Year. **Note:** Not applicable to P&A jobs.

20. **Stock Based Fluids – Biodegradation Rate**: Once/Yr. **Note:** Not applicable to P&A jobs.

21. **Chemical List**: Record the information from the Daily Drilling/Workover/Completion Report. Chemicals added to fluids introduced to the wellbore must be identified on a “Chemical List” and attach to the monthly discharge report.

22. **Maintenance Wastes – Blasting & Painting**: Wastes from blasting and painting are required to be contained to the maximum practical extent and not allowed to go overboard. A “Best Management Practices Plan” or BMP must also be in place and a copy on the rig. No blasting or painting is allowed except in accordance with the BMP. Enter “Yes” to indicate that a BMP is in place, and “Yes” to indicate that wastes are contained to the maximum extent practical. Enter “N/A” if no blasting or painting is ongoing.

23. **Comments**: Use this section to enter pertinent information, eg: 10/5/12 switched to Oil Based Mud.

**ZERO DISCHARGE FLUIDS**: Rigs using zero discharge fluids such as oil-based mud, zinc bromide, etc., must pressure test jumper hoses and other flexible hoses used to transfer these fluids to a test pressure of **200 psi prior to initial use and every 30 days thereafter**. Rig personnel must perform **weekly** visual inspections of these hoses to ensure proper connections and no wear and tear.