4. Click *Submit*.
5. The ***DMR/COR Search Results*** page is displayed with a table listing DMRs that can be signed and submitted. The table will not included any results if none of your DMRs have a status of NetDMR validated or NetDMR validated with errors and you have not yet acknowledged all soft errors for your DMRs. You can sort the DMRs in this table in ascending or descending order by clicking on any underlined column title.
6. In the Include in Batch Submit column, click to check the box or click the *Select All* in the table title row. Note that you can submit a maximum of 10 DMRs at a time.
7. Click **Sign & Submit Checked DMRs** after you select all the DMRs you would like to Submit.
8. The ***Sign and Submit*** page is displayed and provides the following:

- **Include in Submission** – Click to check the box in this column to confirm your intention to sign and submit this DMR.
- **View Completed DMR** – Click the icon in this column to view a read-only copy of the DMR in a separate window.
- **Permit ID** - The permit ID for this DMR.
- **Facility** – The facility name for this DMR.
- **Permitted Feature** – The permitted feature for this DMR.
- **Discharge #** - The discharge number for this DMR.
- **Discharge Description** – The discharge description for this DMR.
- **Monitoring Period End Date** – The monitoring period end date for this DMR.
- **DMR Due Date** – The due date for this DMR.
- **Status** – The status of this DMR. The status must be "NetDMR Validated" to be signed and submitted.
- **Acknowledged Soft Edit Check Errors** – Displays the parameters in the DMR being submitted for which you have acknowledged any soft errors identified by NetDMR (see Section 6.2.3).

- **Parameter Code** – The parameter code associated with the submission errors
- **Parameter Name** – The parameter name associated with the submission errors
- **Monitoring Location** – The monitoring location code and description associated with the submission errors.
- **Field** – The field in the DMR associated with the submission errors.
- **Description** – A plain English description of the error that was encountered.

Attachments – Lists the files you attached to the DMR. Note that attachments are not forwarded directly to your regulatory authority. After you sign and submit a DMR, NetDMR sends an email to the set of the notification email addresses entered by the Permit Administrator as well as

the notification email addresses entered by the Internal Administrators. Those users can access attachments by logging in to NetDMR and viewing the COR for the submitted DMR.

- **Name** – The name of the attached file, presented as a hyperlink. You can download the attached file by clicking the file name hyperlink.
- **Type** – The MIME content type of the attached file
- **Size** – The size of the attached file in megabytes (MB)

Certification Statement – The legal certification statement for the impending submission. This statement verifies:

- You are the owner of this account.
  You have protected the account and password and are in compliance with the subscriber agreement.
  You have the authority to submit the selected DMRs.
  You agree that providing the account password to sign the DMR(s) constitutes an electronic signature equivalent to your written signature.

9. **Security Question** – Provide the answer to the security question that is displayed.
10. **Password** – Enter your password in the text box.
11. **Submit** – Click *Submit* to submit the DMR(s) and view the submission confirmation.

❖ **Do Not Submit** – Click the *Do Not Submit* button to cancel a submission and return to the previous page.

Submission Confirmation

As an external user with Signatory access to a permit, after you answer the security question and provide your password on the ***Sign & Submit DMR*** page, NetDMR creates the copy of record for your DMR. This copy of record includes your DMR data, any attached files, and a submission receipt. NetDMR also generates a unique confirmation number for your submission. NetDMR sends a notification e-mail to you, any addresses associated with the submitted DMRs' permit(s), and any addresses associated with the governing regulatory authority. The e-mail indicates that NetDMR has received the submission and will forward it to the Central Data Exchange for transfer to EPA's official repository for DMR submissions, the ICIS-NPDES database. The ***Submission Confirmation*** page displays the following confirmation information for a DMR submission.

- **Permit ID** - The permit ID for this DMR.
  Facility – This name of the facility associated with the permit.
  Permitted Feature – The permitted feature for this DMR.
  Discharge # - The discharge number for this DMR.
  Discharge Description – The discharge description for this DMR.

- **Monitoring Period End Date** – The monitoring period end date for this DMR.
  DMR Due Date – The due date for this DMR.
  View COR – Click the icon in this column to view the COR associated with this DMR's submission.
  Download COR – Click the icon to download the DMR's COR Zip file.
  Download COR Signature – Click the icon to download the COR signature file for this DMR submission.

NetDMR sends the following additional email notifications to you as the Signatory:

- Notification that the DMR has been submitted to ICIS via CDX.
- Notification that ICIS has finished processing the DMR, the results of the processing, and an indication of whether errors or warning were encountered.

Correct DMR

As an external user with signatory or edit access to a permit, you can correct a DMR previously submitted using NetDMR using the on the ***Correct DMR*** as follows:

Correct DMR

1. Login to NetDMR with a Signatory or Edit user account.
2. On your ***Home*** page, click to select "Completed", "Submission Errors/Warnings", "NetDMR Validated", or "NetDMR Validation Errors" in the box next to Status on the DMR/COR Search tab and enter any other search criteria.
3. Click *Submit*.
4. The ***DMR/COR Search Results*** page is displayed with a table listing DMRs that can be corrected. In the Next Steps column, click "Correct DMR" and click Go.
5. NetDMR retrieves the parameter values, other editable fields, and list of attachments on the ***Correct DMR*** page with the corresponding information in the DMR's most recent copy of record. Edit the DMR as needed, acknowledge any soft errors, and save the DMR. To view more detail about how to edit the DMR, see Section 6.2.

Sign and Submit a Corrected DMR

6. If you are a Signatory User, click *Sign & Submit* at the top or bottom of the page.
7. On the ***Sign & Submit DMR*** page, click to check the box in the **Include in Submission** column to confirm your intention to sign and submit the corrected DMR
8. Click the icon in the View Completed DMR column to display a read-only copy of the DMR in a separate window and verify your corrections.
9. Close the read-only view of the DMR by choosing File > Close from the menu or by clicking the red X in the top right corner of the window.
10. Review the statements in the Certification Statement section of the page.
11. Enter the appropriate response to the security question.

12. Enter your password.
13. Click Submit to submit your corrected DMR. NetDMR generates a new Copy of Record for this corrected DMR.

DMR Reporting Definitions

The following are definitions of some terms used for reporting on the Discharge Monitoring Report (DMR).

Term	Definition
Annual Average Flow	The arithmetic average of all daily flow determinations taken within the preceding 12 consecutive calendar months. The annual average flow determination shall consist of daily flow volume determinations made by a totalizing meter, charted on a chart recorder and limited to major domestic wastewater discharge facilities with a 1 million gallons per day or greater permitted flow
Daily Average Flow	The arithmetic average of all determinations of the daily discharge within a period of one calendar month. The daily average flow determination shall consist of determinations made on at least four separate days. If instantaneous measurements are used to determine the daily discharge, the determination shall be the arithmetic average of all instantaneous measurements taken during that month. Daily average flow determination for intermittent discharges shall consist of a minimum of three flow determinations on days of discharge.
Daily Maximum Flow **Instantaneous Flow**	The highest total flow for any 24-hour period in a calendar month. The measured flow during the minimum time required to interpret the flow measuring device.
2-hour Peak Flow	Applies to domestic wastewater treatment plants: The maximum flow sustained for a two-hour period during the period of daily discharge. Multiple measurements of instantaneous maximum flow within a two-hour period may be compared to the permitted 2-hour peak flow.
Maximum 2-hour Peak Flow	Applies to domestic wastewater treatment plants: The highest 2-hour peak flow for any 24-hour period in a calendar month.
Daily Average Concentration	The arithmetic average of all effluent samples, composite or grab as required by the permit, within a period of one calendar month, consisting of at least four separate representative measurements. When four samples are not available in a calendar month, the arithmetic average of the four most recent measurements or the arithmetic average (weighted by flow) of all values taken during the month shall be used as the daily average concentration.
7-day Average Concentration	The arithmetic average of all effluent samples, composite or grab as required by the permit, within a period of one calendar week, Sunday through Saturday.
Daily Maximum Concentration	The maximum concentration measured on a single day, by composite sample unless otherwise specified in the permit, within a period of one calendar month.

Term	Definition
Fecal Coliform Bacteria Concentration	The number of colonies of fecal coliform bacteria per 100 milliliters effluent. The fecal coliform bacteria daily average is a geometric mean of the values for the effluent samples collected in a calendar month. The geometric mean shall be determined by calculating the nth root of the product of all measurements made in a particular period of time. For example in a month's time, where n equals the number of measurements made; or, computed as the antilogarithm of the arithmetic average of the logarithms of each measurement made. For any measurement of fecal coliform bacteria equaling zero, a substituted value of one shall be made for input into either computation method.
Composite Sample	For domestic wastewater, a sample made up of a minimum of three effluent portions collected in a continuous 24-hour period or during the period of daily discharge if less than 24 hours, and combined in volumes proportional to flow, and collected no closer than two hours apart. For industrial wastewater, a composite sample is a sample made up of a minimum of three effluent portions collected in a continuous 24-hour period or during the period of daily discharge if less than 24 hours, and combined in volumes proportional to flow, and collected no closer than one hour apart.
Grab Sample	An individual sample collected in less than 15 minutes.

Example Calculations and Reporting

The example calculations and reporting instructions described in this section are illustrated using data in the following chart titled " Example Daily Operations Log for March."

EXAMPLE DAILY OPERATIONS LOG FOR MARCH								
Day of Week	**Date**	**Flow (MGD)**	**BOD_5 (mg/l)**	**TSS (mg/l)**	**pH (s.u.)**	**Cl_2 (mg/l)**	**BOD_5 (lbs/day)**	**TSS (lbs/day)**
Sunday	3/1	0.17						
Monday	3/2	0.20				2.00		
Tuesday	3/3	0.19	22.00	30.00	7.50	1.40	34.86	47.54
Wednesday	3/4	0.17				1.30		
Thursday	3/5	0.14				1.00		
Friday	3/6	0.15				1.00		
Saturday	3/7	0.13						
Sunday	3/8	0.17						
Monday	3/9	0.23				1.40		
Tuesday	3/10	0.20	29.00	23.00	7.00	2.10	48.37	38.36
Wednesday	3/11	0.34				1.10		
Thursday	3/12	0.30				1.00		
Friday	3/13	0.20				1.20		
Saturday	3/14	0.14						
Sunday	3/15	0.15						
Monday	3/16	0.20				0.00		
Tuesday	3/17	0.18	18.00	16.00	7.20	1.30	27.02	24.02
Wednesday	3/18	0.17				1.10		
Thursday	3/19	0.21				1.40		
Friday	3/20	0.22				1.40		
Saturday	3/21	0.13						
Sunday	3/22	0.14						
Monday	3/23	0.21				1.00		
Tuesday	3/24	0.19	10.00		6.80	1.30	15.85	
Wednesday	3/25	0.18				1.70		
Thursday	3/26	0.20				1.30		
Friday	3/27	0.17				2.10		
Saturday	3/28	0.15						
Sunday	3/29	0.13						
Monday	3/30	0.19				2.20		
Tuesday	3/31	0.14				1.40		
Total	31	5.69	79.00	69.00	---	---	126.10	109.92
Average	--	0.183	19.75	23.12	N/A	N/A	31.53	36.64
Maximum	--	0.34	29.00	30.00	7.50	2.20	48.37	47.54
Minimum	--	0.13	10.00	16.00	6.80	0.00	15.85	24.02

Reporting of Concentration

The example Daily Operations Log shows that four individual BOD_5 grab samples were obtained during the month as follows:

March 3 - 22.00 mg/l
March 10 - 29.00 mg/l
March 17 - 18.00 mg/l
March 24 - 10.00 mg/l

The daily average concentration is calculated by adding the four values obtained and dividing by the number of samples taken during the month. The calculated BOD_5 daily average is 19.75 mg/l.

$$\frac{(22.00 + 29.00 + 18.00 + 10.00)}{4} = 19.75 \text{ mg/l Daily Average } BOD_5$$

The highest BOD_5 concentration was obtained on March 10. This value is reported as the maximum BOD_5 individual grab for the reporting period.

Reporting of Loadings

Some parameters in the permit are limited in terms of pounds per day (lbs/day). Although all of these parameters are measured initially in milligrams per liter (mg/l), conversion to lbs/day can be achieved by using the following formula. **Always be sure to use the flow measurement determined on the day when sampling was done.**

Flow on day of sampling (MGD) x concentration (mg/l) x 8.34 (lbs/gal) = Loading (lbs/day)

Using the four BOD_5 concentrations and the flow measurements obtained on the days of sampling, the individual daily loadings are calculated as follows:

March 3 - (.19 MGD) (22.00 mg/l) (8.34 lbs/gal) = 34.86 lbs/day
March 10 - (.20 MGD) (29.00 mg/l) (8.34 lbs/gal) = 48.37 lbs/day
March 17 - (.18 MGD) (18.00 mg/l) (8.34 lbs/gal) = 27.02 lbs/day
March 24 - (.19 MGD) (10.00 mg/l) (8.34 lbs/gal) = 15.85 lbs/day

The daily average loading (lbs/day) is calculated by adding the individual daily loading values together and dividing by the number of samples taken during the month. The calculated BOD_5 daily average loading is 31.53 lbs/day.

$$\frac{(34.86 + 48.37 + 27.02 + 15.85)}{4} = 31.53 \text{ lbs/day Daily Average } BOD_5$$

Flow-weighted Averages

When four samples are not available in a calendar month, the daily average concentration should be calculated using the four most recent measurements or the arithmetic average (weighted by flow) of all values taken during the month.

The example Daily Operations Log shows that TSS grab samples were taken only three times during the month. The values obtained and the flows on the days of sampling are as follows:

	TSS (mg/l)	Flow on day of sampling (MGD)
March 3	30.00	.19
March 10	23.00	.20
March 17	16.00	.18
Total flow on sample days		.57

To calculate the flow-weighted concentration for each sample, the following equation must be used. The flow-weighted average concentration is then determined by adding the flow-weighted concentrations for the individual samples together.

Concentration (mg/l) x Flow on day of sampling (MGD) / Total flow on days of sampling (MGD) = Flow-weighted Concentration

Sum of Flow-weighted Concentrations = Flow-weighted Daily Average Concentration

March 3 30.00 mg/l x .19/.57 = 10.00
March 10 23.00 mg/l x .20/.57 = 8.07
March 17 16.00 mg/l x .18/.57 = 5.05

Flow-weighted Daily Average = 23.12 mg/l
TSS Concentration

To calculate the daily average flow-weighted loading, the following equation must be used:

Daily average flow-weighted concentration x Average of flows on sampling days x 8.34 lbs/gal = Flow-weighted Daily Average Loading (lbs/day)

$\frac{23.12}{3}$ mg/l x $\frac{.19 + .20 + .18}{}$ x 8.34 = 36.64 lbs/day Flow-weighted Daily Average TSS Loading

pH

A review of the example Daily Operations Log indicates four pH values were obtained during the reporting period ranging from a minimum value of 6.80 s.u. on March 24 to a maximum value of 7.50 s.u. on March 3. The highest pH value obtained on March 3 is reported as the maximum pH for the reporting period. The lowest pH value obtained on March 24 is reported as the minimum pH for the reporting period.

Note that pH is not subject to averaging.

Cl_2 Residual

A review of the example Daily Operations Log shows Cl_2 residual values ranging from a minimum value of 0.00 mg/l on March 16 to a maximum value of 2.20 mg/l on March 30 were obtained during the reporting period. The highest Cl_2 value obtained on March 30 is reported as the maximum Cl_2 residual for the reporting period. The lowest Cl_2 value obtained on March 16 is reported as the minimum Cl_2 residual for the reporting period.

Note that chlorine residual is not subject to averaging.

Flow

Daily Average Flow and Daily Maximum Flow

The average daily flow is calculated by adding the individual daily flow measurements together and dividing by the number of days on which flow measurements were taken during the month. The average daily flow calculated from the example Daily Operations Log is 0.183 MGD. The daily maximum flow is the highest daily flow value obtained during the reporting period. On the example Daily Operations Log, the daily maximum flow value is 0.34 MGD, which occurred on March 11.

Annual Average Flow

The annual average flow is the arithmetic average of all daily flow determinations taken during the previous 12-month period. It is calculated by adding the individual daily flow measurements together and dividing by the number of measurements taken during the previous 365 days. For example, if the total flow recorded during a 12-month period is 600 MG and during that period of time flow measurements were obtained once per day, the annual average would be calculated as follows:

600 MG/365 Days = 1.64 MGD Annual Average Flow

For new facilities, the first annual average should be calculated based on the number of measurements taken during the first full month of operation. The second annual average should be calculated based on the number of measurements taken during the first and second months of operation. The third annual average should be calculated based on the number of measurements taken during the first, second and third months of operation, etc. After twelve months of operation, all annual average flows should be calculated using the sum of the individual flow measurements divided by the number of measurements taken during the previous 365 days.

For example, during the first full month of operation, if the total flow recorded is 45 MG and 30 flow measurements were taken (one each day), the annual average flow would be calculated by dividing the total flow by the number of measurements taken during the month: **45 MG/30 Measurements = 1.5 MGD Annual Average Flow**. During the next 30 days, if the total flow recorded is 75 MG and 31 measurements were taken (one each day), the annual average flow would be calculated by dividing the total flow for the first 61 days by the number of measurements taken during that period: **45 MG+75 MG/61 Measurements = 1.967 MGD Annual Average Flow**. During the third month of operation, if the total flow recorded is 65 MG and 31 measurements were taken (one each day), the annual average would be calculated by dividing the total flows for the first 92 days by the number of measurements taken during that period: **45 MG + 75 MG + 65 MG/ 92 Measurements = 2.01 MGD Annual Average Flow.**

2-hour Peak Flow

The 2-hour peak flow is the maximum flow sustained for a two-hour period during the period of daily discharge. The maximum 2-hour peak flow which is reported on the Discharge Monitoring Report should be the highest 2-hour peak flow for any 24-hour period in a calendar month. Questions about how to determine the 2-hour peak flow should be directed to the Wastewater Permitting Section (MC 148) in the Water Permits and Resource Management Division.

Calculating Fecal Coliform Geometric Mean

Fecal coliform bacteria concentration is the number of colonies of fecal coliform bacteria per 100 milliliters effluent. Fecal coliform bacteria daily average is the geometric mean of the fecal coliform samples collected in a calendar month. The following instructions show two ways to calculate the geometric mean.

nth Root

The geometric mean can be calculated as the *n*th root of the product of *n* data points. In this case, *n* is the number of fecal coliform bacteria sample results.

$$\text{Geometric Mean} = \sqrt[n]{X_1X_2X_3X_4X_5...X_n}$$

For example, if five fecal coliform bacteria samples are taken and the samples results are 99, 126, 90, 420, and 2200 colonies/ml, the calculated geometric mean is 253.

$$(99)(126)(90)(420)(2200) = 1.037 \times 10^{12}$$

$$\sqrt[5]{1.037 \times 10^{12}} = 253$$

Antilog

The geometric mean can also be calculated by taking the antilog of the arithmetic average of the logarithms of the sample results. The following instructions describe how this can be done using the data provided in the chart as an example.

1. Calculate the logarithm for each sample result. For example: The second sample result in the chart is 120. Enter 120 into the calculator and press the log function. The result is 2.079. This is the log of 120. *

2. Calculate the arithmetic average of the logarithms. To do this, add all of the logarithm values together and divide the sum by the number of logarithm values. In the example in the chart, the sum of the logs is 13.703. Since there are 7 log values, divide 13.703 by seven to determine the average of the logs. The result is 1.9576. **

3. Take the antilog of the arithmetic average of the logarithms. This will be the geometric mean. Using the example in the chart, enter 1.9576 into the calculator and press the antilog function. The result is 91. This is the geometric mean for the sample results. ***

Colonies per 100 ml	Log of Colonies per 100 ml
10	1
120	2.079 *
601	2.779
48	1.681
130	2.114
11	1.041
1020	3.009

Arithmetic Average	13.703 ÷ 7 = 1.9576 **
Geometric Mean	Antilog of 1.9576 = 91 ***

Using the MAL Provision to Determine Reportable Results

For some parameters (toxic organic and inorganic constituents), the permit will contain a provision in the Other Requirements section stating that compliance/noncompliance determinations will be based on the minimum analytical level (MAL) for the parameter, and effluent concentrations measured as less than the MAL are deemed to be compliant with the permit limits. This permit provision further states that when an analysis of an effluent sample for the parameter results in a measurement of less than the MAL that parameter shall be reported as "< (MAL value)" and this shall be interpreted as a value of zero (0) for compliance purposes. This means, in these instances, to record the concentration for the sample as < (MAL value) for the purposes of determining daily maximum concentration and use a zero for that measurement when calculating the daily average concentration and the daily average loading. The following examples show how to determine reportable values based on the MAL permit provision, using Mercury as an illustration.

MAL for Mercury = 0.0002 mg/l (0.2μg/l)

Example 1: Some measured values above the MAL and some below the MAL

Sample	Lab Result for Mercury (mg/l)	Concentration (mg/l) to be used for calculating average & loading	Flow on day of sample collection (MGD)	Loading (lbs/day)
Sample 1	0.00014 (<0.0002)	0.0	1.022	0.0
Sample 2	0.00028	0.00028	1.039	0.00242
Sample 3	0.00034	0.00034	1.186	0.00336
Sample 4	0.00012 (<0.0002)	0.0	0.974	0.0
Average	---	0.00015	---	0.00144

Values to be Reported on the DMR
Daily Maximum Concentration: 0.00034 mg/l
Daily Average Concentration: 0.00015 mg/l
Daily Average Loading: 0.00144 lbs/day

Example 2: All measured values below the MAL

Sample	Lab Result for Mercury (mg/l)	Concentration (mg/l) to be used for calculating average & loading	Flow on day of sample collection (MGD)	Loading (lbs/day)
Sample 1	0.00014 (<0.0002)	0.0	1.183	0.0
Sample 2	0.00011 (<0.0002)	0.0	0.966	0.0
Sample 3	0.00018 (<0.0002)	0.0	1.205	0.0
Sample 4	0.00015 (<0.0002)	0.0	1.078	0.0
Average	---	0.0	---	0.0

Values to be Reported on the DMR
Daily Maximum Concentration: <0.0002 mg/l
Daily Average Concentration: 0 mg/l
Daily Average Loading: 0 lbs/day

Note: When an analysis of an effluent sample for a parameter covered by the MAL permit provision indicates no detectable levels and the test method detection level is not as sensitive as the specified MAL, then the level of detection achieved must be used for that sample result in determining reportable maximum and average values. A zero (0) may not be used.

No Detection for Non-MAL Parameters

When an analysis of an effluent sample indicates no detectable levels for a parameter not covered by the MAL permit provision, the level of detection achieved must be used for that sample result in determining reportable maximum and average values. A zero (0) may not be used.

SEWAGE SLUDGE ANNUAL REPORTING

Annual Report

Your Texas Pollutant Discharge Elimination System (TPDES) permit requires you to submit a sewage sludge annual report to the Enforcement Division of the Texas Commission on Environmental Quality (TCEQ) and to the TCEQ Regional Office. Previously, no standard format was required for this report. To standardize reporting, the TCEQ has developed Discharge Monitoring Reports (DMRs) for sewage sludge. If you have been sent DMRs, you are now required to submit your annual sewage sludge data using the DMRs with supplemental attachments. Supplemental attachments are to be used for any additional information that is required to be reported but is not included on the DMRs. The DMRs with the additional attachments will meet the requirement in the TPDES permit for the sewage sludge annual report.

Monitoring Period And Due Date

The monitoring period for sewage sludge use and disposal begins on August 1 and ends on July 31. The DMRs and attachments are due September 1. If your permit is issued during the monitoring cycle, you may receive DMRs for that portion of the monitoring cycle after issuance of your permit.

Discharge Monitoring Reports (DMRs)

The following DMRs will be used for reporting sewage sludge use and disposal information for TPDES permits.

SLDP DMR: Production and Use
SLLA DMR: Land Application (for land application on-site or marketing and distribution of sewage sludge for land application)
SLLY DMR: Pathogen Density Data for Land Application
SLDF DMR: Landfill
SLSA DMR: Surface Disposal
SLDL DMR: Digested Sludge and Sludge in Lagoons

You will receive DMRs for all sewage sludge use and disposal options that are listed in your TPDES permit. *All DMRs that you receive must be submitted to TCEQ. If you do not submit all of the DMRs, you may receive a Notice of Violation for failure to report.*

Basic Instructions for Sewage Sludge DMRs

Some basic instructions for completing the sewage sludge DMRs are listed below. More detailed instructions for each DMR can be found in Section II of this packet.

- Every permittee must fill in data on the Production and Use (SLDP) DMR, even if sewage sludge was not produced during the monitoring period. If a particular use or disposal method was not applicable during the monitoring period, put a "0" in the appropriate space for that item on the SLDP DMR. Otherwise, fill in actual values. If sewage sludge was not produced during the monitoring period, put a "0" in each space on the form for reported values.

- For the other DMRs, fill in data on the form if you used or disposed of sewage sludge by the practice represented by that DMR.

- If a particular DMR does not apply to your sewage sludge use or disposal practice, mark "No Discharge" in the top right hand corner of the form. This indicates that no sewage sludge was handled by that method.

- *Sign and date all DMRs on each page, including those marked "No Discharge."*

Additional Attachments

Any additional sewage sludge information that is required to be reported annually but is not listed on the DMRs should be attached to the original copies of the DMRs. You should check your permit to determine what specific additional data must be reported. Additional information

that is typically required to be reported is listed below. Copies of the required certification statements are included in Section III of this packet.

Type Method	Additional Information To Be Attached to DMRs
Land Application On-site	• Identity of hauler(s) and TCEQ transporter number. • Date(s) of disposal. • Owner of disposal site(s). • TCEQ registration number, if applicable. • Amount of sludge disposal dry weight (lbs/acre) at each disposal site.

Type Method	Additional Information To Be Attached to DMRs

Type Method	Additional Information To Be Attached to DMRs
Land Application On-site (continued)	• If Class B, information on how site restrictions were met. • Certification statement listed in either 30 TAC §312.47(a)(4)(A)(ii) or 30 TAC §312.47(a)(5)(A)(ii) as applicable to the permittee's sewage sludge treatment activities. • When the amount of any pollutant applied to the land exceeds 90% of the cumulative pollutant loading rate for that pollutant, as described in Table 2: – Location, by street address, and specific latitude and longitude; – Number of acres in each site on which bulk sewage sludge was applied; – Date and time bulk sewage sludge was applied to each site; – Cumulative amount of each pollutant (i.e., pounds/acre) listed in Table 2 in the bulk sewage sludge applied to each site; – Amount of sewage sludge (i.e., dry tons) applied to each site.
Marketing and Distribution of Sewage Sludge for Land Application	• Certification statement listed in the permit.
Municipal Solid Waste Landfill	• Identity of hauler(s) and transporter registration number. • Owner of disposal site(s). • Location of disposal site(s). • Date(s) of disposal. • Certification that the sewage sludge meets the requirements of 30 TAC Chapter 330 concerning the quality of the sewage sludge disposed in a municipal solid waste landfill (i.e. passes TCLP and paint filter tests).

Type Method	Additional Information To Be Attached to DMRs
Surface Disposal	• Amount of sludge disposal dry weight (tons) at the sewage surface disposal site. • Date(s) of disposal. • Certification statement found in 30 TAC §312.67 as listed in the permit. • Narrative description explaining how the management practices in 30 TAC §312.64 are met. • Identity of hauler(s) and TCEQ transporter number. • Owner of disposal site.
Digested Sewage Sludge and Lagoons	• Results of any other additional analyses performed on the sludge that are not included on the DMRs (i.e., priority pollutants)

Who To Contact About Questions

If you have questions about how to report data on the DMRs or how to submit the DMRs, please contact:

Water Quality Compliance Monitoring Team (MC 224)
Enforcement Division
(512) 239-2545

If you have questions about the technical aspects of the permit requirements or applicable rules and regulations for sewage sludge use and disposal, please contact:

Agriculture Team (MC 158)
Water Permits and Resource Management Division
(512) 239-4433

How to Obtain Copies of Applicable Rules and Regulations

Copies of applicable rules and regulations are available from the following sources:

Rules/Regulations	Electronic Copies	Printed Copies
TCEQ Rules (e.g., 30 TAC Chapter 312)	http://www.TCEQ.state.tx.us	TCEQ Publications, MC 195 P.O. Box 13087 Austin, TX 78711-3087 Phone: 512/239-0028 Fax: 512/239-4488 Note: The initial copy is free and you may reproduce additional copies yourself. If you request TCEQ to reproduce copies, a fee will be charged.

Federal Regulations (e.g., 40 CFR Part 503)	http://www.epa.gov	U.S. Government Printing Office Texas Crude Building 801 Travis Street Houston, Texas 77002 Phone: 713/228-1187 U.S. Government Printing Office Room 1C-50 Federal Building 1100 Commerce Street Dallas, Texas 75242 Phone: 214/767-0076

COMPLETING SEWAGE SLUDGE DMRs

SLDP DMR: Production And Use

Data must be filled in on this form by all permittees that generate sewage sludge, even if sewage sludge was not produced during the monitoring period. This DMR cannot be marked "No Discharge" at the top of the form. The annual production and use information must be reported in metric tons per year (MT/yr); other information should be reported in the units indicated on the form. All reported quantity and concentration measurements must be based on dry weight. If a particular sewage sludge use or disposal method does not apply to your facility, then put a "0" in that field. If sewage sludge was not produced during the monitoring period, put zeroes in all the spaces for reported values.

Polychlorinated Biphenyls (PCBs): Indicate the concentration of PCBs (mg/kg) measured in the sewage sludge during the reporting period. If PCB testing did not apply during the reporting period, put "N/A" for not applicable and include an explanatory statement in the Comments Section at the bottom of the form.

Toxic Characteristic Leaching Procedure (TCLP): If a TCLP test was performed on the sewage sludge during the reporting period, indicate the results of the TCLP test. If the sewage sludge passed the TCLP test, put a "0" (Pass). If the sewage sludge did not pass the TCLP test, put a "1" (Fail). If TCLP testing did not apply during the reporting period, put "N/A" for not applicable and include an explanatory statement in the Comments Section at the bottom of the form.

Annual Sludge Production: Indicate the amount of sewage sludge produced after final sludge treatment for the reporting period. If you did not produce sewage sludge during the reporting

period, put a "0" and include an explanatory statement in the Comments Section at the bottom of the form.

Annual Sludge Land Applied (land application on-site or marketing and distribution): If you marketed and distributed sewage sludge, indicate the amount that was sold or given away in bulk, bag or other container for land application. If you land applied sewage sludge *on-site* for beneficial use, indicate the amount of sewage sludge that was land applied at your site. *If your sewage sludge was hauled off-site for land application or was transferred to another facility for further processing prior to land application, put a "0" in this field (see Annual Sludge Disposed by Other Method for related reporting instructions).*

Annual Sludge Surface Disposed: Indicate the amount of sewage sludge that was prepared and disposed in a surface disposal unit.

Annual Sludge Landfilled: Indicate the amount of sewage sludge that was prepared and co-disposed in a municipal solid waste landfill.

Annual Sludge Incinerated: Indicate the amount of sewage sludge that was prepared and disposed by incineration.
Annual Sludge Transported Interstate: Indicate the amount of sewage sludge that was prepared and transported to another state other than the one in which it was prepared for eventual use or disposal.

Annual Sludge Disposed by Other Methods: Indicate the amount of sewage sludge that was prepared and was used or disposed by a method other than land application on-site, marketing and distribution, surface disposal, co-disposal in a municipal solid waste landfill, incineration, or transportation to another state. In the Comments Section at the bottom of the form, describe the other method. *If your sewage sludge was hauled off-site for land application or was transferred to another facility for further processing before it was disposed or beneficially used, you should report the amount hauled or transferred in this field on the form and put an explanatory statement in the Comments Section. The explanatory statement should include the name and registration number of the transporter or the name and ID number of the facility to which the sludge was transferred for further processing.*

SLLA DMR: Land Application (for land application on-site or marketing and distribution of sewage sludge for land application)

You must fill in data on this form if you prepared bulk sewage sludge and beneficially reused it by land application *on-site* or gave it away in bulk, bag or other container for land application (marketing and distribution). *If you did not use these methods, or if your sewage sludge was hauled off-site for land application or was transferred to another facility for further processing before it was land applied, mark "No Discharge" at the top of the form and leave the spaces for reported values blank.*

Pollutant Table Used: Indicate the pollutant table from 30 TAC §312.43 which is used for determining compliance with pollutant quality.

Table 2: Used if bulk sewage sludge exceeds the pollutant concentrations of Table 3.

Table 3: Used if bulk sewage sludge or sewage sludge sold or given away in bulk, bag or other container of one metric ton or less meets (does not exceed) the pollutant concentrations of Table 3.

Table 4: Used if sewage sludge is sold or given away in bulk, bag or other container of one metric ton or less, does not meet the Pollutant Concentrations of Table 3, and contains a label or information sheet indicating an annual whole sludge application rate which will not cause any of the Annual Pollutant Loading Rates in Table 4 to be exceeded.

Metals: The information to be reported for metals consists of three types.

Maximum Concentration (mg/kg): Indicate the maximum concentration for all metals during the monitoring period in the "Maximum Concentration" column. These concentrations are limited by the values of Table 1 in 30 TAC §312.43.
Average Concentration (mg/kg): If the sewage sludge meets the pollutant concentrations in Table 3 of the permit, report the "Average Concentration" results for the monitoring period. If your facility does not use the Pollutant Concentration limits for compliance, put a "0" to indicate not applicable.

Loading Rate (lbs/acre): If the sewage sludge does not meet the Table 3 pollutant concentrations and it is subject to the cumulative loading rates of Table 2, you must report the cumulative loading of the metals at the site in the "Maximum Loading" column if the loading rate has reached 90% or more of the maximum rate allowed by Table 2. If the loading rate has not reached 90% or more of the maximum rate allowed, or if the cumulative loading rates do not apply, put a "0" in this column to indicate not applicable.*

* For purposes of reporting sewage sludge concentration and loading, analytical values below detection limit should be reported as "< x", where "x" represents the detection limit.

Level of Pathogen Requirement Achieved: Indicate the level of pathogen control requirements achieved. If the sewage sludge met the Class A requirements, put a "1". If the sewage sludge met the Class B requirements, put a "2". If the sewage sludge did not meet either the Class A or Class B levels, put a "0".

Pathogen Alternative Used: Indicate by number which alternative was used to achieve the

pathogen control level indicated above. Descriptions of the pathogen control alternatives for Class A (numbers1-6) and Class B (numbers 1-3) are listed in 30 TAC §312.82 and in the permit. If the sewage sludge did not meet either Class A or Class B levels, put a "0".

Vector Attraction Reduction Alternative Used : Indicate by number which alternative was used to achieve the vector attraction reduction requirement. Descriptions of the vector attraction reduction alternatives which apply to land application are listed in 30 TAC §312.83 and in the permit. If the sewage sludge did not meet any of the vector attraction reduction alternatives, put a "0".

Annual Whole Sludge Application Rate: If the sewage sludge did not meet the pollutant concentrations of Table 3, and it was sold or given away in bulk, bag or other container with a label or information sheet containing an annual whole sludge application rate which will not cause any of the annual pollutant loading rates in Table 4 to be exceeded, report the annual whole sludge application rate in this field on the form. If this information does not apply to your sewage sludge, put a "0" to indicate not applicable.

SLLY DMR: Pathogen Density Data For Land Application (for land application on-site or marketing and distribution of sewage sludge for land application)

You must fill in data on this form if you prepared bulk sewage sludge and beneficially reused it by land application *on-site* or gave it away in bulk, bag or other container for land application (marketing and distribution). *If you did not use these methods, or if your sewage sludge was hauled off-site for land application or was transferred to another facility for further processing before it was land applied, mark "No Discharge" at the top of the form and leave the spaces for reported values blank.*

Fecal Coliform: If you tested the sewage sludge for Fecal Coliform, report the result as a MPN (most probable number) measurement. If Fecal Coliform testing was not required, put a "0" to indicate not applicable.*

Salmonella: If you tested the sewage sludge for Salmonella, report the result as a MPN (most probable number) measurement. If Salmonella testing was not required, put a "0" to indicate not applicable.*

* The MPN measurement can be found in Standard Methods.

SLDF: Landfill

You must fill in data on this form if you prepared sewage sludge and co-disposed of it in a municipal solid waste landfill. If you did not use this method, mark "No Discharge" at the top of the form and leave the spaces for reported values blank.

In Compliance With Part 258 Requirements for Sewage Sludge: Indicate whether the sewage sludge that was co-disposed in a municipal solid waste landfill met the requirements of 40 CFR Part 258 (passed TCLP and paint filter tests). If the sewage sludge met both of the requirements, put "1" (Yes). If the sewage sludge did not meet one or both of the requirements, put a "0" (No).

SLSA DMR: Surface Disposal

You must fill in data on this form if you prepared sewage sludge and disposed of it by surface disposal. If you did not use this method, mark "No Discharge" at the top of the form and leave the spaces for reported values blank.

Unit With Liner/Leachate Collection System: Indicate the presence of a liner and leachate collection system in the surface disposal unit. If the unit has a liner, put "1" (Yes). If the unit does not have a liner, put a "0" (No).

Unit Boundary to Property Line: If the sewage sludge unit does not have a liner and leachate collection system, indicate the actual minimum distance in meters from the sewage sludge unit boundary to the property line of the surface disposal site.

pH: Enter the highest pH value measured for the sewage sludge in the "Maximum Concentration" column. Note: If your DMR shows that a value is to be reported in the "Average Concentration" column for pH, this is an error. You may put a "0" or asterisks in this column to indicate not applicable.

Metal Concentrations: If the sewage sludge unit does not have a liner and leachate collection system, determine the allowed pollutant concentrations for Arsenic, Chromium and Nickel from Tables 6 or 7 of 30 TAC §312.63, and as indicated in the permit, based on the unit boundary to property line distance. Enter the allowed concentration in the "Average Concentration" column of the form. Enter the actual maximum concentration measured in the "Maximum Concentration" column of the form. The reported measurements for each of these metals must be based on dry weight.

If the sewage sludge unit has a liner and leachate collection system, you do not need to fill in pollutant concentrations, but you must put "0" to reflect not applicable in both the "Average" (allowed) and "Maximum" (actual) columns for the metal parameters.

Level of Pathogen Requirement Achieved: Indicate the level of pathogen control requirements achieved. If the sewage sludge met Class A requirements, put a "1". If the sewage sludge met Class B requirements, put a "2". If the sewage sludge did not meet either Class A or Class B levels, put a "0".

Pathogen Alternative Used: Indicate by number which alternative was used to achieve the pathogen control level indicated above. Descriptions of the pathogen control alternatives for Class A (numbers1-6) and Class B (numbers1-3) are given in 30 TAC §312.82 and in Section I.B.3 of the permit. If the sewage sludge did not meet either Class A or Class B levels, put a "0".

Vector Attraction Reduction Alternative Used: Indicate by number which alternative was used to achieve the vector attraction reduction requirement. Descriptions of the vector attraction reduction alternatives which apply to surface disposal (numbers1-11) are given in 30 TAC §312.83 and in the permit. If the sewage sludge did not meet any of the vector attraction reduction alternatives, put a "0".

SLDL: Digested Sewage Sludge And Sludge in Lagoons

You must fill in data on this form if you prepared sewage sludge and stored it in lagoons. If you did not use this method, mark "No Discharge" at the top of the form and leave the spaces for reported values blank.

Parameter Results: Indicate the measured values for the listed parameters.

SLUDGE CERTIFICATION STATEMENTS (REQUIRED CERTIFICATION STATEMENTS)

Land Application On-site

30 TAC §312.47(a)(4)(A)(ii) - Applies if the concentrations for metals in Table 3 are met and the Class B pathogen requirements are met.

"I certify, under penalty of law, that the Class B pathogen requirements in 30 TAC §312.82(b) and the vector attraction reduction requirement in (insert one of the vector attraction reduction requirements in §312.83(b)(1)-(8) if one of those requirements is met) have been met. This determination has been made under my direction and supervision in accordance with the system designed to ensure that qualified personnel properly gather and evaluate the information used to determine that the pathogen requirements [and vector attraction reduction requirements if applicable] have been met. I am aware that there are significant penalties for false certification including the possibility of fine and imprisonment."

- OR -

30 TAC §312.47(a)(5)(A)(ii) - Applies if the cumulative loading rates for metals in Table 2 are met.

"I certify, under penalty of law, that the pathogen requirements in (insert either 30 TAC §312.82(a) or (b)) and the vector attraction reduction requirement in (insert one of the vector attraction reduction requirements in §312.83(b)(1)-(8) if one of those requirements is met) have been met. This determination has been made under my direction and supervision in accordance with the system designed to ensure that qualified personnel properly gather and evaluate the information used to determine that the pathogen requirements [and vector attraction reduction requirements] have been met. I am aware that there are significant penalties for false certification including the possibility of fine and imprisonment."

Marketing and Distribution

"I certify, under penalty of law, that the Class A pathogen requirements in 30 TAC §312.82(a) and the vector attraction reduction requirement in (insert one of the vector attraction reduction requirements in §312.83(b)(1)-(8)) have been met. This determination has been made under my direction and supervision in accordance with the system designed to ensure that qualified personnel

properly gather and evaluate the information used to determine that the pathogen requirements and vector attraction reduction requirements have been met. I am aware that there are significant penalties for false certification including the possibility of fine and imprisonment."

Landfill

"I certify, under penalty of law, that the requirements of 30 TAC Chapter 330 concerning the quality of the sludge disposed in a municipal solid waste landfill have been met (i.e., the sewage sludge passed the TCLP and paint filter tests). This determination has been made under my direction and supervision in accordance with the system designed to ensure that qualified personnel properly gather and evaluate the information used to determine that these requirements have been met. I am aware that there are significant penalties for false certification including the possibility of fine and imprisonment."

Surface Disposal

"I certify, under penalty of law, that the management practices in 30 TAC §312.64; pathogen requirements in 30 TAC §312.82 and the vector attraction reduction requirements in 30 TAC §312.83(b) have been met. This determination has been made under my direction and supervision in accordance with the system designed to assure that qualified personnel properly gather and evaluate the information used to determine that the (insert the specific requirements for pathogen and vector attraction reduction) have been met. I am aware that there are significant penalties for false certification including the possibility of fine and imprisonment."

Common Sludge Calculations

Calculating Sewage Sludge Dry Metric Tons

On the SLDP DMR for sewage sludge production and use, the permittee must report the amount of sewage sludge produced and the amount of sewage sludge disposed or beneficially reused in dry metric tons. The following calculations show how to convert gallons or cubic yards of sewage sludge into dry metric tons.

Converting Gallons to Dry Metric Tons

To convert gallons of sewage sludge to dry metric tons, the following equation can be used.

$$\frac{\text{X gal}}{1} \times \frac{8.34 \text{ lbs}}{1 \text{ gal}} \times \frac{1 \text{ KG}}{2.2046 \text{ lbs}} \times \frac{1 \text{ MT}}{1000 \text{ KG}} \times \frac{\% \text{ Dry MT}}{1 \text{ MT}} = \text{Dry Metric Tons}$$

Short Conversion: $\frac{(X)(8.34)(\%)}{(2.2046)(1000)}$

Where:
X = Gallons of sewage sludge
% = Percent of solids in the sewage sludge
The other values in the equation are conversion factors.

For example, if the permittee disposes of 22,500 gallons of sewage sludge that has a solids content of 5%, the amount disposed is 4.26 dry metric tons.

$$\frac{(22500)(8.34)(0.05)}{(2.2046)(1000)} = 4.26 \text{ dry metric tons}$$

Converting Cubic Yards to Dry Metric Tons

To convert cubic yards of sewage sludge to dry metric tons, the following equation can be used.

$$\frac{X \text{ yd}^3}{1} \times \frac{27 \text{ ft}^3}{1 \text{ yd}^3} \times \frac{Y \text{ lbs}}{1 \text{ ft}^3} \times \frac{1 \text{ KG}}{2.2046 \text{ lbs}} \times \frac{1 \text{ MT}}{1000 \text{ KG}} \times \frac{\% \text{ Dry MT}}{1 \text{ MT}} = \text{Dry Metric Tons}$$

Short Conversion: $\frac{(X)(27)(Y)(\%)}{(2.2046)(1000)}$

Where:
X = Cubic yards of sewage sludge
Y = Unit weight of sewage sludge in pounds per cubic foot
% = Percent of solids in the sewage sludge
The other values in the equation are conversion factors.
For example, if the permittee disposes of 100 cubic yards of sewage sludge with a solids content of 25% and a unit weight of 75 pounds per cubic foot, the amount disposed is 22.96 dry metric tons.

$$\frac{(100)(27)(75)(0.25)}{(2.2046)(1000)} = 22.96 \text{ dry metric tons}$$

Commonly Asked Questions

1. How do I change data for a parameter previously submitted?

Follow the steps for Edit a DMR. Any data resubmitted will override previously submitted data.

2. What water quality reports can be submitted through NetDMR?

Discharge Monitoring Report (DMR) data can be submitted electronically through the NetDMR system for the following TPDES permits where TCEQ has enforcement authority:

- Industrial wastewater discharge individual permit
- Domestic wastewater discharge individual permit
- Authorizations under the TPDES Wastewater General Permit for discharges from concrete production facilities (TXG110000)
- Authorizations under the TPDES Wastewater General Permit for discharges of wastewater from concentrated aquatic animal production facilities and certain related activities (TXG130000)
- Authorizations under the TPDES Wastewater General Permit for discharges contaminated with petroleum fuel or petroleum substances (TXG830000)
- Authorizations under the TPDES Wastewater General Permit for discharges of wastewater and contact storm water from petroleum bulk stations and terminals (TXG340000)

3. What reports cannot be submitted through NetDMR?

At this time, the following reports can not be accepted as valid TCEQ submittals:

- ***Monthly Effluent Reports (MER)*** - permittees required to report by MER must continue submitting paper forms to TCEQ. This data cannot be submitted through the NetDMR system at this time.
- ***Concentrated Animal Feeding Operation (CAFO) General Permit Reports*** - Annual reports required by authorizations under the TPDES

CAFO general permit must continue to be submitted by paper. See TPDES CAFO.

- ***Other required reports*** - Individual and general permits with reporting requirements that must continue to be submitted in paper form by mail include:
  - Pretreatment Semi Annual and Annual Reports required in permit or pretreatment program
  - Biomonitoring Quarterly, Semi Annual, and Annual Report required in permit
  - Sludge Beneficial Land Use Quarterly and Annual Reports (domestic permits & sludge disposal)
  - Multi Sector General Permit Benchmark testing
  - MS4 Annual Reports
  - Groundwater Reports required in permit
  - Other reports relate to compliance activities specified in your permit (example - construction schedule)
  - Notices of non-compliance

4. Do I have to submit all the parameters for a report at one time?

The initial DMR report submitted should contain all parameters for an outfall for the specific monitoring period. However, this system has been designed to allow users to submit data by parameter in order to allow for corrections to one or more pieces of data after an initial submittal.

5. What if my permit requires me to sample a particular parameter 4 times per week but I sampled 8 times per week? I do not see a corresponding frequency of analysis code to select from in the drop-down list. How do I report this?

If you have sampled at a frequency which does not have a corresponding description/code available in the drop-down list, select " (XX/XX)". If you choose this option, you must include a description of the actual frequency of analysis for the parameter in the comments field on the edit parameter page.

6. *If the NetDMR system is not available online for submitting data, how do I report my self-reported data to the TCEQ*

TCEQ will make every effort to have NetDMR available for customers to use as much as possible. However, certain maintenance activities are necessary for upgrades and security. These activities often require temporarily bringing down a server or database that NetDMR uses. During these times, parts of or all of NetDMR will be unavailable for use. Most of these maintenance activities are scheduled, but occasionally emergency maintenance may occur that is not on the schedule.

If you are unable to submit your data through the NetDMR system due to unavailability for *extended periods of time*, you can create a paper DMR using a blank form. A blank DMR form is available both inside and outside the NetDMR application. The external form can be found at http://www.tceq.state.tx.us/assets/public/compliance/netdmr/EPA_dmr_form_3320-1_rev_03-99.pdf. The internal form can be found after the login and towards the top of the page, click on the "Blank DMR Form" link under the Download tab.

NOTE: When your facility is registered to submit data electronically, this method of reporting on paper DMRs should only be used on a temporary, emergency basis.

NPDES

REPORTING

REQUIREMENTS

HANDBOOK

www.epa.gov/region6/6en/w/dmrman.pdf

Revised August 25, 2004

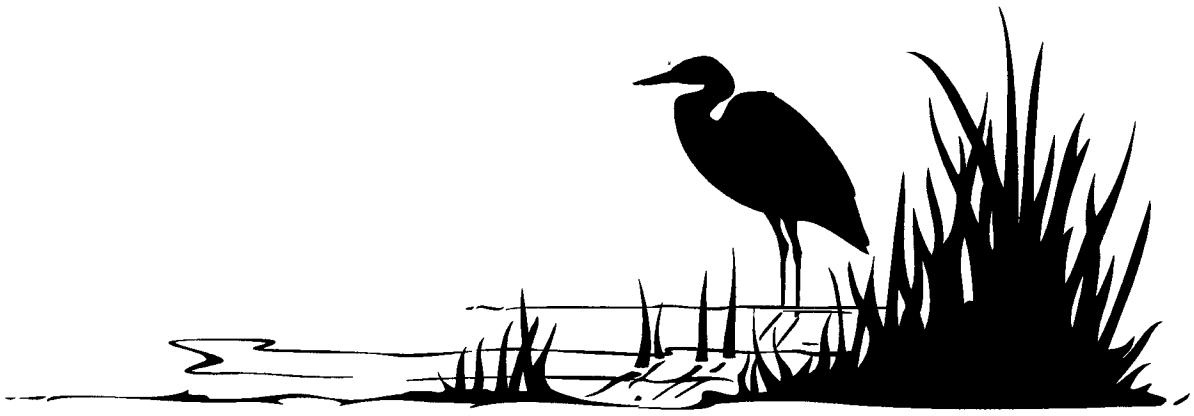
Environmental Protection Agency
Region 6 (6EN-WC)
1445 Ross Ave., Suite 1200
Dallas, TX 75202-2733

PROGRAM AUTHORITY

Facilities that discharge wastewater to receiving waters of the United States must apply for a National Pollutant Discharge Elimination System (NPDES) permit for that discharge. Program Authority is in accordance with Sections 301, 302, 308, 402 and 503 of the Federal Water Pollution Control Act of 1972, as amended by the Clean Water Act of 1977. The Permittee is responsible for understanding and meeting all permit requirements and submitting complete, accurate and legible self-monitoring data.

This booklet is designed to assist the permittee in complying with the reporting requirements in the NPDES permit. We will take you step-by-step in filling out the Discharge Monitoring Report (DMR) and submitting non-compliance and other reports. We have listed the most commonly asked questions with the answers. You will also find helpful information in the form of commonly used math formulas and acceptable abbreviations for filling out the DMR.

TABLE OF CONTENTS



I. DISCHARGE MONITORING REPORTS (DMRS)

The sample collection and analytical results required by the effective permit (EPA or state issued) must be reported to the enforcement authority (EPA or state) through the submission of DMRs (EPA Form 3320-1). An original and one legible copy of the DMRs must be submitted to the enforcement authority by the date specified in the permit. This data is entered into a national database available to the public. *It is extremely important that the data reported on the DMR be accurate, timely, and legible to ensure the facility's compliance status is correctly reflected.* The reported data will be compared with the current limits contained in the permit or any enforcement order to determine facility compliance. It should be noted that a DMR is required even if the facility did not have a discharge during a reporting period.

FIGURE 1

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

Form Approved
OMB No. 2040-0004
Approval expires 05-31-99

PERMITTEE NAME/ADDRESS (Include Facility Name/Location)
NAME 1
ADDRESS

FACILITY LOCATION 2

3 PERMIT NUMBER

4 DISCHARGE NUMBER

5 MONITORING PERIOD FROM (YEAR / MO / DAY) TO (YEAR / MO / DAY)
(20-21) (22-23) (24-25) (26-27) (28-29) (30-31)

6 ☐ Check here if No Discharge

NOTE: Read instructions before completing this form

PARAMETER (32-37)		(3 Card Only) QUANTITY OR LOADING (45-53) (54-61) AVERAGE	MAXIMUM	UNITS	(4 Card Only) QUALITY OR CONCENTRATION (39-45) (46-53) (54-61) MINIMUM	AVERAGE	MAXIMUM	UNITS	NO. EX. (62-63)	FREQUENCY OF ANALYSIS (64-68)	SAMPLE TYPE (69-70)
7	SAMPLE MEASUREMENT								8A	8B	8C
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
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	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER

10

TYPED OR PRINTED

CERTIFY UNDER PENALTY OF LAW THAT THIS DOCUMENT AND ALL ATTACHMENTS WERE PREPARED UNDER MY DIRECTION OR SUPERVISION IN ACCORDANCE WITH A SYSTEM DESIGNED TO ASSURE THAT QUALIFIED PERSONNEL PROPERLY GATHER AND EVALUATE THE INFORMATION SUBMITTED. BASED ON MY INQUIRY OF THE PERSON OR PERSONS WHO MANAGE THE SYSTEM, OR THOSE PERSONS DIRECTLY RESPONSIBLE FOR GATHERING THE INFORMATION, THE INFORMATION SUBMITTED IS, TO THE BEST OF MY KNOWLEDGE AND BELIEF TRUE, ACCURATE, AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT FOR KNOWING VIOLATIONS.

11

SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

TELEPHONE 12 (AREA CODE / NUMBER)

DATE (YEAR / MO / DAY)

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

EPA Form 3320-1 (10-96) (REPLACES EPA FORM T-40 WHICH MAY NOT BE USED.) PAGE OF

DISCHARGE MONITORING REPORTS (DMRS)

Instructions for Completion

See Figure 1
DISCHARGE MONITORING REPORT

1. Permittee Name/Address - Name and mailing address of permittee.

2. Facility/Location - Enter if different from mailing address.

3. Permit Number - The permit number usually consists of nine characters, alpha and numeric combined. Currently, the permit numbers begin with the two-digit alpha state abbreviation (EX: ARXXXXXXX, etc.). For permits issued by the State of Texas (TPDES), the EPA ID Number is the permit number used for reporting purposes. Other variations of the permit number will be assigned to identify special programs (EX: storm water, oil and gas, sludge, etc.)

4. Discharge Number (Outfall Number) - Consists of a combination of four alpha and numeric characters. (EX: 001A, 002Q, 003S, 004Y). Some exceptions include, but are not limited to, biomonitoring/toxicity, and sludge. The first two characters are "TX" for biomonitoring/toxicity reporting and "SL" for sludge reporting. The last two characters are usually an assigned code used for Agency tracking purposes (EX: TX1A, TX1S, TX1Y, SLDP, SLSA, SLSF, etc.).

5. Monitoring Period - From first day of monitoring period through last day of monitoring period. The dates should be displayed as YR MO DAY. Applicable monitoring periods will be specified in each permit. Some examples include, but are not limited to:

Monthly	-	02 01 01	to	02 01 31
Quarterly	-	02 01 01	to	02 03 31
Semi-annual	-	02 01 01	to	02 06 30
Annual	-	02 01 01	to	02 12 31

6. No Discharge - Mark this block if the facility has no discharge for a specific outfall during the monitoring period. Do not mark if the facility had a discharge but failed to sample.

7. Parameters - Specified in the permit as effluent characteristics for each discharge number (outfall), one parameter per box. Each box must display the parameter name and corresponding storet code number. (EX: BOD (00310), pH (00400), TSS (00530), flow (50050)). The parameters should display on the DMR form in numeric order by storet code number. **Consult the appropriate regulatory agency if any changes need to be made to the pre-printed or self-generated DMRs.**

8. Sample Measurement - Sample measurement data for each parameter under "Quantity or Loading" or "Quality or Concentration" in accordance with permit limitations. Indicate

units (lbs/day, mg/L, su, etc) as specified in the permit. It may be necessary to do calculations to convert data to the units required in the permit. "Average" is normally arithmetic average (geometric average for bacterial parameters) of all sample measurements for each parameter obtained during the monitoring period. "Maximum" and "Minimum" are normally the highest and lowest measurements obtained during the monitoring period. (See **TABLE 1 - MATH FORMULAS.**) **Consult the appropriate regulatory agency if any changes need to be made to the pre-printed or self-generated DMRs.**

A. No. EX (Number of Exceedance) - Total of sample measurements that exceed the daily maximum, daily minimum, 7-day (weekly) average permit limit. **DO NOT** include monthly average or daily average violations in this field. If none, enter "0". Permittees with continuous pH, or temperature monitoring requirements should consult the permit for what constitutes an accedence and report accordingly.

B. Frequency of Analysis - **Actual** frequency of analysis used during the monitoring period; the minimum requirement is as specified in the permit. Enter "CONT" for continuous monitoring, "01/07" for one day per week, "01/30" for one day per month, "01/90" for one day per quarter, etc. Some examples are included in **TABLE 2.**

C. Sample Type - **Actual** sample type used during monitoring period. Enter "GRAB" for individual sample, "24HC" for 24-hour composite, "CONT" for continuous monitoring. Some examples are included in **TABLE 3.**

9. Permit Requirement - Effluent limitations for each parameter as specified in the permit are displayed on the DMR under "Quantity or Loading" and/or "Quality or Concentration". Monitoring requirements for frequency of analysis and sample type as specified in the permit are also displayed. The DMR must reflect the most current monitoring and reporting requirements. **Consult the appropriate regulatory agency if any changes need to be made to the pre-printed or self-generated DMRs.**

10. Name/Title Principal Executive Officer or Authorized Agent - See the permit for qualifications of Principal Executive Officer and signature authorization.

11. Signature - **Original** legible signature of authorized Principal Executive Officer or Authorized Agent. Every page of the DMR must have an original signature.

In the event a revised or corrected DMR is necessary, an original authorized signature and date of signature is required on each page. The word **REVISED** should be clearly visible on each page of the form.

12. Telephone - Telephone number of Principal Executive Officer.

13. Date - **Actual date** of signature certifying authenticating data submitted on DMR.

14. Comments - May contain any clarifying information of permit requirements or reporting instructions.

NOTE: The results of any additional monitoring of parameters at the location(s) designated in the permit, using approved analytical methods, must be included on the DMR.

THE MOST RECENT VERSION OF A DISCHARGE MONITORING REPORT (FIGURE 1) CAN BE FOUND AT:

http://www.epa.gov/region6/6en/w/dmr.htm
http://www.epa.gov/region6/6en/w/dmr.pdf

II. REVISED/CORRECTED DMRS

Sometimes it will be necessary for the facility to submit a revised or corrected DMR either because the Agency has requested it or the facility has discovered an error. Some reasons for submitting a revision/correction are:

1. Missing original or unauthorized signature
2. Missing NPDES Permit Number, Discharge Number (Outfall Number) and/or Monitoring Period
3. Missing sample measurements
4. Parameters not reported
5. Loading measurements not correctly calculated
6. Missing Frequency of Analysis, Sample Type and/or Number of Excursions
7. Wrong monitoring period shown on DMR.

When a revised/corrected DMR is submitted, it **must**:

1. Have an original authorized signature. Signatures from a carbon copy, photocopy, stamp, or computer scanner are not acceptable.
2. Date of new signature
3. Be clearly marked as a revised or corrected DMR
4. Revised data should be highlighted or otherwise clearly indicated.

III. SELF-GENERATED DMR FORMS

Before undertaking the task of generating self-monitoring reports, the facility should first contact their regulatory agency. In order to receive approval from EPA for use of a facility-generated (self-generated) DMR form, a facility must submit an approval request with sample DMRs (clearly marked "SAMPLE" and not signed) reflecting permit requirements for each monitoring period and discharge number. The forms submitted for approval must be an exact replica of the DMRs provided by the Agency with printing no smaller than the type on the pre-printed DMRs. **These facility-generated forms must not be used until Agency approval has been obtained.** If there is a change in monitoring or reporting requirements (EX: reissued permit), it will be necessary for the facility to revise their forms to reflect the changes and resubmit for approval. OMB Forms Approval Number in the upper right corner of the pre-printed DMR and the form number and other information under the last solid line at the bottom of the DMR form should not be included on the facility's self-generated forms.

IV. NON-COMPLIANCE REPORTS (NCRs)

The Permittee shall report any instances of non-compliance with their permit. See your permit for specific requirements for reporting anticipated non-compliance, 24-hour reporting of conditions which may endanger health and the environment (via phone, e-mail or fax) and other non-compliances which must be reported.

This report must include the following information as indicated on Figure 2, **SAMPLE NON-COMPLIANCE REPORT**:

1. Type of violation
   Name of parameter and outfall, or description such as overflow/bypass.

2. Date of violation
   A date range is required for multi-date non-compliance reporting. If you have a 7 day violation, you must provide the first and last date of that 7 day monitoring period.

3. Duration of violation

4. Cause of violation

5. Corrective action/Health or Environmental Impact/Preventative Measures/Other Narrative

The exact date and value of each occurrence for a minimum or maximum violation means to state the actual date the sample is taken and the value derived from the sample that exceeds the limit. If the sample exceeds the limit more than once in a monitoring period indicate each sample and value for that period.

EPA REGION 6 NPDES NON-COMPLIANCE REPORT FORM

Facility Name:_____

NPDES Permit Number:_____

Name of Parameter & Description (e.g. TSS at Outfall 001, pH at Outfall 003, Sanitary Sewer Overflow at 123 Main St.)	Numeric Value (e.g., volume, concentration or load) (i.e., 67 mg/L daily max, 100 lbs/day or 100,000 gal)	Permit Limit (e.g. 45 mg/L)	Date of Violation	Duration of Violation	Cause of Violation (e.g., power failure, sludge pump failure)	Corrective Action/Health or Environmental Impact/Preventative Measures/Other Narrative (e.g., replaced pump, restored power, replaced backup generator, fish kill, applied disinfectant)

Reported by:_____ **Date of Report:**_____ **Phone #:**_____

Title:_____

You may enter your data online and print this form. This is an optional form that you may alter for your own purposes.

Signature

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Figure 2

V. BYPASS/OVERFLOW/UPSET REPORTS
(Twenty-Four Hour Reporting)

A bypass, an overflow and an upset condition are all deviations from the permit conditions and as such are subject to reporting conditions. If any noncompliance endangers health or the environment, it should be reported orally within 24 hours from the time the permittee becomes aware of the circumstances. A written submission shall be provided within 5 days of the time the permittee becomes aware of the circumstances. The report shall contain the following information:

1. A description of the noncompliance and its cause;

2. The period of noncompliance including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and,

3. Steps being taken to reduce, eliminate, and prevent recurrence of the noncomplying discharge.

The 24-hour verbal report shall include:

1. Any unanticipated bypass, which exceeds any effluent limitation in the permit;

2. Any upset which exceeds any effluent limitation in the permit;

3. Violation of a maximum daily discharge limitation for any of the pollutants listed by the Director in Part II (industrial permits only) of the permit to be reported within 24 hours.

VI. SCHEDULES/REPORTS

In addition to DMRs and non-compliance reports (NCRs), the permit or formal enforcement actions may contain additional reporting provisions, with specific reporting requirements. These specific provisions could include compliance schedules with progress reports, pretreatment requirements, toxicity, sludge, storm water, etc. The actual completion date of any scheduled activity must be included in the submitted report and the report is due within 14 days of the scheduled activity. Any report which indicates noncompliance with a scheduled event should include the reason for the delay, what actions are being taken to get back on schedule, and how the delay will affect the remaining schedule events. See the permit or formal enforcement action for specific reporting dates and requirements.

VII. SLUDGE REPORTING REQUIREMENTS

Federal regulations contained in 40 CFR Part 503 are self implementing (i.e., compliance is required regardless of whether a permit contains the conditions). An updated version of the regulations can be found at EPA Region 6, web page <http://www.epa.gov/earth1r6/6cn/w/sludge.htm>. The regulations require all Publicly Owned Treatment Works (POTWs) servicing a population greater than 10,000 or having a design flow rate greater than one million gallons per day, or designated as Class I facilities to submit an annual report to the permitting authority every year on February 19th.

Annual sludge reports required by 40 CFR Parts 503-18, and 503-28, are due to the regulatory agency by either February 19th or September 1st of each year as specified in your permit. EPA Region 6, is the sludge regulatory authority for the States of Arkansas, Louisiana, and New Mexico. If you require assistance for completing the DMRs, or if you have questions regarding sewage sludge compliance with the Part 503 requirements, please contact the EPA Regional Sludge Coordinator at 214-665-6475.

Louisiana facilities should note that the Louisiana General Sewage Sludge permit was published in the federal register on August 21, 1998. The General Permit (LAG65000) can be found at 63 Fed. Reg. 44961-44984 in the EPA Region 6 web page mentioned above. Louisiana facilities that have not forwarded "Notice of Intent" for the permit coverage to EPA Region 6, may be in violation of the permit requirements. Contents of the "Notice of Intent" can be found in Part IV.B of the General Permit.

The basic set of sludge DMR forms consist of: Production and Use (Outfall SLDP); Land Application (Outfall SLLA); Surface Disposal (Outfall SLSA); and, Landfilling (Outfall SLDF). See the permit for additional outfalls required for specific sludge disposal operations. The entire set of forms must be appropriately completed (with facility name, address, NPDES number and appropriate monitoring periods) and each form must include an original signature. The original and one copy of the completed and signed reports must be mailed to the appropriate agency.

FREQUENCY OF ANALYSIS/MONITORING PERIOD

PRODUCTION AND USE FORMS: The reporting year begins on January 1 and ends on December 31 each year for reports due on February 19th. The reporting year begins on August 1 and ends on July 31st each year for reports due on September 1st.

LAND APPLICATION AND SURFACE DISPOSAL FORMS: Facilities must indicate the actual frequency that sewage sludge is monitored in the "Frequency of Analysis" column. The minimum required frequency, indicated in Tables 1 of Parts 503.16 and 503.26, is dependent on the amount of sludge which is annually land applied or surface disposed, respectively.

A separate report shall be made and completed for EACH MONITORING PERIOD, and the appropriate monitoring period; dates must be indicated at the top of the DMR form. For example, if a facility is required to monitor once per quarter, four monitoring reports must be completed for each full reporting year.

In order to aid in processing reports for multiple monitoring periods, facilities should indicate "Monitoring Period 1, Monitoring Period 2, Monitoring Period 3, etc..." in the comments section at the bottom of the DMR form for each of the separate reports.

NOTE: Frequency and sample type must be completed on every DMR form, except when "no discharge" is indicated.

ADDITIONAL REPORTING REQUIREMENTS

In addition to the DMR forms, facilities which land apply or surface dispose of sewage sludge are responsible for submitting the additional information required in Parts 503.18 or 503.28, respectively; i.e., appropriate certification statements, descriptions of how the management practices in Parts 503.14 or 503.24 are being met, and descriptions of how the site restrictions (if applicable) in Part 503.32(b)(5) are being met. This information must be attached to the original copy of the DMR forms when submitted to the regulatory agency.

Facilities which dispose of sewage sludge by incineration are required to provide the information required in Part 503.48 in addition to the DMR forms.

COMPLETION OF DMR FORMS

The following instructions are for use in completing the basic set of sludge DMR forms. **All fields must be completed, including frequency of analysis and sample type. This is a summary of total sludge produced and the amount and method of disposal. All numeric values must be reported unless "not applicable" is indicated.**

PRODUCTION AND USE DMR (SLDP)

This form is to be completed by all major and/or designated Class I facilities which generate sewage sludge. The annual production and use information must be reported in metric tons per year (MT/yr); other information shall be in the units indicated. If a particular sludge use does not apply to the facility's practice, then this must be indicated with a "0".

Storet 39516: Polychlorinated Biphenyls (PCBs) - Facilities which generate or prepare sewage sludge must indicate the concentration of PCBs (in mg/Kg) in the sludge. This parameter may be reported as N/A if sludge is not applied to facility during the monitoring period.

Storet 46390: Toxic Characteristic Leaching Procedure (TCLP) - Facilities which generate or prepare sewage sludge must indicate the results of the TCLP test on the sludge. If the sludge has passed the test, the form must be indicated with a "0" (Pass). If the sludge does not pass the test, the form must be indicated with a "1" (Fail). This parameter may be reported as N/A if sludge is not applied to facility during the monitoring period.

Storet 49017: Annual Sludge Disposed by Other Methods - Facilities must indicate the amount of sewage sludge prepared and used or disposed by a method other than land application,

surface disposal, incineration or co-disposal in a municipal solid waste landfill. Facilities which provide sewage sludge to another facility which further prepares the sludge, or changes the quality of the sludge, prior to land application, must report the amount provided to the other facility. The method of disposal or use other than those already indicated must be further described in the "Comments" section of the form. This parameter requires data showing the annual amount of sludge production and disposal; or, if none, report a zero (0).

Storet 49018: Annual Sludge Incinerated - Facilities must indicate the amount of sewage sludge prepared and disposed by incineration in a sewage sludge incinerator. This parameter requires data showing the annual amount of sludge production and disposal; or, if none, report a zero (0).

Storet 49019: Annual Sludge Production - Facilities must indicate the amount of sewage sludge produced after final sludge treatment for the reporting period. This parameter requires data showing the annual amount of sludge production and disposal; or, if none, report a zero (0). If this parameter shows sludge was produced, the appropriate parameter must be completed showing how the produced sludge was disposed; i.e.:

1) by other methods (storet 49017) requires stating what method was used in the comments section),

2) incinerated (storet 49018),

3) land applied (storet 49020) requires values be reported on the SLLA DMR accordingly. It is important to review your instructions to determine what monitoring frequency is required if sludge was land applied; i.e.,

a) <290, frequency of analysis for SLLA is once per year

b) 290 to <1500, frequency of analysis for SLLA is once per quarter

c) 1500 to <15,000, frequency of analysis for SLLA is once every two months

d) 15,000 and over, frequency of analysis for SLLA is once per month,

4) surface disposal (storet 49021) requires values be reported on the SLSA DMR accordingly. It is important to review your instructions to determine what monitoring frequency is required if sludge was surface disposed; i.e.:

a) <290, frequency of analysis for SLSA is once per year

b) 290 to <1500, frequency of analysis for SLSA is once per quarter

c) 1500 to <15,000, frequency of analysis for SLSA is once every tow months

d) 15,000 and over, frequency of analysis for SLSA is once per month,

5) landfilled (storet 49022) requires completion of the SLDF DMR, or

6) transported interstate (storet 49023)

Storet 49020: Annual Sludge Land Applied - Facilities must indicate the amount of sewage prepared and beneficially reused by land application. Facilities which provide sewage sludge to another facility which further prepares the sludge prior to land application need not report that amount of sludge which it has not prepared. This parameter requires data showing the annual amount of sludge production and disposal; or, if none, report a zero (0).

Storet 49021: Annual Sludge Surface Disposed - Facilities must indicate the amount of sewage prepared and disposed in a surface disposal unit. This parameter requires data showing the annual amount of sludge production and disposal; or, if none, report a zero (0).

Storet 49022: Annual Sludge Landfilled - Facilities must indicate the amount of sewage sludge prepared and co-disposed in a municipal solid waste landfill. This parameter requires data showing the annual amount of sludge production and disposal; or, if none, report a zero (0).

Storet 49023: Annual Sludge Transported Interstate - Facilities must indicate the amount of sewage sludge prepared and transported to another state other than the one in which it was prepared for eventual use or disposal. This parameter requires data showing the annual amount of sludge production and disposal; or, if none, report a zero (0).

LAND APPLICATION DMR (SLLA)

This form is to be completed by those facilities which prepare bulk sewage sludge for land application, for beneficial reuse, or sold or given away in a bag or other container. This form does not apply to those facilities which provide all of their sewage sludge to another facility which changes the quality of the sludge prior to land application.

NOTE: Modifications to the regulation, published in the October 25, 1995, Federal Register, removed chromium from the list of regulated pollutants for land application, and relaxed the limitations for selenium in land applied sludge.

Pollutant Table from 503.13 - The facility must indicate the pollutant table from Part 503.13 which is used to determine compliance with pollutant quality as follows:

Table 2 - Used if bulk sewage sludge exceeds the Pollutant Concentrations of Table 3;

Table 3 - Used if bulk sewage sludge or sewage sludge sold or given away in a bag or other container of one metric ton or less meets (does not exceed) the Pollutant Concentrations of Table 3;

Table 4 - Used if sewage sludge is sold or given away in a bag or other container of one metric ton or less, does not meet the Pollutant Concentrations of Table 3, and contains a label or information sheet indicating an annual whole sludge application rate which does not cause any of the Annual Pollutant Loading Rates in Table 4 to be exceeded.

Metals - The information to be included in this portion of the form consists of three types:

1) The cumulative loadings of the metals for a particular site (Kg/Ha);

2) The monthly average concentrations of metals (mg/Kg); and,

3) The maximum concentrations of the metals (mg/Kg).

All facilities which land apply bulk sewage sludge, sell, or give away sewage sludge in a bag or other container for land application must indicate the maximum concentration for all metals during the monitoring period in the "Maximum Concentration" column. These concentrations are limited by the values of Table 1 of Part 503.13.

The "Average Concentration" information must be completed by those facilities whose sludge meets the Table 3 Pollutant Concentrations. This information must reflect the monthly average concentration during the monitoring period. Facilities which do not use the Pollutant Concentration limits for compliance must indicate this column with "0" to reflect "Not Applicable".[1]

For those facilities whose sludge does not meet the Pollutant Concentrations of Table 3 and which are subject to the cumulative loading rates of Table 2, the cumulative loading of the metals at a site must be reported in the "Maximum Loading" columns if the loading rate has reached 90% or more of the maximum rate allowed by Table 2 of Part 503.13. If the facility has more than one application site, then this form must be included for each site which has reached 90% or more of the maximum rate allowed. Facilities which do not use the cumulative loading rates must indicate this column with a "0" to reflect "Not Applicable".[1]

Level of Pathogen Requirement Achieved - Facilities must indicate the level of pathogen requirements achieved, if any. If the sludge meets the Class A requirements, the form must be indicated with a "1". If the sludge meets the Class B requirements, the form must be indicated with a "2". If the facility's sludge does not meet either the Class A or Class B levels, the facility must report "0" (None).

Pathogen Alternative Used - Facilities must indicate which alternative number is used to achieve the pathogen level indicated above. The alternative numbers are given in Part 503.32(a)(3) - (8) for Class A (#1-6) and Part 503.32(b)(2) - (4) for Class B (#1-3). For those facilities which have been issued a permit containing the new requirements under Part 503, the alternative numbers are

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[1]For purposes of reporting sludge concentration and loading, analytical values below detection limit shall be reported as "< x", where "x" represents the detection limit.

given in Section I.B.3. of the permit. If the facility's sludge does not meet either of the pathogen reduction levels, it must report "0".

Vector Attraction Reduction Alternative Used - Facilities must indicate which alternative was used to achieve the vector attraction reduction requirement. The alternative numbers which apply to land application (#1-10) are given in Part 503.33(b)(1) - (10). For those facilities which have been issued a permit containing the new requirements under Part 503, the alternative numbers for vector attraction reduction are given in Section I.B.4. of the permit. If a facility is unable to meet any of the vector attraction reduction alternatives, it must report "0".

Annual Whole Sludge Application Rate - Facilities whose sewage sludge does not meet the Pollutant Concentrations of Table 3, which sell or give away sludge in a bag or other container as defined by Part 503, and which include (with the sludge) a label or information sheet containing an annual whole sludge application rate which does not cause any of the annual pollutant loading rates in Table 4 to be exceeded, must include that rate in this portion of the form. If this information does not apply to the facility, then it must indicate "0" to reflect "Not Applicable".

This DMR must be completed with values if any value other than "0" was shown on the SLDP DMR for parameter with storet 49020. If parameter storet 49020 on the SLDP DMR was reported as "0", the No Discharge box should be marked at the upper right portion of the DMR.

SURFACE DISPOSAL DMR (SLSA)

Storet 49028: Unit With Liner/Leachate Collection System - Facilities must indicate the presence of a liner and leachate collection system in the surface disposal unit. A unit with a liner is indicated with "1" (Yes). A unit without a liner is indicated with "0" (No).

Storet 49029: Unit Boundary to Property Line - Facilities whose sewage sludge unit does not have a liner and leachate collection system must indicate the actual minimum distance (in meters) from the sewage sludge unit boundary to the property line of the surface disposal site.

Storets 78469 and 78473: Metals Concentrations - Facilities whose sewage sludge unit does not have a liner and leachate collection system must indicate the allowed pollutant concentrations for Arsenic, Chromium and Nickel from Tables 1 or 2 or Part 503.23., based on the unit boundary to property line distance. The allowed concentration must be entered into the "Average Concentration" column of the form. The actual maximum concentration measured by the permittee must be entered into the "Maximum Concentration" column of the form.

Facilities whose sewage sludge unit has a liner and leachate collection system need not indicate the pollutant concentrations but must indicate "0" to reflect "Not Applicable" in both the Average (allowed) and Maximum (actual) columns for the three pollutants.

Storet 84368: Level of Pathogen Requirement Achieved - See Land Application procedures above.

Storet 84369: Pathogen Alternative Used - See Land Application procedures above.

Storet 84370: Vector Attraction Reduction Alternative Used - Facilities must indicate which alternative was used to achieve the vector attraction reduction requirement. The alternative numbers which apply to surface disposal (#1 through #11) are given in Part 503.33(b)(1) - (11). For those facilities which have been issued a permit containing the new requirements under Part 503, the alternative numbers for vector attraction reduction are given in Section I.B.4. of the permit. If a facility is unable to meet any of the vector attraction reduction alternatives, it must report "0".

This DMR must be completed with values if any value other than "0" was shown on the SLDP DMR for parameter with storet 49021. If parameter storet 49021 on the SLDP DMR was reported as "0", the No Discharge box should be marked at the upper right portion of the DMR.

LANDFILLING DMR (SLDF)

Storet 49030: In Compliance With Part 258 Requirements for Sludge - Facilities which generate sewage sludge that is co-disposed in a municipal solid waste landfill must indicate whether the sludge meets the requirements of 40 CFR Part 258 (passes TCLP and paint filter test). If the facility's sludge meets the requirements, it must report "1" (Yes). If the facility's sludge does not meet the requirements, it must report "0" (No).

This DMR must be completed if any value other than "0" was shown on the SLDP DMR for parameter 49022. If parameter 49022 on the SLDP DMR was reported as "0", the No Discharge box should be marked at the upper right portion of the DMR.

VIII. BIOMONITORING/TOXICITY

The Permittee must test the effluent for toxicity in accordance with the provisions specified in their permit. Such testing will determine if an effluent sample dilution affects the survival, reproduction or growth of the appropriate test organism.

1. **VALID TEST.** A valid test must be performed and data submitted on a Discharge Monitoring Report (DMR) for each species required to be tested during the monitoring period specified in the permit. A valid test is defined as any test which satisfies the test acceptability criteria, procedures, and quality assurance requirements specified in the test methods and permit. All reports, tables, plans, summaries, and related correspondence required by your permit shall be prepared and/or submitted to the appropriate regulatory agency (EPA or State).

2. **DMRS.** If Agency provided preprinted DMRs have not been received for the initial test, or if the permittee has other questions regarding the monitoring periods, parameter codes, etc., the regulatory agency should be contacted for instructions. Discharge Numbers for Toxicity DMRs, such as TX1A, TX2Q, TX3Y, etc, are identified usually as follows:

   TX - indicates Toxicity reporting;
   1, 2 or 3 - indicates which outfall is being tested for toxicity.
   A, Q or Y - indicates if a test is to be conducted monthly (A), quarterly (Q) or yearly (Y).

   Toxicity data is reported on the appropriate DMRs, for example:

   Pass/Fail (1 = Failure, 0 = Pass),
   NOEC value for Survival (Percent),
   NOEC value for Reproduction (Percent),
   % Mortality at Critical Dilution (Percent),
   % Coefficient of Variation (Percent), etc.

3. **INVALID TEST.** An invalid test is defined as any test which does not satisfy the test acceptability criteria, procedures, and quality assurance requirements specified in the test methods and permit. A REPEAT Test shall be conducted within the reporting period of any test determined to be invalid.

4. **RETESTS.** The permittee shall perform a total of two (2) additional tests (Retests) as a result of a previously failed test. The retests shall be conducted as outlined in the permit. If one or both of the two retests demonstrates significant lethal effects at or below the critical dilution, the permittee shall initiate Toxicity Reduction Evaluation (TRE) requirements as specified in the permit.

5. **TRE.** A TRE is an investigation intended to determine those actions necessary to achieve compliance with water quality-based limits by reducing an effluent's toxicity to an acceptable level. The permittee shall submit a Action Plan and Schedule for conducting the TRE. The Action Plan shall specify the approach and methodology to be

used in performing the TRE. The permittee shall submit quarterly activity reports concerning the progress of the TRE.

Based upon the results of the TRE and proposed corrective actions, the permit may be amended to modify the biomonitoring requirements where necessary, to require a compliance schedule for implementation of corrective actions, to specify a Whole Effluent Toxicity (WET) limit, to specify a Best Management Practice (BMP), and/or to specify Chemical Specific Effluent Limits.

6. **WET.** Failure to identify the specific chemical compound causing toxicity test failure will normally result in a WET permit limit and will be reported on a DMR as Parameter 22414.

IX. CONCENTRATED ANIMAL FEEDING OPERATION

www.epa.gov/region6/6en/w/cafo

The EPA Region 6 CAFO General Permit became effective March 10, 1993, and expired on midnight of March 10, 1998. A draft permit was published on June 26, 1998, and the public comment period was open through August 25, 1998, but the draft permit has not been finalized. Facilities with permit coverage as of March 10, 1998, have administratively extended permit coverage until a new permit is issued. New facilities may not apply for coverage under the expired 1993 general permit.

The CAFO Final Rule became effective upon it being signed by the Administrator on December 15, 2002. You can find the entire rule and associated information on the Office of Water's CAFO WEB Page.

X. STORM WATER

Website instructions for completing multi-sector general permit DMRs can be found at:

www.epa.gov/region6/6en/w/dmr.htm

XI. OFFSHORE GENERAL PERMIT GMG290000

Website instructions for completing offshore DMRs can be found at:

www.epa.gov/region6/6en/w/offshore/dmrinstructions.htm

XII. MOST COMMONLY ASKED QUESTIONS

1. **How do I report "too numerous to count" (TNTC) coliform samples?**

A. Using Standard Methods 9222 D, 18th - 20th Edition

If the Standard Methods 9222 D analysis procedure results in a colony count greater than 60, or is not distinct enough for accurate counting, on the membrane with the smallest filtration volume, report TNTC on the DMR form if only a single sample was collected for the reporting period (i.e. once a week sample for the 7-day geometric mean or a Daily Maximum). A TNTC reported on the DMR exceeds the permit limit and is considered a permit violation. However, actual numbers are required by the permit and should be reported whenever possible, and a broader dilution range should be adopted to ensure that a reportable fecal coliform count is obtained in future samples.

However, when calculating the 30-day geometric mean or a 7-day geometric mean with multiple sample results within each reporting period, the TNTC fecal coliform plate sample should be estimated as a ">" (greater than) value by dividing 60 by the smallest filtration value by using the following formula:

$$\frac{\text{No. of Fecal Coliform Colonies Counted}}{\text{Volume in mL of Sample Filtered}} \times 100 = \text{Fecal coliform count / 100 mL}$$

i.e., for a 0.1 mL volume filtered $60/0.1 \times 100 = 60{,}000$

Calculate as: >60,000 fecal coliforms/100 mL.

Example based on a 7x/week sampling schedule, using the optimum range for colony plate count (20 - 60 colonies) and sample filtration volumes of 100 mL, 10 mL, 1.0 mL, and 0.1 mL (the smallest filtration volume of 0.1 mL):

Monday	200 colonies (20 colonies/10 mL x 100 = 200 colonies/100 mL)
Tuesday	600 colonies (60 colonies/10 mL x 100 = 600 colonies/100 mL)
Wednesday	TNTC = >60,000 colonies based on smallest filtration volume of 0.1 mL and using 60 colonies as the basis of calculation
Thursday	3000 colonies (30 colonies/1.0 mL x 100 = 3000 colonies/100mL)
Friday	500 colonies (50 colonies/10 mL x 100 = 500 colonies/100 mL)
Saturday	400 colonies (40 colonies/10 mL x 100 = 400 colonies/100 mL)
Sunday	200 colonies (20 colonies/10 mL x 100 = 200 colonies/100 mL)

The 7-day fecal coliform geometric mean would be calculated by multiplying the seven values 200 x 600 x 60,000 x 3000 x 500 x 400 x 200 and taking the seventh root of the multiplication factor which equals 979. If (as in this case) the geometric mean contained 1 or more greater than (>) values, the final average should be reported as >979.

B. Using EPA Method, page 124

If the EPA method Part III. Section C Fecal Coliform Methods (page 124) analysis procedure results in uncountable membranes with more than 60 colonies, use 60 colonies as the basis of calculation with the smallest filtration volume as illustrated above. A TNTC report is not allowed, but rather the result is reported as a ">" value by dividing 60 by the smallest filtration value, i.e.. 0.1 mL:

60/0.1 x 100 = 60,000

Calculate and/or report as: >60,000 fecal coliforms/100 mL.

Again, a broader dilution range may need to be adopted to ensure that a reportable fecal coliform count is obtained in future samples

2. **How do I count number of exceedance?**

If daily maximum/daily minimum, count each sample that is below and/or above the minimum/maximum limit.

If a 7-day average or weekly limit, every 7-day average which exceeds the limit in the permit shall be counted as one exceedance.

DO NOT INCLUDE 30-DAY AVERAGES OR DAILY AVERAGES AS EXCEEDANCES ON DMR. This exceedance is already included in the above calculations.

3. **How do I calculate and report 7-day averages?**

We recognize that calendar weeks and calendar months rarely coincide. Therefore, for the purpose of calculating and reporting 7-day averages, you should follow the process below:

a. Define your week (SUN-SAT, MON-SUN, etc.).

b. Calculate the averages of all sample data obtained for each week.

c. The highest calculated weekly average will be reported on the DMR for the month in which (1) the week ends or (2) the week begins, or (3) the month which contains the greatest number of days. It is the choice of the facility. However, the choice should be consistent month to month, year to year. SET A RULE AND STICK WITH IT.

4. **Who can sign a DMR?**

The definition of authorized signatory official can be found in your permit, and in the regulations at 40 CFR 122.22 and 40 CFR 403.6(a)(2)(ii). In general, it is a responsible

corporate official (e.g., officer of the corporation), partner, sole proprietor, or, for a governmental entity, a principal executive officer or ranking elected official. See the permit or regulations for the complete definition.

Can signatory authority be delegated? Yes. A duly authorized representative of a signatory official may also sign DMRs, or other NPDES reports, if such authorization has been made in writing by an authorized signatory official. The authorization must specify either an individual or a position having responsibility for the overall operation of the regulated facility or activity, it must be submitted to the permitting authority, and it must be certified by an authorized signatory official. See 40 CFR 122.22(b). Additionally, a sample delegation letter is available online and linked off of the following web page: www.epa.gov/region6/6en/w/dmr.htm.

5. **Do I have to sign each page of my DMR?**

Yes. Each page must be signed. If any revisions are submitted, that revised page must also have an original signature and new signature date.

6. **Do I send copies of State DMRs to EPA (Texas only)?**

No, and you do not need to send copies of EPA DMRs to TCEQ.

7. **Do I have to send a copy of a non-compliance report for my state permit to EPA?**

No. Copies of state required reports are not required to be submitted to EPA.

8. **I received a letter from EPA telling me that the State has NPDES authority. Do I have to send any more reports to EPA?**

Once you have received a letter from EPA transferring enforcement authority for your facility to an approved NPDES state, you no longer need to send DMRs, non-compliance reports, etc., to EPA, unless you receive a specific request or action from EPA.

9. **How do I report effluent data below detection limit?**

Unless otherwise stated in the permit, values below the detection limit are to be reported with a less than symbol (<) and the numeric value for the detection limit using the EPA approved method.

Where the permit contains a listing of Minimum Quantification Levels (MQLs) and the permittee is granted authority in the permit to report zero in lieu of the <MQL for a **specified parameter**, (conventional, priority pollutants, metals, etc.) then zero is to be reported for that parameter.

In some cases the permittee has been granted by letter the authority to report zero when the permit does not contain this language. The permittee may request this authorization from its regulatory agency.

Where authority has not been granted to report zero, the less than MQL values are to be averaged with the numbers greater than the MQL and report the calculated average using the less than symbol.

For Example: MQL is 3 mg/L, 4 sample results in a month: <3, 5, <3, 7.

The Monthly Average = (3 + 5 + 3 +7)/4 = 4.5

Report on the DMR for Monthly Average as "<4.5"

Some permittees have complained that the MQL concentration for a parameter results in a loading calculation they believe is higher than they actually have. Unless one of the provisions discussed above applies, allowing you to use "0" for your calculation, you are to use the MQL concentration for calculating the loadings for results that are below the MQL. The only way to improve the loadings calculation is to switch to another approved method that has a lower MQL.

10. **How do I round numbers and ratios?**

Permits sometimes require the rounding of numbers or ratios. These numbers or ratios should be rounded as follows:

(1) If the digit 6, 7, 8, or 9 is dropped, increase preceding digit by one unit.
Example: a calculated parameter of 1.06 should be rounded to 1.1 and reported as a violation of the permit limit if the permit limit is 1.0.

(2) If the digit 0, 1, 2, 3, or 4 is dropped, do not alter the preceding digit.
Example: a calculated parameter of 1.04 should be rounded to 1.0 and reported to EPA as compliant with the permit limit if the permit limit is 1.0.

(3) If the digit 5 is dropped, round off preceding digit to the nearest even number.
Example: a calculated ratio of 1.05 should be rounded to 1.0 and reported to EPA as compliant with the permit limit if the permit limit is 1.0.

This method of rounding numbers and ratios is consistent with the EPA rounding method recommended by EPA Headquarters' L. Y. Boornazian and M. T. Flores Oct 10, 2003, memo.

XII. MISCELLANEOUS

A. Math Formulas

B. Fecal Coliform - How to Calculate

C. Metric System

D. Population Equivalent

E. Compounds/Pesticides

F. Frequency of Analysis

G. Sample Types

H. Definitions and Calculations for DMRs

A. MATH FORMULAS

CONVERSION FACTORS:

1 gallon	=	8.34 lbs. (estimate that varies slightly with temperature)
1 cu. ft.	=	7.4805195 gallons
1 acre	=	43,560 sq. ft.
1 ft. head	=	0.43 PSI
π	=	3.14159

FORMULAS:

1. Area of a Rectangle (square units)

   Length X Width = Area

2. Area of a circle (square units)

   π X radius^2 = Area or .785 X Diameter^2 = Area

3. Volume of rectangular or circular container (clarifier, pond, pipe, etc.)

   Surface Area X Depth = Volume (cu. units)

4. Volume in Gallons

   Volume in cu. ft. X 7.48 = gallons

5, Detention Time

   $\frac{\text{Volume (gals.)}}{\text{Flow (gpm)}}$ = Detention Time (in minutes)

   NOTE: If flow is in gpd, detention time is in days.)

6. Circumference of a Circle

π X Diameter = Circumference

7. BOD (mg/L)

$$\frac{\text{(Initial D.O. - Final D.O.) X 100}}{\text{\% Dilution}} = \text{BOD (mg/L)}$$

OR

(Initial D.O. - Final D.O.) X Dilution Facor = BOD

$$\text{Dilution Factor} = \frac{\text{TOTAL VOLUME}}{\text{SAMPLE VOLUME}}$$

8. Suspended Solids (mg/L)

$$\frac{\text{Weight}_2\text{ (mg) - Weight}_1\text{ (mg) X 1000}}{\text{mL of Sample Filtered}}$$

9. Pounds of BOD, Solids, Chemicals

Concentration (mg/L) X Quantity (million gals.) X 8.34 = lbs.

NOTE: Quantity, Volume or Flow must be in million gals.

10. Weir Overflow Rate

$$\frac{\text{GPD}}{\text{Length of Weir}} = \text{gal./ft./day}$$

11. Surface Loading Rate

$$\frac{\text{GPD}}{\text{Surface Area}} = \text{gal./sq.ft./day}$$

B. FECAL COLIFORM

HOW TO CALCULATE GEOMETRIC MEAN

Determine the optimum number of colonies per plate based on the series of dilutions. The acceptable range is usually 20 to 60 colonies. If it is too dense to count refer to Section XII for directions on reporting TNTC.

There are two methods by which to calculate the geometric mean (GM). Method One is the product of all the values (n1 x n2 x n3.....) followed by taking the n^{th} root of the multiplication factor, and Method Two is to average the sum of the logs (log n1 + log n2 + log n3.....) followed by the antilog of the average.

The following example is based on a 7x/week sampling schedule, using the optimum range for colony plate count (20 - 60 colonies) and sample filtration volumes of 100 mL, 10 mL, 1.0 mL, and 0.1 mL (the smallest filtration volume being of 0.1 mL):

Monday	20 colonies (20 colonies/100 mL x 100 = 20 colonies/100 mL)
Tuesday	60 colonies (60 colonies/100 mL x 100 = 60 colonies/100 mL)
Wednesday	45 colonies (45 colonies/100 mL x 100 = 45 colonies/100 mL)
Thursday	300 colonies (30 colonies/10 mL x 100 = 300 colonies/100mL)
Friday	550 colonies (55 colonies/10 mL x 100 = 550 colonies/100 mL)
Saturday	42 colonies (42 colonies/100 mL x 100 = 42 colonies/100 mL)
Sunday	27 colonies (27 colonies/100 mL x 100 = 27 colonies/100 mL)

Using the Method One Formula

GM = "n^{th}" root of n1 x n2 x n3 .....

The 7-day fecal coliform geometric mean would be calculated by multiplying the seven values 20 x 60 x 45 x 300 x 550 x 42 x 27 and taking the seventh root of the multiplication product which yields a geometric mean of 72.

Using the Method Two Formula

$$X = \frac{\text{Sum of the Log for Sample Measurements}}{\text{\# samples}}$$

Then take the anti-log of X to obtain the GM.

The 7-day fecal coliform geometric mean would be calculated by adding the sum of the logs for each value (log 20 = 1.30103 + log 60 = 1.77815 + log 45 = 1.65321 + log 300 = 2047712 + log 550 = 2074036 + log 42 = 1.62325 + log 27 = 1.43136) , dividing the summation of 13.00448 by 7 = 1.85778, followed by the anti-log of the result which also yields a geometric mean of 72.

How to Average "<" Daily Max or 7-Day Averages into the 30-Day Average

For samples that have a value of "0 colonies" on a plate count, the value must be reported as less than (calculated value) / 100 mL, based upon the largest single volume filtered. For example, if 10 mL, 1.0 mL and 0.1 mL are filtered and all plates show zero counts, select the largest volume, and apply the general formula for determining fecal coliform counts at various dilutions and report the count as < (less than) value.

$$\frac{1}{10} \times 100 = <10 \text{ fecal coliforms / } 100 \text{ mL}$$

If the geometric mean for a reporting period (i.e., the 7-day average or 30-day average) has a sample with a zero count, use the above formula to obtain a "< fecal coliform count ", and average that number (i.e. 10 from the above example) with the other samples taken.

C. METRIC SYSTEM

Prefix		Value	Example		
Kilo		1000	1 Kilogram	=	1000 Grams
Hecto	-	100	1 Hectogram	=	100 Grams
Deca (Deka)	-	10	1 Decagram (Dekagram)	=	10 Grams
(Unit)	-	1	1 Gram	=	1 Gram
Deci		0.1 (1/10)	1 Decigram	=	0.1 Gram
Centi		0.01 (1/100)	1 Centigram	=	0.01 Gram
Milli		0.001 (1/1000)	1 Milligram	=	0.001 Gram
Micro		0.000001 (1/1,000,000)	1 Microgram	=	0.000001 Gram

METRIC SYSTEM CONVERSION FACTORS

1 pound	=	453.6	grams
1 ounce	=	28.35	grams
1 gallon	=	3.785	liters
1 quart	=	0.946	liter
1 inch	=	25.4	millimeter
1 foot	=	0.305	meters
1 mile	=	1.609	kilometers

D. POPULATION EQUIVALENT

$$\text{Population Equivalent} = \frac{\text{Average BOD (mg/L)} \times \text{Average Flow (MGD)} \times 8.34}{.17 \text{ lbs/person/day}}$$

Average BOD will consist of a minimum of four (6 hour composite) samples taken at least 5 days apart.

Average flow will be the average of at least 20 days within a 30-day period.

Example: If your average BOD is 200 mg/L and your average flow is 1.0 MGD

$$\text{Pop. Eq.} = \frac{200 \times 1.0 \times 8.34}{.17} = 9{,}812 \text{ people}$$

E. COMPOUNDS/PESTICIDES

VOLATILE COMPOUNDS	MQL (ug/L)
Acrolein	50
Acrylonitrile	50
Benzene	10
Bromoform	10
Carbon Tetrachloride	10
Chlorobenzene	10
Chlorodibromomethane	10
Chloroethane	50
2-Chloroethyl Vinyl Ether	10
Chloroform	10
Dichlorobromomethane	10
1,1-Dichloroethane	10
1,2-Dichloroethane	10
1,1-Dichloroethylene	10
1,2-Dichloropropane	10
1,3-Dichloropropylene	10
Ethylbenzene	10
Methyl Bromide (Bromomethane)	50
Methyl Chloride (Chloromethane)	50
Methylene Chloride	20
1,1,2,2-Tetrachloroethane	10
Tetrachloroethylene	10
Toluene	10
1,2-trans-Dichloroethylene	10
1,1,-Trichloroethane	10
1,1,2-Trichloroethane	10
Trichloroethylene	10
Vinyl Chloride	10

ACID COMPOUNDS	MQL (ug/L
2-Chlorophenol	10
2,4-Dichlorophenol	10
2,4-Dimethylphenol	10
4,6-Dinitro-o-Cresol [2-Methyl-4,6-Dinitrophenol]	50
2,4-Dinitrophenol	50
2-Nitrophenol	20
4-Nitrophenol	50
p-Chloro-m-Cresol [4-Chloro-3-Methylphenol]	10
Pentachlorophenol	50
Phenol	10
2,4,6-Trichlorophenol	10

ACID COMPOUNDS (CONT'D)

3,3'-Dichlorobenzidine	50
Diethyl Phthaate	10
Dimethyl Phthalate	10
Di-n-Butyl Phthalate	10
2,4-Dinitrotoluene	10
2,6-Dinitrotoluene	10
Di-n-octyl Phthalate	10
1,2-Diphenylhydrazine	20
Fluoranthene	10
Fluorene	10
Hexachlorobenzene	10
Hexachlorobutadiene	10
Hexachlorocyclopentadiene	10
Hexachloroethane	20
Indeno(1,2,3-cd) [2,3-o-Phenylene Pyrene]	20
Isophorone	10
Naphthalene	10
Nitrobenzene	10
n-Nitrosodimethylamine	50
n-Nitrosodi-n-Propylamine	20
n-Nitrosodiphenylamine	20
Phenanthrene	10
Pyrene	10
1,2,4-Trichlorobenzene	10

PESTICIDES	**MQL (ug/L)**
Aldrin	0.05
Alpha-BHC	0.05
Beta-BHC	0.05
Gamma-BHC [Lindane]	0.05
Delta-BHC	0.05
Chlordane	0.2
4,4'-DDT	0.1
4,4'-DDE [p,p-DDX]	0.1
4,4'-DDD [p,p-TDE]	0.1
Dieldrin	0.1
Alpha-Endosulfan	0.1
Beta-Endosulfan	0.1
Endosulfan Sulfate	0.1
Endrin	0.1
Endrin Aldehyde	0.1

PESTICIDES (CONT'D)

Heptachlor	0.05
Heptachlor Epoxide [BHC-Hexachlorocyclohexane]	0.05
PCB-1242	1.0
PCB-1254	1.0
PCB-1221	1.0
PCB-1232	1.0
PCB-1248	1.0
PCB-1260	1.0
PCB-1016	1.0
Toxaphene	5.0

BASE/NEUTRAL COMPOUNDS	**MQL (ug/L)**
Acenaphthene	10
Acenaphthylene	10
Anthracene	10
Benzidine	50
Benzo(a)anthracene	10
Benzo(a)pyrene	10
3,4-Benzofluoranthene	10
Benzo(ghi)perylene	20
Benzo(k)fluoranthene	10
Bis(2-chloroethoxy) Methane	10
Bis(2-chloroethyl) Ether	10
Bis(2-chlorisopropyl) Ether	10
Bis(2-ethylhexyl) Phthalate	10
4-Bromophyenyl Phenyl Ether	10
Butyl Benzyl Phthalate	10
2-Chloronapthalene	10
4-Chlorophyenyl Phenyl Ether	10
Chrysene	10
Dibenzo(a,h)anthracene	20
1,2-Dichlorobenzene	10
1,3-Dichlorobenzene	10
1,4-Dichlorobenzene	10

NOTE: You may utilize these MQLs in association with the most appropriate test method approved at 40 CFR Part 136 for all future monitoring performed under your current Pollutant Discharge Elmination System permit. Exceptions to using this list as a benchmark for quantifiable values will be those cases where your current permit specifies other quantification levels or where you have demonstrated to the satisfaction of the regulatory authority that you are unable to achieve a level of analytical sensitivity equivalent to the MQL.

F. FREQUENCY OF ANALYSIS

FREQUENCY	DESCRIPTION	FREQUENCY	DESCRIPTION
N/A	NOT APPLIC	01/5Y	ONCE/5 YEARS
N/R	NOT REPORTD	01/60	ONCE/2 MONTHS
N/V	NOT VALID	01/7M	ONCE/7 MONTHS
CL/OC	CHLRNTN/OCCURS	01/90	QUARTERLY
DL/DS	DLY WHNDISCHRG	01/99	INSTNT
REPRT	REPORT	02/BA	TWICE/BATCH
WH/DS	WHEN DISCHRG	02/DS	TWICE/DISCH
WH/MN	MEASRD WHN MON	02/DW	TWICE/DSCHWK
01/BA	ONCE/BATCH	02/SH	TWICE/SHIFT
01/DD	ONCE/DSCHDY	02/YR	SEMI-ANNUAL
01/DM	ONCE/DSCHMN	02/01	TWICE/DAY
01/DQ	ONCE/DSCHQTR	02/07	TWICE/WEEK
01/DS	ONCE/DISCHG	02/12	TWICE/12 DAYS
01/DW	ONCE/DSCHWK	02/30	TWICE/MONTH
01/RN	ONCE/RN EVNT	02/90	TWICE/QTRLY
01/SH	ONCE/SHIFT	02/99	SEE PERMIT
01/SN	ONCE/SEASON	03/BA	THREE/BATCH
01/YR	ANNUAL	03/DS	THREE/DISCHG
01/01	DAILY	03/DW	3 DAYS/WEEK
01/02	ONCE/2 DAYS	03/YR	THREE/YEAR
01/03	ONCE/3 DAYS	03/01	THREE/DAY
01/04	ONCE/4 DAYS	03/05	THREE/5 DAYS
01/05	ONCE/5 DAYS	03/07	THREE/WEEK
01/06	ONCE/6 DAYS	03/08	THREE/8 DAYS
01/07	WEEKLY	03/30	THREE/MONTH
01/08	ONCE/8 DAYS	03/5Y	THREE/5 YEARS
01/09	ONCE/9 DAYS	03/99	SEE PERMIT
01/10	ONCE/10 DAYS	04/BA	FOUR/BATCH
01/11	ONCE/11 DAYS	04/01	FOUR/DAY
01/12	ONCE/12 DAYS	04/07	FOUR/WEEK
01/13	ONCE/13 DAYS	04/30	FOUR/MONTH
01/14	ONCE/2 WEEKS	04/99	SEE PERMIT
01/21	ONCE/3 WEEKS	05/BA	FIVE/BATCH
01/28	ONCE/4 WEEKS	05/DW	5 DAYS/WEEK
01/30	ONCE/MONTH	05/WK	5 TIMES/WEEK
01/4M	ONCE/4 MONTHS	05/01	5 TIMES/DAY
01/5M	ONCE/5 MONTHS	05/07	WEEK-DAYS

FREQUENCY	DESCRIPTION	FREQUENCY	DESCRIPTION
05/08	FIVE/8 DAYS	09/99	SEE PERMIT
05/30	5 TIMES/MONTH	10/30	TEN/MONTH
05/90	FIVE/QRTLY	10/99	SEE PERMIT
05/99	SEE PERMIT	12/01	TWELVE/DAY
06/SH	SIX/OPRSHIFT	12/30	12 PER MONTH
06/01	SIX/DAY	15/30	FIFTEEN/MONTH
6/07	SIX/WEEK	16/01	SIXTEEN/DAY
06/30	6 TIMES/MONTH	16/30	SIXTEEN/MONTH
06/99	SEE PERMIT	18/01	EIGHTEEN/DAY
07/30	7 TIMES/MONTH	18/30	EIGHTEEN/MONTH
07/99	SEE PERMIT	24/01	HOURLY
08/BA	EIGHT/BATCH	48/01	EVERY ½ HR
08/01	EIGHT/DAY	66/66	WPC PLAN
08/30	EIGHT/MONTH	77/77	CONTIN-GENT
08/99	SEE PERMIT	88/88	CLEANING
09/01	NINE/DAY	99/99	CONTINUOUS
09/30	NINE/MONTH		

G. SAMPLE TYPES

SAMPLE	DESCRIPTION	SAMPLE	DESCRIPTION
CA	CALCTD	RF	RCDFLO
CN	CONTIN	RG	RANG-C
CP	COMPOS	RP	REPRES
CR	CK REQ	RT	RCOTOT
CS	CORSAM	R4	RNG-4A
CT	CERTIF	SR	SGLRDG
CU	CURVE	SS	STAT-SH
DA	DAILAV	ST	STATIC
DS	DISCRT	TI	TIMEMT
ES	ESTIMA	TM	TOTALZ
FI	FLOIND	VI	VISUAL
GH	5GR24H	01	COMP-1
GM	GRAB10	02	COMP-2
GR	GRAB	03	COMP-3
G2	GRAB-2	04	COMP-4
G3	GRAB-3	05	COMP-5
G4	GRAB-4	06	COMP-6
G5	GRAB-5	08	COMP-8
G6	GRAB-6	1H	AVG-1H
G7	GRAB-7	10	COMP10
G8	GRAB-8	12	COMP12
G9	GRAB-9	16	COMP16
IM	IMERSN	2H	AVG-2H
IN	INSTAN	20	COMP20
IS	INSITU	22	BATCH
IT	IMRSTB	24	COMP24
MC	MATHCL	28	COMP28
MP	MATHCP	3G	3GR/HR
MS	MEASRD	4C	4DA24C
MT	METER	4H	AVG-4H
NA	NOT AP	5G	5GR45M
NR	NOTRPT	72	COMP72
OC	OCCURS	96	COMP96
PC	PMPCRV	SB	SEQBAR
PL	PMPLOG		
RC	RCORDR		
RD	RNG-DA		

H. DEFINITIONS AND CALCULATIONS FOR DISCHARGE MONITORING REPORTS

1. Definitions

The following are definitions of some terms used for reporting on the Discharge Monitoring Report (DMR).

Annual Average Flow — The arithmetic average of all daily flow determinations taken within the preceding 12 consecutive calendar months. The annual average flow determination shall consist of daily flow volume determinations made by a totalizing meter, charted on a chart recorder and limited to major domestic wastewater discharge facilities with a 1 million gallons per day or greater permitted flow.

Daily Average Flow — The arithmetic average of all determinations of the daily discharge within a period on one calendar month. The daily average flow determination shall consist of determinations made on at least four separate days. If instantaneous measurements are used to determine the daily discharge, the determination shall be the arithmetic average of all instantaneous measurements taken during that month. Daily average flow determination for intermittent discharges shall consist of a minimum of three flow determinations on days of discharge.

Daily Maximum Flow — The highest total flow for any 24-hour period in a calendar month.

Instantaneous Flow — The measured flow during the minimum time required to interpret the flow measuring device.

2-hour Peak Flow — Applies to domestic wastewater treatment plants: The ;maximum flow sustained for a two-hour period during the period of daily discharge. Multiple measurements of instantaneous maximum flow within a two-hour period may be compared to the permitted 2-hour peak flow.

Maximum 2-hour Peak Flow — Applies to domestic wastewater treatment plants: The highest 2-hour peak flow for any 24-hour period in a calendar month.

Daily Average Concentration — The arithmetic average of all effluent samples, composite or grab as required by the permit, within a period of one calendar month, consisting of at least four separate representative measurements. When four samples are not available in a calendar month, the arithmetic average of the four most recent measurements or the arithmetic average (weighted by flow) of all values taken during the month shall be used as the daily average concentration.

7-day Average Concentration — The arithmetic average of all effluent samples, composite or grab as required by the permit, within a period of one calendar week, Sunday through Saturday.

Daily Maximum Concentration — The maximum concentration measured on a single day, by composite sample unless otherwise specified in the permit, within a period of one calendar month.

Fecal Coliform Bacteria — The number of colonies of fecal coliform bacteria per 100 milliliters

Concentration	effluent. The fecal coliform bacteria daily average is a geometric mean of the values for the effluent samples collected in a calendar month. The geometric mean shall be determined by calculating the nth root of the product of all measurements made in a particular period of time. For example in a month's time, where n equals the number of measurements made; or, computed as the antilogarithm of the arithmetic average of the logarithms of each measurement made. For any measurement of fecal coliform bacteria equaling zero, a substituted value of one shall be made for input into either computation method.
Composite Sample	For domestic wastewater, a sample made up of a minimum of three effluent portions collected in a continuous 24-hour period or during the period of daily discharge if less than 24 hours, and combined in volumes proportional to flow, and collected no closer than two hours apart. For industrial wastewater, a composite sample is a sample made up of a minimum of three effluent portions collected in a continuous 24-hour period or during the period of daily discharge if less than 24 hours, and combined in volumes proportional to flow, and collected no closer than one hour apart.
Grab Sample	An individual sample collected in less than 15 minutes.

2. Example Calculations and Reporting for Concentration, Loading, Flow, Cl_2 Residual and pH

The example calculations and reporting instructions described in this section are illustrated using data in the following chart titled "Example Daily Operations Log for March."

EXAMPLE DAILY OPERATIONS LOG FOR MARCH

Day of Week	Date	Flow (MGD)	BOD (mg/L)	TSS (mg/L)	pH (s.u.)	CL_2 (mg/L)	BOD_5 (lbs/dy)	TSS (lbs/dy)
Sunday	3/1	0.17						
Monday	3/2	0.20				2.00		
Tuesday	3/3	0.19	22.00	30.00	7.50	1.40	34.86	47.54
Wednesday	3/4	0.17				1.30		
Thursday	3/5	0.14				1.00		
Friday	3/6	0.15				1.00		
Saturday	3/7	0.13						
Sunday	3/8	0.17						
Monday	3/9	0.23				1.40		
Tuesday	3/10	0.20	29.00	23.00	7.00	2.10	48.37	38.36
Wednesday	3/11	0.34				1.10		
Thursday	3/12	0.30				1.00		
Friday	3/13	0.20				1.20		
Saturday	3/14	0.14						
Sunday	3/15	0.15						
Monday	3/16	0.20				0.00		
Tuesday	3/17	0.18	18.00	16.00	7.20	1.30	27.02	24.02
Wednesday	3/18	0.17				1.10		
Thursday	3/19	0.21				1.40		
Friday	3/20	0.22				1.40		
Saturday	3/21	0.13						
Sunday	3/22	0.14						
Monday	3/23	0.21				1.00		
Tuesday	3/24	0.19	10.00		6.80	1.30	15.85	
Wednesday	3/25	0.18				1.70		
Thursday	3/26	0.20				1.30		
Friday	3/27	0.17				2.10		
Saturday	3/28	0.15						
Sunday	3/29	0.13						
Monday	3/30	0.19				2.20		
Tuesday	3/31	0.14				1.40		
Total	31	5.69	79.00	69.00	–	–	126.10	109.92
Average	–	0.183	19.75	23.12	N/A	N/A	31.53	36.64
Maximum	–	0.34	29.00	30.00	7.50	2.20	48.37	47.54
Minimum	–	0.13	10.00	16.00	6.80	0.00	15.85	24.02

Reporting of Concentration

The example Daily Operations Log shows that four individual BOD_5 grab samples were obtained during the month as follows:

March 3 - 22.00 mg/L
March 10 - 29.00 mg/L
March 17 - 18.00 mg/L
March 24 - 10.00 mg/L

The daily average concentration is calculated by adding the four values obtained and dividing by the number of samples taken during the month. The calculated BOD_5 daily average is 19.75 mg/L.

$$\frac{(22.00 + 29.00 + 18.00 + 10.00)}{4} = 19.75 \text{ mg/L Daily Average } BOD_5$$

The highest BOD_5 concentration was obtained on March 10. This value is reported as the maximum BOD_5 individual grab for the reporting period.

Reporting of Loadings

Some parameters in the permit are limited in terms of pounds per day (lbs/day). Although all of these parameters are measured initially in milligrams per liter (mg/L), conversion to lbs/day can be achieved by using the following formula. **Always be sure to use the flow measurement determined on the day when sampling was done.**

Flow on day of sampling (MGD) x concentration (mg/L) x 8.34 (lbs/gal) = Loading (lbs/day)

Using the four BOD_5 concentrations and the flow measurements obtained on the days of sampling, the individual daily loadings are calculated as follows:

March 3 - (.19 MGD) (22.00 mg/L) (8.34 lbs/gal) = 34.86 lbs/day
March 10 - (.20 MGD) (29.00 mg/L) (8.34 lbs/gal) = 48.37 lbs/day
March 17 - (.18 MGD) (18.00 mg/L) (8.34 lbs/gal) = 27.02 lbs/day
March 24 - (.19 MGD) (10.00 mg/L) (8.34 lbs/gal) = 15.85 lbs/day

The daily average loading (lbs/day) is calculated by adding the individual daily loading values together and dividing by the number of samples taken during the month. The calculated BOD_5 daily average loading is 31.53 lbs/day.

$$\frac{(34.86 + 48.37 + 27.02 + 15.85)}{4} = 31.53 \text{ lbs/day Daily Average } BOD_5$$

Flow-weighted Averages

When four samples are not available in a calendar month, the daily average concentration should be calculated using the four most recent measurements or the arithmetic average (weighted by flow) of all values taken during the month.

The example Daily Operations Log shows that TSS grab samples were taken only three times during the month. The values obtained and the flows on the days of sampling are as follows:

	TSS (mg/L)	Flow on day of sampling (MGD)
March 3	30.00	.19
March 10	23.00	.20
March 17	16.00	.18
Total flow on sample days		.57

To calculate the flow-weighted concentration for each sample, the following equation must be used. The flow-weighted average concentration is then determined by adding the flow-weighted concentrations for the individual samples together.

Concentration (mg/L) x Flow on day of sampling (MGD) = Flow-weighted Concentration
Total flow on days of sampling (MGD)

Sum of Flow-weighted Concentrations = Flow-weighted Daily Average Concentration

March 3	30.00 mg/L x .19/.57 = 10.00
March 10	23.00 mg/L x .20/.57 = 8.07
March 17	16.00 mg/L x .18/.57 = 5.05

Flow-weighted Daily Average = 23.12 mg/L
TSS Concentration

To calculate the daily average flow-weighted loading, the following equation must be used:

Daily average flow-weighted concentration x Average of flows on sampling days x 8.34 lbs/gal = Flow-weighted Daily Average Loading (lbs/day)

$$23.12 \text{ mg/L} \times \frac{.19 + .20 + .18}{3} \times 8.34 = 36.64 \text{ lbs/day Flow-weighted Daily Average TSS Loading}$$

pH

A review of the example Daily Operations Log indicates four pH values were obtained during the reporting period ranging from a minimum value of 6.80 s.u. on March 24 to a maximum value of 7.50 s.u. on March 3. The highest pH value obtained on March 3 is reported as the maximum pH for the reporting period. The lowest pH value obtained on March 24 is reported as the minimum pH for the reporting period.

Note that pH is not subject to averaging.

Cl_2 Residual

A review of the example Daily Operations Log shows Cl_2 residual values ranging from a minimum value of 0.00 mg/L on March 16 to a maximum value of 2.20 mg/L on March 30 were obtained during the reporting period. The highest Cl_2 value obtained on March 30 is reported as the maximum Cl_2 residual for the reporting period. The lowest Cl_2 value obtained on March 16 is reported as the minimum CL_2 residual for the reporting period.

Note that chlorine residual is not subject to averaging.

Flow

Daily Average Flow and Daily Maximum Flow

The average daily flow is calculated by adding the individual daily flow measurements together and dividing by the number of days on which flow measurements were taken during the month. The average daily flow calculated from the example Daily Operations Log is 0.183 MGD. The daily maximum flow is the highest daily flow value obtained during the reporting period. On the example Daily Operations Log, the daily maximum flow value is 0.34 MGD , which occurred on March 11.

Annual Average Flow

The annual average flow is the arithmetic average of all daily flow determinations taken during the previous 12-month period. It is calculated by adding the individual daily flow measurements together and dividing by the number of measurements taken during the previous 365 days. For example, if the total flow recorded during a 12-month period is 600 MG and during that period of time flow measurements were obtained once per day, the annual average would be calculated as follows:

600 MG/365 Days = 1.64 MGD Annual Average Flow

For new facilities, the first annual average should be calculated based on the number of measurements taken during the first full month of operation. The second annual average should be calculated based on the number of measurements taken during the first and second months of operation. The third annual average should be calculate based on the number of measurements taken during the first, second and third months of operation, etc. After twelve months of operation, all annual average flows should be calculated using the sum of the individual flow measurements divided by the number of measurements taken during the previous 365 days.

For example, during the first full month of operation, if the total flow recorded is 45 MG and 30 flow measurements were taken (one each day), the annual average flow would be calculated by dividing the total flow by the number of measurements taken during the month: **45 MG/30 Measurements = 1.5 MGD Annual Average Flow.** During the next 30 days, if the total flow recorded is 75 MG and 31 measurements were taken (one each day), the annual average flow would be calculated by dividing the total flow for the first 61 days by the number of measurements taken during that period: **45 MG + 75 MG/61 Measurements = 1.967 MGD Annual Average Flow.** During the third month of operation, if the total flow recorded is 65 MG and 31 measurements were taken (one each day), the annual average would be calculated by dividing the total flows for the first 92 days by the number of measurements taken during that period: **45 MG + 75 MG + 65 MG / 92 Measurements = 2.01 MGD Annual Average Flow.**

2-hour Peak Flow

The 2-hour peak flow is the maximum flow sustained for a two-hour period during the period of daily discharge. The maximum 2-hour peak flow which is reported on the Discharge Monitoring Report should be the highest 2-hour peak flow for any 24-hour period in a calendar month. Questions about how to determine the 2-hour peak flow should be directed to the Wastewater Permitting Section (MC 148) in the Water Permits and Resource Management Division.

3. Calculating Fecal Coliform Geometric Mean

Fecal coliform bacteria concentration is the number of colonies of fecal coliform bacteria per 100 milliliters effluent. Fecal coliform bacteria daily average is the geometric mean of the fecal coliform samples collected in a calendar month. The following instructions show two ways to calculate the geometric mean.

*n*th Root

The geometric mean can be calculated as the *n*th root of the product of *n* data points. In this case, *n* is the number of fecal coliform bacteria sample results.

Geometric Mean = $\sqrt[n]{X_1X_2X_3X_4X_5...Xn}$

For example, if five fecal coliform bacteria samples are taken and the samples results are 99, 126, 90, 420, and 2200 colonies/mL, the calculated geometric mean is 253.

$(99)(126)(90)(420)(22)) = 1.037 \times 10^{12}$

$\sqrt[5]{1.037 \times 10^{12}} = 253$

Antilog

The geometric mean can also be calculated by taking the antilog of the arithmetic average of the logarithms of the sample results. The following instructions describe how this can be done using the data provided in the chart as an example.

1. Calculate the logarithm for each sample result. For example: The second sample result in the chart is 120. Enter 120 into the calculator and press the log function. The result is 2.079. This is the log of 120. *

2. Calculate the arithmetic average of the logarithms. To do this, add all of the logarithm values together and divide the sum by the number of logarithm values. In the example in the chart, the sum of the logs is 13.703. Since there are 7 log values, divide 13.703 by seven to determine the average of the logs. The result is 1.9576. **

3. Take the antilog of the arithmetic average of the logarithms. This will be the geometric mean. Using the example in the chart, enter 1.9576 into the calculator and press the antilog function. The result is 91. This is the geometric mean for the sample results. ***

Colonies per 100 mL (sample results)	Log of Colonies per 100 mL
10	1
120	2.079*
601	2.779
48	1.681

130	2.114
11	1.041
1020	3.009
Arithmetic Average	13.703 ÷ 7 = 1.9576 **
Geometric Mean	Antilog of 1.9576 = 91 ***

4. Using the MAL Provision to Determine Reportable Results

For some parameters (toxic organic and inorganic constituents), the permit will contain a provision in the Other Requirements section stating that compliance/noncompliance determinations will be based on the minimum analytical level (MAL) for the parameter, and effluent concentrations measured as less than the MAL are deemed to be compliant with the permit limits. This permit provision further states that when an analysis of an effluent sample for the parameter results in a measurement of less than the MAL that parameter shall be reported as "<(MAL value)" and this shall be interpreted as a value of zero (0) for compliance purposes. This means, in these instances, to record the concentration for the sample as < (MAL value) for the purposes of determining daily maximum concentration and use a zero for that measurement when calculating the daily average concentration and the daily average loading. The following examples show how to determine reportable values based on the MAL permit provision, using Mercury as an illustration.

MAL for Mercury = 0.0002 mg/L (0.2 µg/l)

Example 1: Some measured values above the MAL and some below the MAL

Sample	Lab Result for Mercury (mg/L)	Concentration (mg/L) to be used for calculating average & loading	Flow on day of sample collection (MGD)	Loading (lbs/day)
Sample 1	0.00014 (<0.0002)	0.0	1.022	0.0
Sample 2	0.00028	0.00028	1.039	0.00242
Sample 3	0.00034	0.00034	1.186	0.00336
Sample 4	0.00012 (<0.0002)	0.0	0.974	0.0
Average	—	0.00015	—	0.00144

Values to be Reported on the DMR
Daily Maximum Concentration: 0.00034 mg/L
Daily Average Concentration: 0.00015 mg/L
Daily Average Loading: 0.00144 lbs/day

Example 2: All measured values below the MAL

Sample	Lab Result for Mercury (mg/L)	Concentration (mg/L) to be used for calculating average & loading	Flow on day of sample collection (MGD)	Loading (lbs/day)
Sample 1	0.00014 (<0.0002)	0.0	1.183	0.0
Sample 2	0.00011 (<0.0002)	0.0	0.966	0.0
Sample 3	0.00018 (<0.0002)	0.0	1.205	0.0
Sample 4	0.00015 (<0.0002)	0.0	1.078	0.0
Average	---	0.0	—	0.0

Values to be Reported on the DMR
Daily Maximum Concentration: <0.0002 mg/L
Daily Average Concentration: 0 mg/L
Daily Average Loading: 0 lbs/day
Note: When an analysis of an effluent sample for a parameter covered by the MAL permit provision indicates no detectable levels and the test method detection level is not as sensitive as the specified MAL, then the level of detection achieved must be used for that sample result in determining reportable maximum and average values. A zero (0) may not be used.

5. No Detection for Non-MAL Parameters

When an analysis of an effluent sample indicates no detectable levels for a parameter not covered by the MAL permit provision, the level of detection achieved must be used for that sample result in determining reportable maximum and average values. A zero (0) may not be used.

6. Calculating Sewage Sludge Dry Metric Tons

On the SLDP DMR for sewage sludge production and use, the permittee must report the amount of sewage sludge produced and the amount of sewage sludge disposed or beneficially reused in dry metric tons. The following calculations show how to convert gallons or cubic yards of sewage sludge into dry metric tons.

Converting Gallons to Dry Metric Tons

To convert gallons of sewage sludge to dry metric tons, the following equation can be used.

$$\frac{\text{X gal}}{1} \times \frac{8.34 \text{ lbs}}{1 \text{ gal}} \times \frac{1 \text{ KG}}{2.2046 \text{ lbs}} \times \frac{1 \text{ MT}}{1000 \text{ KG}} \times \frac{\%\ \text{Dry MT}}{1 \text{ MT}} = \text{Dry Metric Tons}$$

Short Conversion $\dfrac{(X)(8.34)(\%)}{(2.2046)(1000)}$

Where:
X = Gallons of sewage sludge

% = Percent of solids in the sewage sludge
The other values in the equation are conversion factors.

For example, if the permittee disposes of 22,500 gallons of sewage sludge that has a solids content of 5%, the amount disposed is 4.26 dry metric tons.

$$\frac{(22500)(8.34)(0.05)}{(2.2046)(1000)} = 4.26 \text{ dry metric tons}$$

Converting Cubic Yards to Dry Metric Tons

To convert cubic yards of sewage sludge to dry metric tons, the following equation can be used.

$$\frac{X\ yd^3}{1} \times \frac{27\ ft^3}{1\ yd^3} \times \frac{Y\ lbs}{1\ ft^3} \times \frac{1\ KG}{2.2046\ lbs} \times \frac{1\ MT}{1000\ KG} \times \frac{\%\ Dry\ MT}{1\ MT} = \text{Dry Metric Tons}$$

Short Conversion: $\frac{(X)(27)(Y)(\%)}{(2.2046)(1000)}$

Where:
X = Cubic yards of sewage sludge
Y = Unit weight of sewage sludge in pounds per cubic foot
% = Percent of solids in the sewage sludge
The other values in the equation are conversion factors.
For example, if the permittee disposes of 100 cubic yards of sewage sludge with a solids content of 25% and a unit weight of 75 pounds per cubic foot, the amount disposed is 22.96 dry metric tons.

$$\frac{(100)(27)(75)(0.25)}{(2.2046)(1000)} = 22.96 \text{ dry metric tons}$$

This document was produced/revised by the following staff members of the Compliance Assurance and Enforcement Division, NPDES Compliance Monitoring Section, of the Environmental Protection Agency, Region 6:

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August 25, 2004

Emailed
10-22-2015
BZ

IN THE MATTER OF AN	§	**BEFORE THE**
ENFORCEMENT ACTION	§	
CONCERNING	§	**TEXAS COMMISSION ON**
CITY OF HACKBERRY	§	
RN102077054	§	**ENVIRONMENTAL QUALITY**

AGREED ORDER
DOCKET NO. 2015-0099-MWD-E

At its _____ agenda, the Texas Commission on Environmental Quality ("the Commission" or "TCEQ") considered this agreement of the parties, resolving an enforcement action regarding the City of Hackberry ("Respondent") under the authority of TEX. WATER CODE chs. 7 and 26. The Executive Director of the TCEQ, through the Enforcement Division, and the Respondent presented this agreement to the Commission.

The Respondent understands that it has certain procedural rights at certain points in the enforcement process, including, but not limited to, the right to formal notice of violations, notice of an evidentiary hearing, the right to an evidentiary hearing, and a right to appeal. By entering into this Agreed Order, the Respondent agrees to waive all notice and procedural rights.

It is further understood and agreed that this Order represents the complete and fully-integrated settlement of the parties. The provisions of this Agreed Order are deemed severable and, if a court of competent jurisdiction or other appropriate authority deems any provision of this Agreed Order unenforceable, the remaining provisions shall be valid and enforceable. The duties and responsibilities imposed by this Agreed Order are binding upon the Respondent.

The Commission makes the following Findings of Fact and Conclusions of Law:

I. FINDINGS OF FACT

1. The Respondent owns and operates a wastewater treatment plant located at 119 Maxwell Road, at the southern end of Maxwell Road in Frisco, Denton County, Texas (the "Facility") with associated collection system manholes located in Hackberry, Denton County, Texas.

2. The Respondent has discharged municipal waste into or adjacent to any water in the state under TEX. WATER CODE ch. 26.

3. During a record review conducted on September 29, 2014, TCEQ staff documented that the Respondent did not prevent the unauthorized discharge of wastewater from the collection system into or adjacent to water in the state. Specifically, an unauthorized discharge of approximately 10,000 gallons from the collection system occurred on September 14, 2014. The unauthorized discharge flowed from the manhole located at 5104 Coney Island Drive and pooled in an area of the storm water collection system resulting in a fish kill of approximately 30 fish. Furthermore, six unauthorized discharges from the collection system occurred between September 18, 2014 and November 12, 2014, totaling approximately 11,500 gallons, as shown in the following table:

UNAUTHORIZED DISCHARGE TABLE			
Date	**Location**	**Amount Discharged (gallons)**	**Description**
September 18, 2014	plant lift station	2,000	Pump failure due to an electrical failure which caused the high level alarm to malfunction.
September 21, 2014	5104 Coney Island Drive (manhole)	500	Pump failure due to electrical problems.
September 29, 2014	12120 Sand Castle Drive and 5104 Coney Island Drive (two manholes)	4,000	Breaker failures at the Coney Island Drive lift station.
September 30, 2014	5104 Coney Island Drive (manhole)	2,000	Breaker failure at the Coney Island Drive lift station.
October 26, 2014	12120 Sand Castle Drive and 5104 Coney Island Drive (two manholes)	2,000	Pump failures due to electrical problems at the Coney Island Drive lift station.
November 12, 2014	5104 Coney Island Drive (manhole)	1,000	Pump failure due to electrical problems at the Coney Island Drive lift station.

4. During a record review conducted on January 21, 2015, TCEQ staff documented that the Respondent did not timely submit a complete discharge monitoring report ("DMR") for the monitoring period ending December 31, 2013. Specifically, the DMR did not include total suspended solids daily average loading and concentration and maximum single grab results.

5. During a record review conducted on January 21, 2015, TCEQ staff documented that the Respondent did not timely submit a complete sludge report for the monitoring period ending July 31, 2014 by September 30, 2014. Specifically, the sewage sludge for production and use ("SLDP") DMR for the 2014 sludge report was lacking polychlorinated biphenyls and toxic characteristic leaching procedure results.

6. The Respondent received notice of the violations on December 2, 2014.

7. The Executive Director recognizes that the Respondent has implemented the following corrective measures at the Facility:

   a. By September 14, 2014, stopped the discharge, collected the debris, disinfected the affected area, and removed and properly disposed of the dead fish.

   b. By February 3, 2015, submitted a revised DMR for the monitoring period ending December 31, 2013 and submitted a revised annual sludge report for the monitoring period ending July 31, 2014.

   c. By March 11, 2015, performed corrective actions following additional discharges and upgraded the lift stations to prevent future electrical malfunctions.

II. CONCLUSIONS OF LAW

1. The Respondent is subject to the jurisdiction of the TCEQ pursuant to TEX. WATER CODE chs. 7 and 26 and the rules of the Commission.

2. As evidenced by Findings of Fact No. 3, the Respondent failed to prevent the unauthorized discharge of wastewater from the collection system into or adjacent to water in the state, in violation of TEX. WATER CODE § 26.121(a)(1), 30 TEX. ADMIN. CODE § 305.125(4), and Texas Pollutant Discharge Elimination System ("TPDES") Permit No. WQ0013434001, Permit Conditions No. 2.g.

3. As evidenced by Findings of Fact No. 4, the Respondent failed to timely submit a complete DMR for the monitoring period ending December 31, 2013, in violation of 30 TEX. ADMIN. CODE §§ 305.125(1) and 319.1 and TPDES Permit No. WQ0013434001, Monitoring and Reporting Requirements No. 1 (permit effective January 26, 2011).

4. As evidenced by Findings of Fact No. 5, the Respondent failed to timely submit a complete sludge report for the monitoring period ending July 31, 2014 by September 30, 2014, in violation of 30 TEX. ADMIN. CODE § 305.125(1) and (17) and TPDES Permit No. WQ0013434001, Sludge Provisions (permit effective February 28, 2014).

5. Pursuant to TEX. WATER CODE § 7.051, the Commission has the authority to assess an administrative penalty against the Respondent for violations of the Texas Water Code and the Texas Health and Safety Code within the Commission's jurisdiction; for violations of rules adopted under such statutes; or for violations of orders or permits issued under such statutes.

6. An administrative penalty in the amount of Nineteen Thousand Four Hundred Twenty-Five Dollars ($19,425) is justified by the facts recited in this Agreed Order, and considered in light of the factors set forth in TEX. WATER CODE § 7.053. The Respondent has paid the Nineteen Thousand Four Hundred Twenty-Five Dollar ($19,425) administrative penalty.

III. ORDERING PROVISIONS

NOW, THEREFORE, THE TEXAS COMMISSION ON ENVIRONMENTAL QUALITY ORDERS that:

1. The Respondent is assessed an administrative penalty in the amount of Nineteen Thousand Four Hundred Twenty-Five Dollars ($19,425) as set forth in Section II, Paragraph 6 above, for violations of TCEQ rules and state statutes. The payment of this administrative penalty and the Respondent's compliance with all the terms and conditions set forth in this Agreed Order completely resolve the violations set forth by this Agreed Order in this action. However, the Commission shall not be constrained in any manner from requiring corrective actions or penalties for other violations that are not raised here. Administrative penalty payments shall be made payable to "TCEQ" and shall be sent with the notation "Re: City of Hackberry, Docket No. 2015-0099-MWD-E" to:

   Financial Administration Division, Revenue Operations Section
   Attention: Cashier's Office, MC 214
   Texas Commission on Environmental Quality
   P.O. Box 13088
   Austin, Texas 78711-3088

2. The Respondent shall undertake the following technical requirements:

   a. Within 30 days after the effective date of this Agreed Order, update the Facility's operational guidance and conduct employee training to ensure that self-reporting requirements are properly accomplished, including the submittal of complete

DMRs and annual sludge reports, in accordance with TPDES Permit No. WQ0013434001.

b. Within 45 days after the effective date of this Agreed Order, submit written certification as described below, and include detailed supporting documentation including photographs, receipts, and/or other records to demonstrate compliance with Ordering Provisions No. 2.a. The certification shall be notarized by a State of Texas Notary Public and include the following certification language:

> "I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fines and imprisonment for knowing violations."

The certification shall be submitted to:

Order Compliance Team
Enforcement Division, MC 149A
Texas Commission on Environmental Quality
P.O. Box 13087
Austin, Texas 78711-3087

with a copy to:

Water Section Manager
Dallas/Fort Worth Regional Office
Texas Commission on Environmental Quality
2309 Gravel Drive
Fort Worth, Texas 76118-6951

3. The provisions of this Agreed Order shall apply to and be binding upon the Respondent. The Respondent is ordered to give notice of the Agreed Order to personnel who maintain day-to-day control over the Facility operations referenced in this Agreed Order.

4. If the Respondent fails to comply with any of the Ordering Provisions in this Agreed Order within the prescribed schedules, and that failure is caused solely by an act of God, war, strike, riot, or other catastrophe, the Respondent's failure to comply is not a violation of this Agreed Order. The Respondent shall have the burden of establishing to the Executive Director's satisfaction that such an event has occurred. The Respondent

shall notify the Executive Director within seven days after the Respondent becomes aware of a delaying event and shall take all reasonable measures to mitigate and minimize any delay.

5. The Executive Director may grant an extension of any deadline in this Agreed Order or in any plan, report, or other document submitted pursuant to this Agreed Order, upon a written and substantiated showing of good cause. All requests for extensions by the Respondent shall be made in writing to the Executive Director. Extensions are not effective until the Respondent receives written approval from the Executive Director. The determination of what constitutes good cause rests solely with the Executive Director.

6. The Executive Director may refer this matter to the Office of the Attorney General of the State of Texas ("OAG") for further enforcement proceedings without notice to the Respondent if the Executive Director determines that the Respondent has not complied with one or more of the terms or conditions in this Agreed Order.

7. This Agreed Order shall terminate five years from its effective date or upon compliance with all the terms and conditions set forth in this Agreed Order, whichever is later.

8. This Agreed Order, issued by the Commission, shall not be admissible against the Respondent in a civil proceeding, unless the proceeding is brought by the OAG to: (1) enforce the terms of this Agreed Order; or (2) pursue violations of a statute within the Commission's jurisdiction, or of a rule adopted or an order or permit issued by the Commission under such a statute.

9. This Agreed Order may be executed in separate and multiple counterparts, which together shall constitute a single instrument. Any page of this Agreed Order may be copied, scanned, digitized, converted to electronic portable document format ("pdf"), or otherwise reproduced and may be transmitted by digital or electronic transmission, including but not limited to facsimile transmission and electronic mail. Any signature affixed to this Agreed Order shall constitute an original signature for all purposes and may be used, filed, substituted, or issued for any purpose for which an original signature could be used. The term "signature" shall include manual signatures and true and accurate reproductions of manual signatures created, executed, endorsed, adopted, or authorized by the person or persons to whom the signatures are attributable. Signatures may be copied or reproduced digitally, electronically, by photocopying, engraving, imprinting, lithographing, electronic mail, facsimile transmission, stamping, or any other means or process which the Executive Director deems acceptable. In this paragraph exclusively, the terms "electronic transmission", "owner", "person", "writing", and "written" shall have the meanings assigned to them under TEX. BUS. ORG. CODE § 1.002.

10. The effective date of this Order is the date it is signed by the Commission. A copy of this fully executed Order shall be provided to each of the parties.

SIGNATURE PAGE

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

For the Commission _____ Date _____

For the Executive Director _____ Date _____

I, the undersigned, have read and understand the attached Agreed Order in the matter of the City of Hackberry. I am authorized to agree to the attached Agreed Order on behalf of the City of Hackberry, and do agree to the specified terms and conditions. I further acknowledge that the TCEQ, in accepting payment for the penalty amount, is materially relying on such representation.

I understand that by entering into this Agreed Order, the City of Hackberry waives certain procedural rights, including, but not limited to, the right to formal notice of violations addressed by this Agreed Order, notice of an evidentiary hearing, the right to an evidentiary hearing, and the right to appeal. I agree to the terms of the Agreed Order in lieu of an evidentiary hearing. This Agreed Order constitutes full and final adjudication by the Commission of the violations set forth in this Agreed Order.

I also understand that failure to comply with the Ordering Provisions, if any, in this order and/or failure to timely pay the penalty amount, may result in:

- A negative impact on compliance history;
- Greater scrutiny of any permit applications submitted;
- Referral of this case to the Attorney General's Office for contempt, injunctive relief, additional penalties, and/or attorney fees, or to a collection agency;
- Increased penalties in any future enforcement actions;
- Automatic referral to the Attorney General's Office of any future enforcement actions; and
- TCEQ seeking other relief as authorized by law.

In addition, any falsification of any compliance documents may result in criminal prosecution.

Signature _____ Date _____

Ronald Austin _____ Mayor _____

Name (Printed or typed) Title
Authorized Representative of
City of Hackberry

Instructions: Send the original, signed Agreed Order with penalty payment to the Financial Administration Division, Revenue Operations Section at the address in Section III, Paragraph 1 of this Agreed Order.