



Managing Small Domestic Wastewater Systems: Part C, Operation and Maintenance

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Introduction

This publication is Part C of a five-part series, *Managing Small Domestic Wastewater Systems* (TCEQ publication series RG-530), and contains worksheets to help you:

- create your own operation-and-maintenance manual for your utility
- map out a program for scheduling and performing preventive and general maintenance
- develop a process-control program to help keep your system in compliance with state and federal environmental rules

As you work through this module, you may find it beneficial to review other parts of the series to help you prepare a comprehensive operation-and-maintenance plan. To view or download the complete series go to www.tceq.texas.gov/goto/rg-530. If you do not have Internet access, call the SBLGA's hotline at 800-447-2827 for a paper copy of the complete series *Managing Small Domestic Wastewater Systems* (RG-530).

Note: This publication is not a substitute for the actual rules. To obtain the most current, official copy of state rules, contact the Secretary of State's office at 512-305-9623. The rules are also available online at [texreg.sos.state.tx.us/public/readtac\\$ext.ViewTAC?tac_view=2&ti=30](http://texreg.sos.state.tx.us/public/readtac$ext.ViewTAC?tac_view=2&ti=30).

Implementing an Operation-and-Maintenance Program

In Part A, *Asset Management* (RG-530a), you developed an asset management plan for your facility. This document (Part C) is designed to help you—the manager or operator of a small domestic wastewater system put together an operation-and-maintenance (O&M) manual to keep the system's infrastructure and equipment (assets) in good working condition, extend their useful life, and avoid some of the common O&M violations.

Benefits of an O&M Program

An effective O&M program can save you money by increasing the useful life of assets. It can also help you estimate the expenses that may be incurred during future repairs and replacement of equipment as you implement your asset-management plan. Finally, an O&M program can help keep your system in compliance with state and federal environmental rules.

Common O&M Violations

As the operator, you must ensure that the facility and its collection, treatment, and disposal systems are properly operated and maintained. This includes regular, periodic examination of wastewater solids to maintain an appropriate quantity and quality of solids inventory. Records of process control, maintenance, and operations must be retained at the facility site or be readily available for review by a TCEQ representative for three years.

Frequent O&M violations to the TCEQ's rules for wastewater facilities include failure to:

- Employ an operator with the appropriate level of license. [30 TAC 30.350(d),* 30 TAC 305.125(1)]
- Maintain compliance with permitted effluent limits. [Texas Water Code 26.121(a)(1), 30 TAC 305.125(1) and (5)]
- Measure the flow according to permit requirements. [30 TAC 319.4, 305.125(1) and (5)]
- Install the flow-measuring devices as required. [30 TAC 217.33(c), 319.11(d)]

* Short for "Title 30, Texas Administrative Code, Subsection 30.350(d)."

- Properly preserve effluent samples. [30 TAC 319.11(b)]
- Maintain all monitoring and reporting records at the facility. [30 TAC 319.7(c); 305.125(1)]
- Comply with the operational requirements of standard permit conditions [30 TAC 305.125]

Other frequent violations include pond erosion, equipment deterioration from lack of maintenance, no records of meter calibrations, and—for those systems that perform land application—failing to submit annual soil sample results to both the regional and Austin TCEQ offices.

Your O&M Manual

A comprehensive O&M manual will help you keep track of your inspections, equipment, operations, staff, and the maintenance you've done—or need to do—on your system. Additionally, your manual will help ensure that the plant and equipment are properly operated and maintained. That will help you maintain compliance with rules, regulations, and permit requirements to protect water quality.

Owners of new treatment facilities designed under 30 TAC 217 are responsible for developing an O&M manual with the assistance of an engineer. The following pages form a basic template for an O&M manual. When using the template keep in mind: your manual must be facility specific.

A current copy of your O&M manual must be maintained on-site, and a copy must be made available within 30 days when requested by an investigator. Your manual should be updated regularly and any time personnel, equipment, or processes and procedures have changed.

Operation-and-Maintenance Manual

for

(Facility Name)

Water Quality Permit Number

TCEQ Regulated Entity Number (RN)

TCEQ Customer Reference Number (CN)

EPA ID Number TX _____

(If this is a new facility, include the supervising engineer's name and PE license number.)

Date _____

Operation-and-Maintenance Manual

Contents

1. Facility Permit and Permit Modifications
2. TCEQ, EPA, and Emergency Contacts
3. Discharge Monitoring Report (DMR) Address and Signatory Authority
4. Process-Control Tests
5. Monthly Effluent Report
6. Soil Monthly Effluent Report
7. Plant Information—Summary
8. Startup and Operating Procedures
9. Sludge Maintenance
10. Lab Analyses and References
11. Routine Maintenance
12. Spare-Part Inventory and Equipment Suppliers
13. Safety

1. Facility Permit and Permit Modifications

Insert a copy of the permit, with drawings, followed by any approved modifications. Identify where the originals are kept.

2. TCEQ, EPA, and Emergency Contacts

TCEQ Region _____ Phone _____

Region Director _____

Water Section Manager _____

SBLGA Representative(s)

SBLGA Hotline 800-447-2827

EPA Region 6—Dallas

General Information 800-887-6063

NPDES Compliance 214-665-7521

Other Contacts

Police _____

Fire _____

Ambulance _____

Local Emergency-Planning Committee _____

DPS, Emergency Management _____

Licensed Operators

Please fill in the name and license number with the license expiration date in the table below.

Operators

Name	Type of License and License Number	Expiration Date

3. Discharge Monitoring Report (DMR) Address and Signatory Authority

Form TCEQ-20431 appears on the following pages. It can also be downloaded at www.tceq.texas.gov/assets/public/assistance/sblga/20431.pdf.



TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Discharge Monitoring Report (DMR) Address and Signatory Authority Form

If you have questions about completing this form, please contact the Compliance Monitoring Team at 512-239-2545.

Individuals are entitled to request and review their personal information that the agency gathers on its forms. They may also have any errors in their information corrected. To review such information, contact us at 512-239-2545.

Permit Information:

EPA ID NUMBER: TX _____ TPDES PERMIT NUMBER (if applicable): _____

PERMITTEE AND/OR FACILITY NAME: _____

DMR MAILING ADDRESS: _____
(If different from your primary mailing address stated on the permit) _____
(Street Address)

(City, State and Zip Code)

Note: If your primary mailing address has changed, please submit the revised address in writing to the Applications Review and Processing Team (MC 148). Please call 512-239-4671 to request the form for this purpose.

Signatory Information:

INDIVIDUAL(S) DELEGATED AUTHORITY TO SIGN DISCHARGE MONITORING REPORTS (DMRs):
(Other than person delegating authority- **Delegation of signatory authority must meet the requirements in 30 TEX. ADMIN. CODE 305.128.** See reverse of this form for rule citation.)

(Name) / (Title)

(Name) / (Title)

PERSON TO CONTACT BY PHONE: _____ / _____
(Name) (Title)

(Phone Number)

(E-mail Address)

RESPONSIBLE CORPORATE OFFICER, GENERAL PARTNER, PROPRIETOR, PRINCIPLE EXECUTIVE OFFICER, OR RANKING ELECTED OFFICIAL: (**Individual listed below is a person defined in 30 TEX. ADMIN. CODE 305.44(a).** See reverse of this form for rule citation.)

I, _____
(Printed name) (Title)

certify that I am a RESPONSIBLE CORPORATE OFFICER, GENERAL PARTNER, PROPRIETOR, PRINCIPAL EXECUTIVE OFFICER, OR RANKING ELECTED OFFICIAL for the above-referenced regulated facility, and I therefore have authority under 30 TAC 305.44 to sign reports. I certify that signatory authority for Discharge Monitoring Reports has been delegated to the above-named individual(s) in accordance with applicable procedures, consistent with 30 TAC 305.44 and 305.128. I also certify that the above-named individual(s) are either individuals or a position having responsibility for the overall operation of the regulated facility or for the environmental matters of the regulated facility. I further certify that I can provide documentation in proof of such delegation upon request.

SIGNATURE: _____ DATE: _____

PHONE NO.: _____

PLEASE RETURN COMPLETED FORM TO:
TCEQ / Compliance Monitoring Team (**MC 224**)
Enforcement Division
P.O. Box 13087
Austin, Texas 78711-3087

Signatories to Applications

30 TEX. ADMIN. CODE 305.44

(a) All applications shall be signed as follows.

(1) For a corporation, the application shall be signed by a responsible corporate officer. For purposes of this paragraph, a responsible corporate officer means a president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the corporation; or the manager of one or more manufacturing, production, or operating facilities employing more than 250 persons or having gross annual sales or expenditures exceeding \$25 million (in second-quarter 1980 dollars), if authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures. Corporate procedures governing authority to sign permit or post-closure order applications may provide for assignment or delegation to applicable corporate positions rather than to specific individuals.

(2) For a partnership or sole proprietorship, the application shall be signed by a general partner or the proprietor, respectively.

(3) For a municipality, state, federal, or other public agency, the application shall be signed by either a principal executive officer or a ranking elected official. For purposes of this paragraph, a principal executive officer of a federal agency includes the chief executive officer of the agency, or a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., regional administrator of the EPA).

(b) A person signing an application shall make the following certification: "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 there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

(c) For a hazardous solid waste permit or a post-closure order, the application must be signed by the owner and operator of the facility.

(d) For radioactive material license applications under Chapter 336 of this title (relating to Radioactive Substance Rules), the applicant or person duly authorized to act for and on the applicant's behalf must sign the application.

Signatories to Reports

30 TEX. ADMIN. CODE 305.128

(a) All reports requested by permits and other information requested by the executive director shall be signed by a person described in §305.44(a) of this title (relating to Signatories to Applications) or by a duly authorized representative of that person. A person is a duly authorized representative only if:

(1) the authorization is made in writing by a person described in §305.44(a) of this title (relating to Signatories to Applications);

(2) **the authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity or for environmental matters for the applicant**, such as the position of plant manager, operator of a well or well field, environmental manager, or a position of equivalent responsibility. (A duly authorized representative may thus be either a named individual or any individual occupying a named position); and

(3) the written authorization is submitted to the executive director.

(b) If an authorization under this section is no longer accurate because of a change in individuals or position, a new authorization satisfying the requirements of this section must be submitted to the executive director prior to or together with any reports, information, or applications to be signed by an authorized representative.

(c) **Any person signing a report required by a permit shall make the certification set forth in §305.44(b) of this title** (relating to Signatories to Applications).

4. Process-Control Tests

Activated-sludge wastewater-treatment facilities (the most common type) are biological processes that require regular monitoring and adjustments. Performing process-control tests will help ensure that your facility does not experience effluent quality violations.

The TCEQ's Licensing Program and the Advisory Committee for Water Utility Operator Licensing developed recommendations for minimum process-control tests, available in *Process Control Tests for Domestic Wastewater Treatment Facilities* (RG-002). This guide has four tables listing the recommended process control tests and appears at <www.tceq.texas.gov/goto/rg-002>. *Note:* Table 4 of the guide applies to facilities with a permitted flow of 1 MGD or less.

Commonly Used Abbreviations

BOD	biochemical oxygen demand
Cl ₂	chlorine gas
COD	chemical oxygen demand
DO	dissolved oxygen
F/M	food-to-microorganism ratio
GPD	gallons per day
GSA	Gould sludge age
MCRT	mean cell-residence time
MGD	million gallons per day
Mg/L	milligram(s) per liter
MLSS	mixed-liquor suspended solids
N	nitrogen
NH ₃	anhydrous ammonia
NH ₃ -N	ammonia nitrogen
RAS	return-activated sludge
SV ₃₀	settleability test, or the 30-minute settling test
SVI	sludge-volume index

TCLP	toxicity characteristic leaching procedure
TSS	total suspended solids
VSS	volatile suspended solids
WAS	waste-activated sludge

Process-Control Daily Activity Report and Operator's Daily Activity Reports

Sample reports for process-control testing and for recording the daily and monthly activities appear in Tables 1 through 3 on the following pages. Refer to your permit and *Process Control Tests for Domestic Wastewater Treatment Facilities* (RG-002), as you may not be required to run all tests daily.

Table 1: Daily Activity Report for Process-Control Tests

As applicable, use this chart for recording process-control tests performed on each unit in your system. Make additional copies as needed for each unit.

Month: _____, **20**_____ **Unit:** _____

Date	Flow	Sludge Temp.	Blanket Level	SV30	SVI	F/M Ratio	MCRT	GSA	WAS Rate	RAS Rate	DO	COD	pH	NH ₃ -N	BOD ₅	TSS/VSS	MLSS
1																	
2																	
3																	
4																	
5																	
6																	
7																	
8																	
9																	
10																	
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30																	
31																	

Table 2: Operator’s Daily Log

Use this chart for recording daily flow, sample results, and meter calibration. Make additional copies as needed for each unit.

Month: _____, **20**_____

Date	Effluent Flow (MGD)	DO (mg/L)	pH (SU)	TSS (mg/L)	BOD ₅ (mg/L)	Cl ₂ (mg/L)	NH ₃ (mg/L)	Fecal/ <i>E. coli</i> (CFUs/100) (mL)
1								
2								
3								
4								
5								
6								
7								
8								
9								
10								
11								
12								
13								
14								
15								
16								
17								
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19								
20								
21								
22								
23								
24								

Table 3: Sludge-Disposal Record

Use this chart to track sludge-management activities. Make copies as needed.

Date	Passed paint filter test? (yes or no)	Amount disposed of (dry tons)	Disposal-site name and permit number	Transporter name and registration number	Land-application rates and area	TCLP test? (yes or no)

Records (including laboratory test results and quality assurance–quality control) must be maintained according to your permit.

Below are more tables you may choose to use to record your backup-power-supply tests, and your backflow-prevention-device annual testing and certification. We also encourage you to keep a daily log book at the plant to note any weather information, notes and instructions for other staff members or any process or equipment changes.

Table 4: Backup Power Tests

Backup power supplies should be tested regularly to ensure operation when needed. Remember to test under load for accurate operation in an emergency.

Date	Type of Supply	Location of Supply	Length of Test (min.)	Comments

Table 5: Backflow-Prevention Device: Annual Testing and Certification

Date	Device Location	Inspector's License No.	Notes	Initials

5. Domestic Reuse Monthly Effluent Report

Form TCEQ-20709 appears on the following pages. It can also be downloaded at www.tceq.texas.gov/assets/public/assistance/sblga/forms/domestic%20reuse%20MER.xlsx.



Texas Commission on Environmental Quality

P.O. Box 13087 • Austin, TX 78711-3087

MONTHLY EFFLUENT REPORT

PERMIT NUMBER

SET

YEAR	MO
------	----

EID

This report to be used for _____

Please retain a photocopy for your records.

Parameter Code/ Parameter	Effluent Condition		No. Ex	Frequency of Analysis	Sample Type
	Value	Units			
3101024 BOD ₅	Permitted			2/week	Grab
	Reported				
800821024 CBOD ₅	Permitted			2/week	Grab
	Reported				
820796624 Turbidity	Permitted			2/week	Grab
	Reported				
31643730 E. coli	Permitted			2/week	Grab
	Reported				
316403724 E. coli	Permitted			2/week	Grab
	Reported				
316393724 Enterococci	Permitted			2/week	Grab
	Reported				
316393730 Enterococci	Permitted			2/week	Grab
	Reported				
4006030 pH	Permitted			2/week	Grab
	Reported				
500507124 Flow	Permitted			2/week	Grab
	Reported				
	Permitted				
	Reported				

COMMENTS AND EXPLANATIONS (Reference all attachments here.)

I CERTIFY THAT I AM FAMILIAR WITH THE INFORMATION CONTAINED IN THIS REPORT AND THAT TO THE BEST OF MY KNOWLEDGE AND BELIEF SUCH INFORMATION IS TRUE, COMPLETE AND ACCURATE.

PLANT OPERATOR NAME	PLANT OPERATOR SIGNATURE	MONTH	DAY	YEAR
EXECUTIVE OFFICER NAME	EXECUTIVE OFFICER SIGNATURE	MONTH	DAY	YEAR
Telephone Number				
		Area code	Number	

Texas Commission on Environmental Quality
Monthly Effluent Report Form
Completion Instructions

This Domestic Reuse Monthly Effluent Report is a self-reporting form that shows all the possible parameters that could be reported. Report those required by your permit. Extreme care should be taken to ensure that this report is used for only the plant or outfall described and for the year and month you specify on this the form. Measurements or test results must be reported in the following manner:

1. "Effluent Condition" column - Enter permitted limit in the shaded space and test results in the unshaded space under VALUE for each parameter using the units specified for that parameter in your permit. If the UNITS specifies MGD (million gallons per day), then a measured flow of 100,000 gallons per day should be reported as 0.100 MGD.

2. "NO EX" column - In the unshaded spaces, enter the exact number of times during the month that the given permitted limit was exceeded. If an effluent value reported as daily average is found to exceed the permitted daily average, enter a "1" in the box regardless of the number of single readings above the permitted limit

3. "Frequency of Analysis" and "Sample Type" columns - These columns reflect your permit requirements for the sampling of each parameter. This form includes many possible permit requirements. Use the frequency of analysis and sample type for each parameter as specified in your permit.

4. If no discharge is made during the reporting month enter a "0" under VALUE and enter the PARAMETER as "Discharge Days/Month." Leave the remainder of the form blank, except for reporting requirements under number 5 below.

5. Each form must contain two original signatures, the dates the forms were signed and the telephone number of the executive officer. Send the completed form to the Water Compliance Monitoring Team (MC 224), Enforcement Division, Texas Commission on Environmental Quality, PO Box 13087, Austin, Texas 78711-3087.

PLEASE RETAIN A PHOTOCOPY OF THE REPORT FOR YOUR RECORDS.

The following are definitions of terms and abbreviations used on the report:

DLY. AVG.	Daily Average will be the arithmetic average of all test or measurement results obtained during the reporting period
DLY. MAX.	Daily Maximum will be the largest of all the test or measurement results obtained during the reporting period.
IND. GRAB	Individual Grab will be the largest test or measurement result obtained during the reporting period from a grab sample.
DLY. MIN.	Daily Minimum will be the smallest test or measurement result obtained during the reporting period.
GRAB	A sample collected in less than 15 minutes.
GRAB PKLOAD	Grab sample collected at peak loading.
3 PRT COMP	3-part composite
6 PRT COMP	6-part composite
12 PRT COMP	12-part composite
Parameter	A physical property whose values determine the characteristics or behavior of something (i.e. temperature, BOD, pH)

If you have questions on how to fill out this form or about the self-reporting program, please contact us at 512/239-2545. Individuals are entitled to request and review their personal information that the agency gathers on its forms. They may also have any errors in their information corrected. To review such information, contact us at 512/239-3282.

Parameter Name	Parameter Code	Sample Type/Units
pH	4006030	Ind Grab
Turbidity	820796624	Daily Average
BOD5	3101024	Daily Average
CBOD5	800821024	Daily Average
E. coli	316403730	Ind Grab
E. coli	316403724	Daily Average
Enterococci	316393724	Daily Average
Enterococci	316393730	Ind Grab

6. Soil Monthly Effluent Report

Form TCEQ-20710 appears on the following pages. It can also be downloaded at www.tceq.texas.gov/assets/public/assistance/sblga/forms/Soil%20MER.xlsx.



Texas Commission on Environmental Quality

P.O. Box 13087 • Austin, TX 78711-3087

MONTHLY EFFLUENT REPORT

PERMIT NUMBER

SET

YEAR	MO

EID

This report to be used for SOIL MON 101 ANN 0-6

Please retain a photocopy for your records.

Parameter Code/ Parameter	Effluent Condition			No. Ex	Frequency of Analysis	Sample Type
		Value	Units			
<i>EXAMPLE</i> 4006080 pH Maximum	Permitted	<i>permitted #</i>	<i>Std Units</i>		<i>1/year</i>	<i>24-hour comp</i>
	Reported	<i>result</i>	<i>units</i>	<i>#</i>		
	Permitted					
	Reported					
	Permitted					
	Reported					
	Permitted					
	Reported					
	Permitted					
	Reported					
	Permitted					
	Reported					
	Permitted					
	Reported					
	Permitted					
	Reported					
	Permitted					
	Reported					

COMMENTS AND EXPLANATIONS (Reference all attachments here.)

I CERTIFY THAT I AM FAMILIAR WITH THE INFORMATION CONTAINED IN THIS REPORT AND THAT TO THE BEST OF MY KNOWLEDGE AND BELIEF SUCH INFORMATION IS TRUE AND COMPLETE AND ACCURATE.

PLANT OPERATOR NAME	PLANT OPERATOR SIGNATURE	MONTH	DAY	YEAR
EXECUTIVE OFFICER NAME	EXECUTIVE OFFICER SIGNATURE	MONTH	DAY	YEAR
Telephone Number		Area code Number		

Texas Commission on Environmental Quality
Monthly Effluent Report Form
Completion Instructions

This Soil Monthly Effluent Report is a self-reporting form for annual soil sampling from 0 to 6 inches. This form is blank, and the parameter names, codes, and sample types are provided in the accompanying spreadsheet file. Extreme care should be taken to ensure that this report is completed accurately. Measurements or test results must be reported in the following manner:

1. "Parameter Code/Parameter" column – Enter the parameter code and parameter name that is specified in your TLAP.
2. "Effluent Condition" column - Enter your permit limit in the shaded space and test results in the unshaded spaces under VALUE for the parameters using the units specified in your permit. If the UNITS specifies MGD (million gallons per day), then a measured flow of 100,000 gallons per day should be reported as 0.100 MGD.
3. "NO EX" column - Enter in the unshaded spaces, the exact number of times during the month that the given permitted limit was exceeded. If an effluent value reported as daily average is found to exceed the permitted daily average, enter a "1" in the box regardless of the number of single readings above the permitted limit
4. "Frequency of Analysis" and "Sample Type" columns - These columns reflect your permit requirements for the sampling of each parameter. If you have previous MER forms, transfer the frequency of analysis and sample type for each parameter.
5. If no discharge is made during the reporting month enter a "0" under VALUE and enter the PARAMETER "Discharge Days/Month." Leave the remainder of the form blank, except for reporting requirements under number 6 below.
6. Each form must contain two original signatures, the dates the forms were signed and the telephone number of the executive officer. Send the completed form to the Water Compliance Monitoring Team (MC 224), Enforcement Division, Texas Commission on Environmental Quality, PO Box 13087, Austin, Texas 78711-3087.

PLEASE RETAIN A PHOTOCOPY OF THE REPORT FOR YOUR RECORDS.

The following are definitions of terms and abbreviations used on the report:

DLY. AVG.	Daily Average will be the arithmetic average of all test or measurement results obtained during the reporting period
DLY. MAX.	Daily Maximum will be the largest of all the test or measurement results obtained during the reporting period.
IND. GRAB	Individual Grab will be the largest test or measurement result obtained during the reporting period from a grab sample.
DLY. MIN.	Daily Minimum will be the smallest test or measurement result obtained during the reporting period.
GRAB	A sample collected in less than 15 minutes.
GRAB PKLOAD	Grab sample collected at peak loading.
3 PRT COMP	3-part composite
6 PRT COMP	6-part composite
12 PRT COMP	12-part composite
Parameter	A physical property whose values determine the characteristics or behavior of something (i.e. temperature, BOD, pH)

If you have questions on how to fill out this form or about the self-reporting program, please contact us at 512/239-2545. Individuals are entitled to request and review their personal information that the agency gathers on its forms. They may also have any errors in their information corrected. To review such information, contact us at 512/239-3282.



Texas Commission on Environmental Quality

P.O. Box 13087 • Austin, TX 78711-3087
MONTHLY EFFLUENT REPORT

PERMIT NUMBER

SET

YEAR	MO

EID

This report to be used for SOIL MON 101 ANN 0-12

Please retain a photocopy for your records.

Parameter Code/ Parameter	Effluent Condition			No. Ex	Frequency of Analysis	Sample Type
		Value	Units			
<i>EXAMPLE</i> 4006080 <i>pH Maximum</i>	Permitted	<i>permitted #</i>	<i>Std Units</i>		<i>1/year</i>	<i>24-hour comp</i>
	Reported	<i>result</i>	<i>units</i>	#		
	Permitted					
	Reported					
	Permitted					
	Reported					
	Permitted					
	Reported					
	Permitted					
	Reported					
	Permitted					
	Reported					
	Permitted					
	Reported					
	Permitted					
	Reported					
	Permitted					
	Reported					

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PLANT OPERATOR NAME	PLANT OPERATOR SIGNATURE	MONTH	DAY	YEAR
EXECUTIVE OFFICER NAME	EXECUTIVE OFFICER SIGNATURE	MONTH	DAY	YEAR
Telephone Number				
		Area code	Number	

Texas Commission on Environmental Quality
Monthly Effluent Report Form
Completion Instructions

This Soil Monthly Effluent Report is a self-reporting form for annual soil sampling from 0 to 12 inches. This form is blank, and the parameter names, codes, and sample types are provided in the accompanying spreadsheet file. Extreme care should be taken to ensure that this report is completed accurately. Measurements or test results must be reported in the following manner:

1. "Parameter Code/Parameter" column – Enter the parameter code and parameter name that is specified in your TLAP.
2. "Effluent Condition" column - Enter your permit limit in the shaded space and test results in the unshaded spaces under VALUE for the parameters using the units specified in your permit. If the UNITS specifies MGD (million gallons per day), then a measured flow of 100,000 gallons per day should be reported as 0.100 MGD.
3. "NO EX" column - Enter in the unshaded spaces, the exact number of times during the month that the given permitted limit was exceeded. If an effluent value reported as daily average is found to exceed the permitted daily average, enter a "1" in the box regardless of the number of single readings above the permitted limit
4. "Frequency of Analysis" and "Sample Type" columns - These columns reflect your permit requirements for the sampling of each parameter. If you have previous MER forms, transfer the frequency of analysis and sample type for each parameter.
5. If no discharge is made during the reporting month enter a "0" under VALUE and enter the PARAMETER "Discharge Days/Month." Leave the remainder of the form blank, except for reporting requirements under number 6 below.
6. Each form must contain two original signatures, the dates the forms were signed and the telephone number of the executive officer. Send the completed form to the Water Compliance Monitoring Team (MC 224), Enforcement Division, Texas Commission on Environmental Quality, PO Box 13087, Austin, Texas 78711-3087.

PLEASE RETAIN A PHOTOCOPY OF THE REPORT FOR YOUR RECORDS.

The following are definitions of terms and abbreviations used on the report:

DLY. AVG.	Daily Average will be the arithmetic average of all test or measurement results obtained during the reporting period
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3 PRT COMP	3-part composite
6 PRT COMP	6-part composite
12 PRT COMP	12-part composite
Parameter	A physical property whose values determine the characteristics or behavior of something (i.e. temperature, BOD, pH)

If you have questions on how to fill out this form or about the self-reporting program, please contact us at 512/239-2545. Individuals are entitled to request and review their personal information that the agency gathers on its forms. They may also have any errors in their information corrected. To review such information, contact us at 512/239-3282.



Texas Commission on Environmental Quality

P.O. Box 13087 • Austin, TX 78711-3087
MONTHLY EFFLUENT REPORT

PERMIT NUMBER

SET

YEAR	MO

EID

This report to be used for SOIL MON 201 ANN 6-18

Please retain a photocopy for your records.

Parameter Code/ Parameter	Effluent Condition			No. Ex	Frequency of Analysis	Sample Type
		Value	Units			
<i>Example 4006080 pH Maximum</i>	Permitted	<i>permitted #</i>	<i>Std Units</i>		<i>1/year</i>	<i>24-hour comp</i>
	Reported	<i>result</i>	<i>units</i>	<i>#</i>		
	Permitted					
	Reported					
	Permitted					
	Reported					
	Permitted					
	Reported					
	Permitted					
	Reported					
	Permitted					
	Reported					
	Permitted					
	Reported					
	Permitted					
	Reported					
	Permitted					
	Reported					

COMMENTS AND EXPLANATIONS (Reference all attachments here.)

I CERTIFY THAT I AM FAMILIAR WITH THE INFORMATION CONTAINED IN THIS REPORT AND THAT TO THE BEST OF MY KNOWLEDGE AND BELIEF SUCH INFORMATION IS TRUE AND COMPLETE AND ACCURATE

PLANT OPERATOR NAME	PLANT OPERATOR SIGNATURE	MONTH	DAY	YEAR
EXECUTIVE OFFICER NAME	EXECUTIVE OFFICER SIGNATURE	MONTH	DAY	YEAR
Telephone Number				
		Area code	Number	

Texas Commission on Environmental Quality
Monthly Effluent Report Form
Completion Instructions

This Soil Monthly Effluent Report is a self-reporting form for annual soil sampling from 6 to 18 inches. This form is blank, and the parameter names, codes, and sample types are provided in the accompanying spreadsheet file. Extreme care should be taken to ensure that this report is completed accurately. Measurements or test results must be reported in the following manner:

1. "Parameter Code/Parameter" column – Enter the parameter code and parameter name that is specified in your TLAP.
2. "Effluent Condition" column - Enter your permit limit in the shaded space and test results in the unshaded spaces under VALUE for the parameters using the units specified in your permit. If the UNITS specifies MGD (million gallons per day), then a measured flow of 100,000 gallons per day should be reported as 0.100 MGD.
3. "NO EX" column - Enter in the unshaded spaces, the exact number of times during the month that the given permitted limit was exceeded. If an effluent value reported as daily average is found to exceed the permitted daily average, enter a "1" in the box regardless of the number of single readings above the permitted limit
4. "Frequency of Analysis" and "Sample Type" columns - These columns reflect your permit requirements for the sampling of each parameter. If you have previous MER forms, transfer the frequency of analysis and sample type for each parameter.
5. If no discharge is made during the reporting month enter a "0" under VALUE and enter the PARAMETER "Discharge Days/Month." Leave the remainder of the form blank, except for reporting requirements under number 6 below.
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Texas Commission on Environmental Quality

P.O. Box 13087 • Austin, TX 78711-3087
MONTHLY EFFLUENT REPORT

PERMIT NUMBER

SET

YEAR	MO

EID

This report to be used for SOIL MON 201 ANN 12-24

Please retain a photocopy for your records.

Parameter Code/ Parameter	Effluent Condition			No. Ex	Frequency of Analysis	Sample Type
		Value	Units			
<i>Example</i> 4006080 <i>pH Maximum</i>	Permitted	<i>permitted #</i>	<i>Std Units</i>		<i>1/year</i>	<i>24-hour comp</i>
	Reported	<i>result</i>	<i>units</i>	<i>#</i>		
	Permitted					
	Reported					
	Permitted					
	Reported					
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	Permitted					
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	Permitted					
	Reported					

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PLANT OPERATOR NAME	PLANT OPERATOR SIGNATURE	MONTH	DAY	YEAR
EXECUTIVE OFFICER NAME	EXECUTIVE OFFICER SIGNATURE	MONTH	DAY	YEAR
Telephone Number				
		Area code	Number	

Texas Commission on Environmental Quality
Monthly Effluent Report Form
Completion Instructions

This Soil Monthly Effluent Report is a self-reporting form for annual soil sampling from 12 to 24 inches. This form is blank, and the parameter names, codes, and sample types are provided in the accompanying spreadsheet file. Extreme care should be taken to ensure that this report is completed accurately. Measurements or test results must be reported in the following manner:

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2. "Effluent Condition" column - Enter your permit limit in the shaded space and test results in the unshaded spaces under VALUE for the parameters using the units specified in your permit. If the UNITS specifies MGD (million gallons per day), then a measured flow of 100,000 gallons per day should be reported as 0.100 MGD.
3. "NO EX" column - Enter in the unshaded spaces, the exact number of times during the month that the given permitted limit was exceeded. If an effluent value reported as daily average is found to exceed the permitted daily average, enter a "1" in the box regardless of the number of single readings above the permitted limit
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Texas Commission on Environmental Quality

P.O. Box 13087 • Austin, TX 78711-3087
MONTHLY EFFLUENT REPORT

PERMIT NUMBER

SET

YEAR	MO
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EID

This report to be used for SOIL MON 301 ANN 18-30

Please retain a photocopy for your records.

Parameter Code/ Parameter	Effluent Condition			No. Ex	Frequency of Analysis	Sample Type
		Value	Units			
<i>Example</i> 4006080 pH Maximum	Permitted	<i>permitted #</i>	<i>Std Units</i>		<i>1/year</i>	<i>24-hour comp</i>
	Reported	<i>result</i>	<i>units</i>	<i>#</i>		
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PLANT OPERATOR NAME PLANT OPERATOR SIGNATURE MONTH DAY YEAR

EXECUTIVE OFFICER NAME EXECUTIVE OFFICER SIGNATURE MONTH DAY YEAR

Telephone Number

Area code Number

Texas Commission on Environmental Quality
Monthly Effluent Report Form
Completion Instructions

This Soil Monthly Effluent Report is a self-reporting form for annual soil sampling from 18 to 30 inches. This form is blank, and the parameter names, codes, and sample types are provided in the accompanying spreadsheet file. Extreme care should be taken to ensure that this report is completed accurately. Measurements or test results must be reported in the following manner:

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2. "Effluent Condition" column - Enter your permit limit in the shaded space and test results in the unshaded spaces under VALUE for the parameters using the units specified in your permit. If the UNITS specifies MGD (million gallons per day), then a measured flow of 100,000 gallons per day should be reported as 0.100 MGD.
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Parameter Name	Parameter Code	Sample Type/Units
pH	4006030	Ind Grab
Electrical Conductivity	941830	Ind Grab
Nitrate-Nitrogen	6201430	Ind Grab
Ammonia-Nitrogen	6101430	Ind Grab
Total Kjeldahl Nitrogen (TKN)	6251430	Ind Grab
Total Nitrogen	6001430	Ind Grab
Plant-Available Phosphorus	6641430	Ind Grab
Plant-Available Potassium	9381430	Ind Grab
Plant-Available Calcium	9171430	Ind Grab
Plant-Available Magnesium	9281430	Ind Grab
Plant-Available Sodium	9321430	Ind Grab
Plant-Available Sulfur	801081430	Ind Grab
Plant-Available Manganese	10561430	Ind Grab
Plant-Available Copper	10431430	Ind Grab
Plant-Available Iron	10461430	Ind Grab
Plant-Available Zinc	10931430	Ind Grab
Water-Soluble Sodium	462361030	Ind Grab / mg/L
Water-Soluble Calcium	462341030	Ind Grab / mg/L
Water-Soluble Magnesium	462351030	Ind Grab / mg/L
Water-Soluble Sodium	462361430	Ind Grab / meq/L
Water-Soluble Calcium	462341430	Ind Grab / meq/L
Water-Soluble Magnesium	462351430	Ind Grab / meq/L
Sodium Absorption Ratio (SAR)	9316079	Per Event

7. Plant Information—Summary

Plant Capacity

Maximum GPD _____

Average GPD _____

Flow Capacity (describe)

Number and Locations of Lift Stations

Type of Emergency Power Source

Location of Emergency Power Source

8. Startup and Operating Procedures

Describe startup activities such as the sequence of turning on pumps and equipment. Describe your daily, weekly, and monthly procedures such as testing effluent, checking chemical feeds, and cleaning filters. Describe all emergency procedures such as notification procedures for chemical spills, or threats like an active shooter on the premises. Describe all shut-down procedures for taking the plant off-line. Include a diagram or map of the plant showing details for each piece of equipment. Include a map of the conveyances to the system and any irrigation equipment. Use additional sheets if needed.

Startup Procedures

Daily Procedures

Weekly Procedures

Emergency Operating Procedures

Shut-Down Procedures

Plant Map

Insert a map, or maps if needed, of the plant with all equipment identified.

System Map

Insert a map, or maps if needed, of the system's conveyances, including lift stations, manholes, and irrigation equipment.

Maintenance Work Order
Date of work order ___/___/___

Person making the work order:			
Work assigned to:			
Time of day:		Asset no.:	
Equipment to be repaired:			
Location of repair:			
Describe problem:			
Date, time started:		Date, time finished:	
Total man hours for job:			
Repairs completed:			
Still to be done:			
Parts ordered and used (attach invoices and warranties):			
Employee signature			Date
Supervisor signature			Date

- the names and phone numbers of organizations and individuals to be contacted during emergencies
- emergency operation plans for power outages, flooding, and other site-specific emergency situations that may develop
- curriculum for annual safety training and schedule for all facility personnel
- first-aid precautions, location of first-aid supplies and description of appropriate emergency medical treatment
- chemical disposal in accordance with 30 TAC 217.247(q), if applicable
- ultraviolet light in accordance with 30 TAC 217.299, if applicable
- a description of hazardous tasks in accordance with 30 TAC 217.323(b), if applicable

For More Information

For confidential assistance with environmental compliance, contact the Small Business and Local Government Assistance Hotline at 800-447-2827, or visit www.TexasEnviroHelp.org.