3800-FM-BCW0462 12/2016

pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF CLEAN WATER
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

PRIMARY FACILITY NAME/ADDRESS

NAME	Marcus Hook Generating Station
CLIENT	Marcus Hook Energy LP
ADDRESS	100 Green Street
	Marcus Hook, PA 19061
LOCATION	Marcus Hook Borough
	Delaware County
WATERSHED	3-G

PA0244449	001
PERMIT NUMBER	OUTFALL NUMBER

MONITORING PERIOD						
YEAR	MO	DAY		YEAR	MO	DAY
			TO			

Reporting Frequency:	Annually
DMR Effective From:	April 1, 2021
DMR Effective To:	March 31, 2026
Permit Expires:	March 31, 2026
Permit Application Due:	October 2, 2025

___ Check Here if No Discharge

NOTE: Read Instructions before completing this form

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		VALUE	VALUE	UNITS	VALUE	VALUE	VALUE	UNITS			
PCBs Dry Weather Analysis	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT	XXX	XXX	XXX	XXX	XXX	Report Daily Max	pg/L		1/year	24-Hr Composite

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER	I certify under penalty of law that this document was prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel 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. See 18 Pa. C.S. § 4904 (relating to unsworn falsification).		TELEPHONE		DATE		
TYPED OR PRINTED		SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	AREA CODE	NUMBER	YEAR	MO	DAY

COMMENTS *(Report all violations on the "Non-Compliance Reporting Form")*

3800-FM-BCW0462 12/2016

pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF CLEAN WATER
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)

DISCHARGE MONITORING REPORT (DMR)

PRIMARY FACILITY NAME/ADDRESS

NAME	Marcus Hook Generating Station
CLIENT	Marcus Hook Energy LP
ADDRESS	100 Green Street
	Marcus Hook, PA 19061
LOCATION	Marcus Hook Borough
	Delaware County
WATERSHED	3-G

PA0244449	001
PERMIT NUMBER	OUTFALL NUMBER

MONITORING PERIOD						
YEAR	MO	DAY		YEAR	MO	DAY
			TO			

Reporting Frequency:	Quarterly
DMR Effective From:	April 1, 2021
DMR Effective To:	March 31, 2026
Permit Expires:	March 31, 2026
Permit Application Due:	October 2, 2025

___ Check Here if No Discharge

NOTE: Read Instructions before completing this form

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		VALUE	VALUE	UNITS	VALUE	VALUE	VALUE	UNITS			
Carbonaceous Biochemical Oxygen Demand (CBOD5)	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT	1080 Avg Qrtly	2161 Daily Max	lbs/day	XXX	30.0 Avg Qrtly	60.0 Daily Max	mg/L		1/quarter	24-Hr Composite
Bromide	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT	XXX	XXX	XXX	XXX	Report Avg Qrtly	Report Daily Max	mg/L		1/quarter	24-Hr Composite
Toxicity, Acute - Ceriodaphnia Survival	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT	XXX	XXX	XXX	XXX	XXX	Report Daily Max	TUa		See Permit	24-Hr Composite
Toxicity, Acute - Pimephales Survival	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT	XXX	XXX	XXX	XXX	XXX	Report Daily Max	TUa		See Permit	24-Hr Composite

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER	I certify under penalty of law that this document was prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel 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. See 18 Pa. C.S. § 4904 (relating to unsworn falsification).		TELEPHONE		DATE		
TYPED OR PRINTED		SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	AREA CODE	NUMBER	YEAR	MO	DAY

COMMENTS *(Report all violations on the "Non-Compliance Reporting Form")*

3800-FM-BCW0462 12/2016

pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF CLEAN WATER
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)

DISCHARGE MONITORING REPORT (DMR)

PRIMARY FACILITY NAME/ADDRESS

NAME	Marcus Hook Generating Station
CLIENT	Marcus Hook Energy LP
ADDRESS	100 Green Street
	Marcus Hook, PA 19061
LOCATION	Marcus Hook Borough
	Delaware County
WATERSHED	3-G

PA0244449	001
PERMIT NUMBER	OUTFALL NUMBER

MONITORING PERIOD						
YEAR	MO	DAY		YEAR	MO	DAY
			TO			

Reporting Frequency:	Monthly
DMR Effective From:	April 1, 2021
DMR Effective To:	March 31, 2026
Permit Expires:	March 31, 2026
Permit Application Due:	October 2, 2025

___ Check Here if No Discharge

NOTE: Read Instructions before completing this form

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		VALUE	VALUE	UNITS	VALUE	VALUE	VALUE	UNITS			
Flow	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT	Report Avg Mo	Report Daily Max	MGD	XXX	XXX	XXX	XXX		1/day	Metered
pH	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT	XXX	XXX	XXX	6.0 Inst Min	XXX	9.0 IMAX	S.U.		1/week	Grab
Dissolved Oxygen	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT	XXX	XXX	XXX	5.0 Inst Min	XXX	XXX	mg/L		1/month	Grab
Total Residual Chlorine (TRC)	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT	XXX	XXX	XXX	XXX	0.05 Avg Mo	0.1 IMAX	mg/L		1/week	Grab
Temperature	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT	XXX	XXX	XXX	XXX	XXX	95.0 IMAX	°F		1/week	I-S
Total Suspended Solids	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT	1080 Avg Mo	3602 Daily Max	lbs/day	XXX	30.0 Avg Mo	100.0 Daily Max	mg/L		1/week	24-Hr Composite

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER	I certify under penalty of law that this document was prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel 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. See 18 Pa. C.S. § 4904 (relating to unsworn falsification).		TELEPHONE		DATE		
TYPED OR PRINTED		SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	AREA CODE	NUMBER	YEAR	MO	DAY

COMMENTS *(Report all violations on the "Non-Compliance Reporting Form")*

3800-FM-BCW0462 12/2016

pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF CLEAN WATER
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

PRIMARY FACILITY NAME/ADDRESS

NAME	Marcus Hook Generating Station
CLIENT	Marcus Hook Energy LP
ADDRESS	100 Green Street
	Marcus Hook, PA 19061
LOCATION	Marcus Hook Borough
	Delaware County
WATERSHED	3-G

PA0244449	001
PERMIT NUMBER	OUTFALL NUMBER

MONITORING PERIOD						
YEAR	MO	DAY		YEAR	MO	DAY
			TO			

Reporting Frequency:	Monthly
DMR Effective From:	April 1, 2021
DMR Effective To:	March 31, 2026
Permit Expires:	March 31, 2026
Permit Application Due:	October 2, 2025

___ Check Here if No Discharge

NOTE: Read Instructions before completing this form

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		VALUE	VALUE	UNITS	VALUE	VALUE	VALUE	UNITS			
Total Dissolved Solids	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT	180144 Avg Mo	360288 Daily Max	lbs/day	XXX	5000.0 Avg Mo	10000.0 Daily Max	mg/L		1/month	24-Hr Composite
Oil and Grease	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT	540 Avg Mo	720 Daily Max	lbs/day	XXX	15.0 Avg Mo	20.0 Daily Max	mg/L		1/week	Grab
Ammonia-Nitrogen	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT	XXX	XXX	XXX	XXX	Report Avg Mo	Report Daily Max	mg/L		1/month	24-Hr Composite
Copper, Total	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT	XXX	XXX	XXX	XXX	Report Avg Mo	Report Daily Max	mg/L		1/month	24-Hr Composite
Aluminum, Total	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT	XXX	XXX	XXX	XXX	Report Avg Mo	Report Daily Max	mg/l		1/month	24-Hr Composite
Chromium, Hexavalent	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT	XXX	XXX	XXX	XXX	Report Avg Mo	Report Daily Max	mg/l		1/month	24-Hr Composite

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER	I certify under penalty of law that this document was prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel 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. See 18 Pa. C.S. § 4904 (relating to unsworn falsification).		TELEPHONE		DATE		
TYPED OR PRINTED		SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	AREA CODE	NUMBER	YEAR	MO	DAY

COMMENTS *(Report all violations on the "Non-Compliance Reporting Form")*

3800-FM-BCW0462 12/2016

pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF CLEAN WATER
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)

DISCHARGE MONITORING REPORT (DMR)

PRIMARY FACILITY NAME/ADDRESS

NAME	Marcus Hook Generating Station
CLIENT	Marcus Hook Energy LP
ADDRESS	100 Green Street
	Marcus Hook, PA 19061
LOCATION	Marcus Hook Borough
	Delaware County
WATERSHED	3-G

PA0244449	001
PERMIT NUMBER	OUTFALL NUMBER

MONITORING PERIOD						
YEAR	MO	DAY		YEAR	MO	DAY
			TO			

Reporting Frequency:	Monthly
DMR Effective From:	April 1, 2021
DMR Effective To:	March 31, 2026
Permit Expires:	March 31, 2026
Permit Application Due:	October 2, 2025

___ Check Here if No Discharge

NOTE: Read Instructions before completing this form

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		VALUE	VALUE	UNITS	VALUE	VALUE	VALUE	UNITS			
Chromium, Total	SAMPLE MEASUREMENT			XXX							
	PERMIT REQUIREMENT	XXX	XXX		XXX	0.2 Avg Mo	0.2 Daily Max	mg/l		1/month	24-Hr Composite
Zinc, Total	SAMPLE MEASUREMENT			XXX							
	PERMIT REQUIREMENT	XXX	XXX		XXX	1.0 Avg Mo	1.0 Daily Max	mg/l		1/month	24-Hr Composite

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER	I certify under penalty of law that this document was prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel 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. See 18 Pa. C.S. § 4904 (relating to unsworn falsification).		TELEPHONE		DATE		
TYPED OR PRINTED		SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	AREA CODE	NUMBER	YEAR	MO	DAY

COMMENTS *(Report all violations on the "Non-Compliance Reporting Form")*

pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF CLEAN WATER

INSTRUCTIONS FOR COMPLETING DISCHARGE MONITORING REPORTS (DMRs)

General

One or more Discharge Monitoring Reports (DMRs) are attached to your permit for reporting the results of self-monitoring activities as required by your permit. You should make copies of the DMRs for your ongoing use, unless you elect to participate in the Department of Environmental Protection's (DEP's) electronic DMR (eDMR) program (see [HYPERLINK "http://www.dep.pa.gov/edmr"]).

- Reporting frequencies will vary depending on the monitoring frequencies listed in your permit, and are generally monthly, quarterly semi-annually and annually.
- Your reports must be received by DEP on the 28th day of the month following the end of the reporting period, unless otherwise specified in Part C of your permit.
- Your permit may require submission of DMRs to other agencies, including the U.S. Environmental Protection Agency (EPA).
- If you receive DMRs in the mail from EPA, please discontinue use of DMR Form No. 3800-FM-BCW0462 and begin using EPA's DMRs.
- DMRs will generally include pre-populated information for permittee name and address, facility location, permit number, outfall number, permit expiration date, parameter names, and permit requirements. If you identify any errors on a DMR issued by DEP, please contact the DEP regional office that issued your permit. If you identify any errors on a DMR issued by EPA, please contact DEP's Central Office at 717-787-6744. **DO NOT make changes to DMRs issued to you**.
- You may use computer-generated replicas of Form No. 3800-FM-BCW0462 or of EPA's DMR if you receive prior approval from DEP and EPA. **DEP reserves the right to instruct you to discontinue the submission of computer-generated DMRs if the permit requirements you entered on the form are inaccurate.**

Instructions

1. Enter statistical results into each blank field below the "VALUE" column headers. Results must be reported in the same units shown on the DMR.
2. Sum the total number of excursions or exceedances of permit limits across the row for each parameter and enter the value into the "NO. EX" field. For example, if the permit contains limits of 6.0 S.U. (Minimum) and 9.0 S.U. (Maximum) for pH, and the Minimum and Maximum results are 5.9 S.U. and 9.1 S.U., respectively, enter "2" into the "NO. EX" field.
3. Report the actual sampling frequency and sample type utilized during the reporting period in the fields corresponding to "Frequency of Analysis" and "Sample Type", respectively.
4. Type the name of the principal executive officer (or an authorized agent designated by a principal executive officer) who is taking responsibility for the report, sign the report (should be in ink), enter the telephone number of the responsible individual, and record the date that the report was signed. Mail only original, signed copies of DMRs.
5. In the Comments section at the bottom of the DMR, you may write a brief summary of violations in this section; however, DEP requests that all violations during the monitoring period be reported in more detail on DEP's **Non-Compliance Reporting Form** (3800-FM-BCW0440) and be submitted as an attachment to the DMR. Other uses of the Comments Section include explanations of attachments to the DMR, explanations for the unavailability of data, and brief summaries of issues that have affected operations or effluent quality during the monitoring period. Always consider attaching a letter or separate document to explain your situation in more detail.

No Discharge or No Data Available

If there was no discharge at all from an outfall during the monitoring period, check the "No Discharge" box on the top of the DMR. Complete the information above and below the table and mail the DMR to the appropriate agencies. Be sure to sign and date the DMR.

If there was no discharge of a specific parameter (e.g., if a chlorine limit is in the permit but chlorine was not used for disinfection during the entire reporting period), or if data are not available for a specific parameter for the entire reporting period, do not leave the DMR blank. Instead, report one of the following No Data Indicator (NODI) codes that apply to your situation in the appropriate value field, and **provide an explanation as an attachment to the DMR**:

A Use if you are exempted from monitoring the parameter because of a General Permit condition.

E Use if all samples or results are not available for the reporting period due to equipment failure or because sample collection was overlooked or samples could not be collected for the parameter.

GG Use if your permit requires sample collection and analysis only under certain conditions and those conditions were not met during the reporting period (e.g., report chlorine results only when chlorination system is used).

FF Other: use if there is any reason for the absence of data that is not covered by those above.

If you have at least one result for a parameter, the value should be reported and not a NODI code.

Calculations

The following explains how to calculate statistical values that are commonly required by permits:

Monthly Average – For Loading (lbs/day), sum the total of daily loadings and divide by the number of samples during the month. To calculate the daily loading, multiply the daily concentration (mg/l) by the flow (MGD) on the date of sampling and a conversion factor of 8.34. For Concentration, sum the total of daily concentrations and divide by the number of samples.

Weekly Average – For Loading (lbs/day), sum the total of average daily loadings during each week of the reporting period (beginning on a Sunday and ending on a Saturday) and divide by the number of samples during the week. For Concentration, sum the total of daily concentrations each week and divide by the number of samples. Report the maximum weekly average on the DMR.

Maximum Daily ("Daily Max") – Report the maximum concentration or load measured during a 24-hour period during the reporting period; if multiple measurements are taken daily, include all data in the analysis.

Instantaneous Maximum ("IMAX") – Report the maximum result obtained by a grab sample for a specific pollutant over the entire reporting period covered by a DMR.

Instantaneous Minimum ("Minimum") – Report the minimum result obtained by a grab sample for a specific pollutant over the entire reporting period covered by a DMR.

Total Monthly Load (lbs) – Sum the total of average daily loadings, divide by the number of samples during the month, and multiply by the number of days in the month.

Geometric Mean – Report the average of a set of *n* sample results given by the *n*th root of their product. If any result is zero (0), substitute 1 for the calculation. For example, five samples were analyzed with the following results: 20, 300, 400, 500, and 0. The calculation of geometric mean is as follows (note that you will need to use the power function on a calculator):

$$\sqrt[5]{20 \cdot 300 \cdot 400 \cdot 500 \cdot 1} = \sqrt[5]{1{,}200{,}000{,}000} = (1{,}200{,}000{,}000)^{1/5} = \mathbf{65}$$

Non-Detect Data

Conventional and Toxic Parameters

For calculating average values of data sets in which there are some "detections" (results at or above the laboratory reporting limit) and some "non-detect" data (results reported below the laboratory reporting limit), use the reporting limit for non-detect data. In other words, ignore the less than (<) symbol for statistical calculations and include the < symbol with the statistical result if there is at least one non-detect result in the data set. For example, four samples were analyzed with the following results: < 1.0, 2.0, < 1.0, and 1.0. The average statistical result is < 1.3.

Where the permit includes an effluent limitation for a parameter that is less than the most sensitive detection limit available, and the laboratory reports a value at or below the lowest level specified by the permit, you may use zero (0) in the calculation in lieu of the reporting limit, if the parameter is identified in 25 Pa. Code Chapter 16, Appendix A, Tables 2A and 2B. In general, parameters with limitations that are less than the most sensitive detection limit will be identified in Part C of the permit, if applicable.

Bacteria Parameters

Report all "non-detect" (e.g., < 2) and "too numerous to count" (TNTC) (e.g., > 2,000) results on DMR supplemental forms as reported by the laboratory. Do not report "TNTC" on supplemental forms, but instead report a value qualified with the">" symbol. Where a data set includes one or more "non-detect" and/or TNTC results, calculate the geometric mean by ignoring qualifying symbols, but report the value with the symbol. If a data set includes both ">" and "<" qualifiers, the ">" qualifier takes precedence for reporting. For all "non-detect" values, specify in the Comments section of the DMR the maximum volume filtered at the laboratory.

Example 1 – For results are determined, < 2, 10, 20, and 30. The geometric mean should be reported as $< (2 \bullet 10 \bullet 20 \bullet 30)^{0.25} = < 10$. Specify the maximum volume filtered for the < 2 result in the DMR Comments.

Example 2 – Three results are determined, < 2, 1,000, and > 2,000. The geometric mean should be reported as $> (2 \bullet 1{,}000 \bullet 2{,}000^{0.333} = > 158$.

Rounding and Precision

Statistical values reported on the DMR should be rounded to the same number of decimal places as the limit for the parameter as set forth in the permit. If the permit does not contain a limit but requests monitoring only, statistical values for concentration results should be rounded to the maximum number of decimal places in the data set as reported by the laboratory or the instrument used for analysis. If mass loads must be reported and there is no limit, round statistical values to the nearest whole number, unless the calculated number is less than one, in which case the value should be rounded to one significant figure (e.g., 0.1, 0.05, etc.). If the number you are rounding is followed by 5, 6, 7, 8, or 9, round the number up, otherwise round down.

The documents "Discharge Monitoring Reports Overview and Summary" (3800-BK-DEP3047) and "Management of Non-Detect Results for Discharge Monitoring Reports" (3800-FS-DEP4262) contain more information and are incorporated by reference. These documents are available on DEP's website.