Completing the Discharge Monitoring Report (DMR)/Monthly Report of Operations (MRO)

WORKSHEET

The following discussion and questions relate to issues encountered each month by the operator who completes the monthly reports of sampling results submitted to IDEM through NetDMR, and using IDEM's Excel MRO forms. Similar questions are included on the Operator Exam.

Examples of a NetDMR data entry page, IDEM MRO and permit page to be used in this exercise are found immediately following this appendix as Appendix B, Appendix C and Appendix D.

This exercise details how to complete the NetDMR data entry page (Appendix B) using information from the MRO (Appendix C). These rules would apply to most parameters.

Note #1: About "permit requirement" values which are preprinted on the DMRs: These permit requirements or limits are found in Part I of each NPDES permit. Some parameters will have summer and winter limits which differ. The sample permit page (Appendix D) shows the limits applicable to this exercise.

Note #2: About how many digits to record in NetDMR: When recording the values on the DMR from the MRO only record the value in the same number of digits that is contained in the permit. For example, the permit limit is *17.8* and the actual test result written on the MRO is *11.473*. Enter on the DMR a value with the same number of digits as the permit limit, in this case record *11.5* (apply all standard rules of "rounding").

Using the MRO, complete the information needed on the NetDMR data entry page for the parameter "Solids, total suspended" (TSS). There are four blanks to fill out.

- First look at the QUANTITY OR LOADING row at the top of the DMR (Appendix B). Under the column titled "Value 1," the number to be recorded is the TSS Monthly Average value. The "permit requirement" (effluent limit) for the month is already entered; it shows "19.5 Mo. Ave." Using the MRO (Appendix C) find the column for "**Susp. Solids – lbs./day**". Following that column to the bottom "**Avg**" is the calculated average of all measurement taken for the month. Record that value on the DMR in "Box 1" on the example page. (Check Note#2 for guidance on rounding).
- The next QUANTITY OR LOADING value to record for TSS is the maximum weekly average. The "permit requirement" for the month is already entered, it shows "29.3". Using the MRO find the column for "**Susp. Solids – lbs./day Weekly Average**", there are four weekly averages calculated. Record the highest value on the DMR in "Box 2". (Check Note#2).
- Moving next to QUALITY OR CONCENTRATION. The value to record on the DMR (Box 3 in the example page) is the Monthly Average value. The "permit requirement" for the month is already entered, it shows "30". Using the MRO find the column for "**Susp Solids – mg/L**". Following that column to the bottom "**Avg**" is the calculated average of all measurements taken for the month. Record that value on the DMR in "Box 3". (Check Note#2).
- The last QUALITY OR CONCENTRATION value to record is the maximum weekly average. The "permit requirement" for the month is already entered; it shows "45". Using the MRO find the column for "**Susp. Solids – mg/L Weekly Average**". Record the highest value on the DMR in "Box 4". (Check Note#2)

Based on the above discussion and Appendices B, C, and D, the following are sample questions as they might appear on the exam (although in the exam, all questions are le choice):

1. *Do any of the four values recorded on the DMR exceed the permit limits?*

Answer: **Yes, the Quantity or Loading Maximum Weekly Average value exceeded the permit requirement.**

2 *What would the number of exceedances or "NO.EX" value for TSS be? (Box 5)*

Answer: **The number recorded on the DMR for Maximum Weekly Average would be the highest of the weekly averages which have been calculated on the MRO. Since the number already appearing in that box is a violation that counts as one. However if other**

weekly averages exceed the permit requirement, they should also be included in the number of exceedances to be recorded in Box 5. In this case the MRO shows another weekly average also exceeded the permit requirement. Therefore, the number of exceedances or NO.EX for that parameter would be "2".

3. The DMR already shows a "Frequency of Analysis" as "Twice every week", which can be written as "2/7". In this case, what frequency of analysis should be written on the DMR?

Answer: **Use the MRO to find out how often analysis was <u>actually</u> done each week for TSS, which may or may not be the same as the permit requirement since it is common to sample more frequently than required by the permit, especially if high results are being seen and you are trying to diagnose what is wrong. The standard NPDES sampling week begins on Sunday and ends on Saturday. The example MRO shows that five samples were analyzed each week. So the correct Frequency of Analysis number for this month should be written on the DMR is "5/7".**

4. What is the TSS weekly average in mg/L for the week that includes February 10th?

Answer: **Since the NPDES sampling week begins on Sunday and ends on Saturday, then beginning on Sunday the 10th and ending on Saturday the 16th, the MRO has calculated a weekly average of "21.25".**

5. The last row on the sample DMR asks for "Flow, total". What is the total flow in February?

Answer: **You could take the time to total the values in the first column of the MRO, however the total flow has already been calculated by the MRO form on the right side in the box at the bottom of the MRO. The flow on the MRO is already in "million gallons" just as should be recorded on the DMR. The total flow for February is 2.54 million gallons.**

6. With regard to Effluent Flow, the "Avg" for the month is 0.09071 MGD, how many gallons is this?

Answer: **Multiply 0.09071 MGD by 1,000,000, result: 90,710 gallons.**