

COMMONWEALTH OF VIRGINIA
DEPARTMENT OF ENVIRONMENTAL QUALITY
WATER DIVISION


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SUBJECT: Guidance Memo No. 02-2010, Amendment No. 3
Compliance Auditing Manual Revisions – Section I A “VPDES - DMRs
Processing Procedures”

TO: Regional Directors

FROM: Ellen Gilinsky 

DATE: November 15, 2010

COPIES: Deputy Regional Directors, Regional Water Compliance Managers, James Golden, Rick Weeks, Melanie Davenport, Kathleen OConnell, Fred Cunningham

Summary:

The purpose of this amendment is to update compliance auditing procedures related to processing of the Discharge Monitoring Reports (DMRs) under the VPDES permit program. The Compliance Auditing Manual was originally issued through this guidance memo on May 23, 2002, and subsequently amended on March 25, 2008 and July 29, 2009. Section I A has been revised to incorporate the E-DMR processing procedures, as required by the 2009 Audit Action Plan. The paper DMR processing procedures were also updated to reflect current business practices as a result of the CEDS and VPDES permit program changes.

Note: Other sections of the Compliance Auditing Manual are to be updated at a later date and they will be issued through future amendments of this guidance memo.

Electronic Copy:

An electronic copy of this guidance in PDF format is available for staff internally on DEQNET, and for the general public on DEQ's website at: <http://www.deq.virginia.gov>.

Contact information:

Please contact Lily Choi, Office of Water Permits and Compliance Assistance, at (804) 698-4054 or Lily.Choi@deq.virginia.gov with any questions regarding the application of this guidance.

Disclaimer:

This document is provided as guidance and, as such, sets forth standard operating procedures for the agency. However, it does not mandate any particular method nor does it prohibit any particular method for the analysis of data, establishment of a wasteload allocation, or establishment of a permit limit. If alternative proposals are made, such proposals should be reviewed and accepted or denied based on their technical adequacy and compliance with appropriate laws and regulations.

I. COMPLIANCE AUDITING PROCEDURES

A. VPDES - DMRs Processing Procedures

The Discharge Monitoring Reports (DMRs) may be included with a permit when effluent monitoring by the permittee is required. These forms are the self-reporting tools by which data are transmitted from the permittee to the Department of Environmental Quality (DEQ). The data are reviewed and compared against the requirements of the permit. Permittees may submit the DMRs electronically or via regular mail. The DMRs are due to be submitted to DEQ by the 10th of each month after the monitoring period. The internal DEQ DMR processing flow may vary among the regions due to different staff's role and assignment. Each region should develop and maintain an updated DMR processing flow chart and/or procedures for training and support purposes.

A.1 Paper DMRs

A.1.1 Initial Process

1. Once the paper DMRs are received at the Regional Office (RO), they should be date stamped and routed to the appropriate staff. Faxed or emailed DMRs are allowed but they must be followed up with submittal of a hard copy DMR in a timely manner that bears original signatures.

2. The DMRs may be separated from the following documents:

Best Management Practices (BMPs) Reports
Toxics Management Program (TMP) Reports
Water Quality Standards (WQS) Data
Compliance Special Condition Items (i.e. soils monitoring, ground water monitoring, etc.)

These documents should be routed to the appropriate staff for entry of received, reviewed, and completed dates on the Compliance Schedule Event (CSE) screen in the Comprehensive Environmental Data System (CEDS) and distribution to the appropriate staff for any additional review and/or filing. A DMR Attachment Tracking sheet should be attached to the DMR to note what document was removed and who it was routed to. (These documents, if separated, should be routed within a couple of days of receipt; entry of received dates in CEDS should be no later than the 24th of each month.)

3. The DMR record may include the following supporting items:

Rain data
Lab data
Daily logs
Letter of Explanation (LOE) or Report of Noncompliance for any reported permit potential violation(s)
Any other data pertaining to DMR values

4. The DMRs should be logged as received in the Compliance Auditor's (CA's) tracking tool (a ✓ and/or date received indicated).

The CA should also maintain a spreadsheet that tracks the changes of the DMR forms (e.g., addition or deletion of limits, removal of outfalls, etc.) due to permit issuance, reissuance, modification, administratively continued, enforcement action, or completion of construction (i.e., issuance of Certificate to Operate). This will help the CAs to determine whether the submitted DMRs are consistent with current permit requirements.

A.1.2 Manual Review

1. The CA should review the DMRs manually for the following:
 - Potential effluent violations (reported values greater than average and maximum limit requirements or reported values less than minimum requirements)

NOTE: The Compliance Auditing System (aka. Points Program) is unable to detect the concentration minimum limit violations for Hardness (Parameter code 137), Oxidation Reduction Potential (Parameter code 631), and DO related parameters (Parameter codes 859-865). Therefore, manual review is extremely critical to identify these violations.

- 95% flow (See Section I.L of this document for 95% flow policy requirements)
- Unreported parameters (See data entry rules under Section I.A.1.3, Item 8 below)
- Incorrect DMR form (Compare hard copy DMR submittal to new DMR form as tracked by the spreadsheet)
- Improper DMR/Monitoring Report Potential Violations:

No original signature, date, or telephone number

Use of correction fluid/tape

Numbers and/or decimal point illegible

Typographical or data entry error

DMR submitted on outdated form

Monitoring period not entered or incorrect

Units, excursions, sample type, or sample frequency not entered or incorrect

Letter of Explanation (LOE) or Report of Noncompliance for potential violations not received or inadequate (not applicable for Storm Water Industrial GP with benchmark monitoring)

- Administratively continued permits (The Points Program cannot detect the DMR violations so manual review is extremely critical for these permits)
 - DMRs that are in History (The Points Program cannot detect the DMR violations so manual review is extremely critical for these DMRs)
2. The CA should highlight the DMR data potential violations and use a Post-It note or similar to make notations of "improper" category on the DMR for proper entry

into CEDS so points may be assessed properly. (Do not write on the DMR other than highlighting the violations or making a check mark to show that the data have been entered.)

3. If time permits, the CA should contact the permittees with missing data and other improper DMR items so that they may have an opportunity to correct their DMR prior to the Points Program run.

A.1.3 Data Entry

The DMR data shall be entered into CEDS no later than the 24th of each month by the appropriate staff. The Points Program will generate the points for the potential violations on or about the 25th of each month.

In order to prevent the Points Program from failing, the appropriate staff must follow the CEDS DMR data entry rules as discussed below. For additional data entry rules relative to the CEDS functionality, staff should refer to the CEDS [Water Compliance User Manual](#).

1. Received Date
 - If a paper DMR is received on or before the 15th of the month, key the date received into CEDS. If the DMR is received after the 15th of the month, check the envelope and key the postmark date into CEDS.
 - If a revision is received, enter the received date (without consideration of postmark) and the reason for revision (including parameter code if applicable) in the Comments (general or other) field. Do not change the received date in the Received Date field for the original submission.
2. Quantification Level (QL) parameters
 - When a permit contains limits with specific QLs, and the reported value is less than QL, enter "<QL" (case sensitive). The parameter-specific QLs and the specific reporting instructions for these parameters are included in the permit Part I.B. Special Conditions. Request a DMR revision if the data is improperly reported as "BQL" (should be "<QL").
3. Nondetect (ND) parameter limits
 - In instances where the limit is "Nondetect" (e.g., Federal effluent guidelines for paper mills) and the permittee reports "ND" on the DMR, translate ND to less than QL and enter "<QL" (case sensitive) in CEDS. However, in the case of Cooling Water General Permit, the chlorine limit of Nondetect is defined as <0.1 mg/l in the permit. Therefore, enter "<0.1" if "ND" is reported.
4. Contingent parameters

- Enter “NR” (case sensitive), which stands for “not required”, into CEDS for contingent parameters when monitoring is not applicable. For example, if a facility is equipped with chlorine and UV for disinfection, then Total Residual Chlorine (parameter codes 157, 165 and 213) could become contingent parameters when UV is employed during the monitoring period. Enter “NR” for these contingent parameters. However, when chlorine is employed during the monitoring period, E. coli or enterococci could become the contingent parameter which should be entered as “NR”.

5. Contingent outfalls

- Enter “NR” (case sensitive) into CEDS for all parameter requirements for contingent outfalls when no report is received for the monitoring period. Enter the received date as 10th of the month. This is only applicable if the permit states that the DMR submittal is contingent upon discharge. (Do not check the “No Discharge” indicator box unless a DMR was submitted with that information.)

6. Representative (substantially identical) outfalls

- Some permits allow the sampling of one outfall to be representative of other outfalls so that not all outfalls are actually sampled. The “Comments” section of the DMR should indicate which outfalls that particular DMR represents. For individual permits (IPs), enter the reported data for the sampled outfall. For other non-sampled outfalls, enter the reported data, except flow, from a DMR that is representative of other outfalls. For flow, enter “NR” for each non-sampled outfall that the DMR represented.
- For general permits (GPs), enter the reported data for the sampled outfall. And enter the reported data for the non-sampled outfalls as instructed for IPs above, if time permits.

7. Seasonal parameters

- Enter the DMR data for the "in season" parameter and enter “NR” for the "out of season" parameter, if populated. If the reporting frequency for the seasonal parameters (each has its distinct parameter code) is non-monthly (i.e., bi-monthly or quarterly), both “in season” and “out of season” parameters will be populated. In order to avoid any negative impact on the e-DMR system, do not remove the “out of season” parameter but enter “NR” instead. This will not be an issue for the monthly parameters because only the “in season” parameter will be populated in the CEDS DMR screen.

8. Unreported parameters

- In cases where no data are reported, enter “X” (case sensitive) into the appropriate parameter fields and check the appropriate check box in the header section of the CEDS DMR screen (Deficient DMR (25% or more data missing) or Incomplete DMR (less than 25% data missing)).

NOTE: Do not enter the received date and “Xs” if DMR is not submitted (in some cases a letter may have been provided indicating no sample was taken). Points will be assessed as missing DMR (as Received Date is NULL) rather than deficient DMR in this case.

- If a monthly DMR is submitted but a non-monthly parameter (with the same monitoring end date) is not reported, the received date should be entered on the separate non-monthly CEDS report and “Xs” entered for the data fields since this is an unreported parameter rather than a missing DMR.

9. Monitoring types

- The storm water industrial GP requires various monitoring types (i.e., benchmark, effluent, impaired water, and TMDL). In some cases, the same parameter may be included in different monitoring types (e.g., TSS concentration maximum for benchmark monitoring, and TSS concentration average and concentration maximum for effluent monitoring). While the paper DMRs are separated by monitoring type, the DMR skeleton records in CEDS are separated by outfall and monitoring frequency. To ensure that the data are properly entered in CEDS, the CA should select the parameter line by the correct monitoring type (“MT” field in CEDS) (displayed next to the parameter description field) on the DMR screen as indicated below.

B – Benchmark monitoring (no limits, monitoring only)

E – Effluent monitoring

I – Impaired water monitoring

T – TMDL monitoring

- Because the monitoring types for the storm water industrial GP are stored in an existing table in CEDS (i.e. the limit type for creating the skeleton records for the IPs and the nutrient trading GP), the following limit types (1, 2, or 3) are displayed on the DMR screen (shown in the “MT” field) for the IPs and the nutrient trading GP:

1 – Enforcement limit

2 – Final limit

3 – Interim limit

Display of the limit types should help the staff verify the accuracy of the skeleton records creation for the IPs and other GPs.

10. Others

- When keying DMR data into CEDS, do not use commas in the QTYAVG, QTYMAX, CONCMIN, CONCAVG, or CONCMAX fields. The use of commas causes the data to be rejected in the EPA’s Permit Compliance System (PCS) during upload. It may also fail DEQ’s Points Program.
- If the “Administratively Continued” box was not checked in time (i.e., prior to the 20th of the month before the permit expiration date) in the permit

Active screen or in other unusual circumstances, the skeleton records may not be created automatically by CEDS and the skeleton records need to be manually created in the transition period. When the permittee reports “No Discharge” on their DMR, along with checking the “No Discharge” indicator box, be sure to manually link (list) all pertinent parameters (from the parameter dropdown list in the Details table) on the CEDS DMR screen; otherwise they will appear on the PCS Violation Recognition Report (VRR) and Quarterly Non-compliance Report (QNCR) as absent data violations (Majors only).

- Negative values (“-“or minus) may be reported for parameter codes 079, 082, 083, 727 (Heat rejection), 820 (Temperature rise, Dec-Feb), and 224 (TOC net increase). Greater than (“>”) and Less than (“<”) values are acceptable but they are considered as flagged data and required to be assessed manually for compliance.
- The TRC limits for parameter code 157 typically include an excursion allowance so the No. of Excursions, if reported, needs to be entered. Otherwise, points may be erroneously assessed for potential violations even if the number of excursions reported is well within the permit limit.
- Frequently found data entry errors include: “QL”, “q1”, “<q1”, “x”, “NA”, “N/A”, “n/a”, “NL”, “ND”, and “%”.

After data entry is complete for each DMR, place a ✓ and/or date entered on the DMR in upper right hand corner noting initial review/CEDS data entry process has been completed. The DMRs can then be routed to appropriate staff as necessary.

A.1.4 Quality Assurance/Quality Control (QA/QC)

Once data entry is complete and before the monthly points run, the CA should compare the DMRs to the CEDS entries for Majors and spot check for Minors. The CA may use the shared Discoverer query as a tool to conduct QA/QC. The Points Program cannot detect violation when the data field is left blank. Therefore, the CA should also run the absent data query prior to the monthly points run to capture the blank data fields that were missed during the data entry process. Proper QA/QC is not only necessary to ensure data quality in CEDS, but also to enhance accuracy and completeness of the monthly data upload to EPA’s Permit Compliance System (PCS). The data uploaded to PCS are available to the general public on the following web site:

<http://www.epa-echo.gov/echo/>

The appropriate staff should send copies of DMRs (Majors only) to EPA Region 3 monthly for facilities not submitting E-DMRs.

A.1.5 DMR Filing

Upon completion of the DMR processing, the DMRs should be scanned and stored in the Enterprise Content Manager (ECM or FileNet) by the appropriate staff. The DMRs and their supporting documents may be scanned and stored in the ECM at a different stage of

the DMR process as indicated in the regional DMR processing flow chart/procedures. The yet-to-be scanned DMRs must be available to staff for data verification, if necessary.

A.1.6 DMR Revisions

1. Revised DMRs should be processed the same way as original submittals. Revised DMRs must include original signatures and signature date (no initials/date in reporting box on the DMR). Revisions are made to DMR data entry, as necessary. Documentation should be made in the Comments field on the DMR screen in CEDS indicating that a revised DMR was submitted. Revisions to reported parameter values may result in the addition/deletion of points for potential effluent violations; these adjustments shall be performed manually by the CA in the (Potential) Violation screen of CEDS.
2. DMR corrections/revisions/completions of previously omitted data shall be submitted as an original with proper signatures and date as required for the initial submittal.
3. The CA should notify the PCS Coordinator of any revisions received (Majors only) in a timely manner. The updated data will then be uploaded to PCS. Be sure to include complete information in the email, i.e., permit number, facility name, outfall number, parameter name/code, monitoring period end date, and specific changes (e.g., TSS (parameter code 004) Concentration Average changed from 30 to 25).

A.2 E-DMR

1. The E-DMR system is a web-based application that uses a secure server to receive and store the DMRs and their attachments (e.g., log sheet, lab report, etc.). The attachments are limited to documents that support the DMR data only (each attachment cannot be larger than 1.5 MB). At the time of permit issuance or reissuance, the VPDES individual permit holders are expected to participate in the E-DMR program. However, exceptions may be granted on a case-by-case basis.

The E-DMR [Facility Participation Package](#) is available from the DEQ website. The completed package should be reviewed by the DEQ staff according to the procedures established in the E-DMR [Facility Participation Approval Process Checklist](#). The CA serves as the Regional E-DMR Administrator who is the primary contact for the E-DMR participants when issues arise. Assistance is available from the Central Office (CO) if needed. The CO E-DMR Administrator is responsible for issuing/reissuing the Personal Identification Number (PIN) and resetting the Security Questions for the Certifiers (the facility users who have the privilege to submit the E-DMR). For further information regarding the E-DMR system, the staff should refer to the [Facility User's Guide](#), and the [VPDES Program Staff and Administrator's Guide](#).

The data submitted via E-DMR are transferred to CEDS on a regular basis (according to the E-DMR [Job Schedules](#), Task #9). These data include: submission date (i.e., received date), effluent data, bypasses and overflows,

Comments (general and parameter-specific), and the operator name and license number, if applicable.

2. Data validation is built in the E-DMR system and, therefore, QA/QC of the DMR data in CEDS is not required. The E-DMR system will accept only the following pre-defined values:
 - Numbers
 - “NR”: Not required
 - “X”: No sample results
 - “<QL”: Below quantification level (no space between < and QL)
 - “<”: Less than (along with a numeric value) (no space between < and numeric value)
 - “>”: Greater than (along with a numeric value) (no space between > and numeric value)
3. The CA should generate and review the E-DMR Comments Report (a shared Discoverer query) on a monthly basis. If applicable, the CA should consult with the inspection staff for point assessment.
4. The CA should also generate and review the E-DMR Unreported Parameters (data entered as “X”) Report (a shared Discoverer query) on a monthly basis. Once verified, the CA should check the appropriate check box in the header section of the CEDS DMR screen (Deficient DMR (25% or more data missing) or Incomplete DMR (less than 25% data missing)). If desired, you may include non-E-DMR facilities in the query.
5. When an attachment is submitted through the E-DMR system, the Attachment check box in the DMR screen will be flagged after the data exchange. The CA should generate the E-DMR Attachments Report (a shared Discoverer query) and forward it to the appropriate staff on a monthly basis. The appropriate staff should then log into the E-DMR system, review the attachments, and, if applicable, update the CEDS Compliance Schedule Events screen in a timely manner.
6. The permittee may revise the previous submissions and submit the revisions anytime. The revisions will be stored in the E-DMR system and a notification email will be sent to the CA for approval. Once the CA approves the revisions, the revised data will be transferred to CEDS according to the E-DMR [Job Schedules](#). A notification of approval email will be sent to the permittee and copy the PCS Coordinator. The updated data (Majors only) will then be uploaded to PCS. If the CA rejects the revisions, the permittee will be notified via an email. The CA should enter the specifics of what is approved or rejected in the Review Comments field in E-DMR since the reason for the revision provided by the facility is not visible after the revision is processed.
7. At the time of permit reissuance or modification/permit authorized change, any changes to the monitoring frequency may cause a gap in the E-DMR submittals. Paper DMR submission will then be necessary to fill the gap. In rare occasions (e.g., personnel change, technical issues), the permittee may revert back to paper

submission. After monitoring the situation, the CA should contact the permittee and request them to resume E-DMR submission as soon as possible.

If the “Administratively Continued” box was not checked in time (i.e., prior to the 20th of the month before the permit expiration date) in the permit Active screen or in other unusual circumstances, the skeleton records may not be created automatically by CEDS and the skeleton records need to be manually created in the transition period. This could result in missing E-DMR records and the need for paper DMR submission.

CEDS skeleton records for administratively continued E-DMR facilities should be reviewed each month and corrected as needed. When changes are needed, the “For Compliance Auditor Use Only” E-DMR checkbox on the DMR screen should be checked to transition the updated skeleton records to the E-DMR system.

NOTE: Only skeleton records in CEDS active classification status can be transitioned to the E-DMR system using the E-DMR checkbox. Skeleton records in CEDS history classification status can not be transitioned to the E-DMR system.

A. 3 Missing/Late DMR Report

The CA should run the Missing/Late DMR Report in CEDS and review it prior to the Points Program run. Check to make sure that the facilities that show up on the report have not submitted a DMR and are required to submit a report, or actually submitted a late report. For example, if a DMR has been received, but either the entire DMR has not been keyed or the received date of the DMR was not keyed in, the facility will show up on the report. This will give the CA an opportunity to resolve discrepancies prior to the points run which will prevent the erroneous assessment of potential violation points.