NPDES Permit No. IL0001589
Notice No. MEL:22061301.docx

Public Notice Beginning Date: December 05, 2025

Public Notice Ending Date: January 05, 2026

National Pollutant Discharge Elimination System (NPDES)
Permit Program

Draft Reissued NPDES Permit to Discharge into Waters of the State

Public Notice/Fact Sheet Issued By:

Illinois Environmental Protection Agency
Bureau of Water,
Division of Water Pollution Control
Permit Section
2520 West Iles Avenue
Post Office Box 19276
Springfield, Illinois 62794-9276
217/782-0610

Name and Address of Discharger:

CITGO Petroleum Corporation
135th and New Avenue
Lemont, Illinois 60439

Name and Address of Facility:

CITGO Petroleum Corporation - Lemont Refinery
135th and New Avenue
Lemont, Illinois 60439
(Will County)

The Illinois Environmental Protection Agency (IEPA) has made a tentative determination to issue a NPDES permit to discharge into the waters of the state and has prepared a draft permit and associated fact sheet for the above named discharger. The Public Notice period will begin and end on the dates indicated in the heading of this Public Notice/Fact Sheet. The last day comments will be received will be on the Public Notice period ending date unless a commentor demonstrating the need for additional time requests an extension to this comment period and the request is granted by the IEPA. Interested persons are invited to submit written comments on the draft permit to the IEPA at the above address. Commentors shall provide his or her name and address and the nature of the issues proposed to be raised and the evidence proposed to be presented with regards to those issues. Commentors may include a request for public hearing. Persons submitting comments and/or requests for public hearing shall also send a copy of such comments or requests to the permit applicant. The NPDES permit and notice number(s) must appear on each comment page.

The application, engineer's review notes including load limit calculations, Public Notice/Fact Sheet, draft permit, comments received, and other documents are available for inspection and may be copied at the IEPA between 9:30 a.m. and 3:30 p.m. Monday through Friday when scheduled by the interested person.

If written comments or requests indicate a significant degree of public interest in the draft permit, the permitting authority may, at its discretion, hold a public hearing. Public notice will be given 45 days before any public hearing. Response to comments will be provided when the final permit is issued. For further information, please call Mark E. Liska at 217/782-0610.

The applicant is engaged in the operation of a petroleum refinery (SIC 2911). Wastewater is generated by the refining of crude oil into gasoline, diesel fuel, turbine fuel, aromatic solvents, aliphatic solvents, molten sulfur, and miscellaneous products. Plant operation results in an average discharge of 5.79 MGD of process wastewater, cooling tower blowdown, non-process wastewater (stormwater, utility water, boiler blowdown), sanitary hydrostatic test water, chemical cleaning, process water from Seneca, Chicago Carbon, and BOC, and scrubber wastewater from outfall 001, the intermittent discharge of stormwater basin overflow from outfall 002, 0.01 MGD of intake screen backwash from outfall 007, and the intermittent discharge of stormwater from outfalls 003, 004, 005, 006, and 008.

Application is made for new and existing discharge(s) which are located in Will County, Illinois. The following information identifies the discharge point, receiving stream and stream classifications:

| Outfall | Receiving Stream | Latitude | | Longitude | | Stream Classification | Biological Stream Characterization |
|---|---|---|---|---|---|---|---|
| 001 | Chicago Sanitary and Ship Canal | 41° 38' 58" | North | 88° 03' 31" | West | Chicago Area Waterway | D |
| 002 | Illinois and Michigan Canal | 41° 39' 08" | North | 88° 03' 20" | West | General Use | Not Rated |
| 003 | Illinois and Michigan Canal | 41° 38' 39" | North | 88° 03' 25" | West | General Use | Not Rated |
| 004 | Illinois and Michigan Canal | 41° 38' 31" | North | 88° 03' 33" | West | General Use | Not Rated |
| 005 | Illinois and Michigan Canal | 41° 38' 35" | North | 88° 03' 05" | West | General Use | Not Rated |
| 006 | Illinois and Michigan Canal | 41° 38' 33" | North | 88° 02' 50" | West | General Use | Not Rated |
| 007 | Chicago Sanitary and Ship Canal | 41° 38' 55" | North | 88° 03' 26" | West | Chicago Area Waterway | D |
| 008 | Illinois and Michigan Canal | 41° 39' 48" | North | 88° 02' 25" | West | General Use | Not Rated |

To assist you further in identifying the location of the discharge please see the attached map.

The stream segment IL_GI-02 receiving the discharge from outfall(s) 001 and 007 is on the 2024 303 (d) list of impaired waters. The stream segment IL_GH receiving the discharge from outfall(s) 002, 003, 004, 005, 006, and 008 is not on the 303 (d) list of impaired waters. The following parameters have been identified as the pollutants causing impairment:

| Impairment | Potential Cause |
|---|---|
| Aquatic Life Use | Chloride, Dissolved Oxygen, Nickel, Phosphorus, pH, Total Dissolved Solids |
| Fish Consumption Use | Mercury, PCBs |

The discharge(s) from the facility shall be monitored and limited at all times as follows:

Outfall: 001

| | LOAD LIMITS lbs/day DAF (DMF) | | | CONCENTRATION LIMITS mg/l | | |
|---|---|---|---|---|---|---|
| PARAMETER | 30 DAY AVERAGE | DAILY MAXIMUM | REGULATION | 30 DAY AVERAGE | DAILY MAXIMUM | REGULATION |
| Flow (MGD) | | | | | | 35 IAC 309.146 |
| pH | | | | | 6.0-9.0 | 35 IAC 304.125 |
| Temperature | | | | | Monitor | 35 IAC 309.146 |
| Total Residual Chlorine | | | | | 0.05 | 35 IAC 304.120(b) |
| $BOD_5$ | 966 | 2472 | 35 IAC 304.120(b) | | | |
| $CBOD_5$ | | | | 20 | 40 | 35 IAC 304.120(b) |
| Total Suspended Solids | 1475 | 2414 | 40 CFR 419 | 25 | 50 | 35 IAC 304.120(b) |
| Oil and Grease | 536 | 1006 | 40 CFR 419 | 15 | 20 | 35 IAC 304.124<br>40 CFR 122.44(l) |
| Phenols | 10 | 29 | 40 CFR 419 | 0.3 | 0.6 | 35 IAC 304.124 |
| Ammonia as N | 145 | 418 | 35 IAC 304.122(b) | 3.0 | 6.0 | 35 IAC 304.122(b) |
| COD | 12871 | 24804 | 40 CFR 419 | | | |
| Chromium (Total) | 9.3 | 26.5 | 40 CFR 419 | | 1.0 | 35 IAC 304.124<br>40 CFR 122.44(l) |
| Chromium (Hexavalent) | 0.7 | 1.8 | 40 CFR 419 | 0.1 | 0.3 | 35 IAC 304.124 |
| Sulfide | 9.7 | 22 | 40 CFR 419 | | | |
| Cyanide | 4.8 | 14 | 35 IAC 304.124 | 0.1 | 0.2 | 35 IAC 304.124 |
| Total Dissolved Solids | | 348,000 | IPCB R08-09D | | | |
| Phosphorus (Total) | | | | | Monitor | 35 IAC 309.146 |
| Nitrogen (Total) | | | | | Monitor | 35 IAC 309.146 |
| Mercury | | | | | Monitor | 35 IAC 309.146 |
| Sulfate | | | | | Monitor | 35 IAC 309.146 |
| PFAS | | | | | Report | 35 IAC 309.146 |
| PFAS Sum | | | | | Report | 35 IAC 309.146 |

The discharge(s) from the facility shall be monitored and limited at all times as follows:

Outfall: 002

| | LOAD LIMITS lbs/day DAF (DMF) | | | CONCENTRATION LIMITS mg/l | | |
|---|---|---|---|---|---|---|
| PARAMETER | 30 DAY AVERAGE | DAILY MAXIMUM | REGULATION | 30 DAY AVERAGE | DAILY MAXIMUM | REGULATION |
| Flow (MGD) | | | | | Estimate | 35 IAC 309.146 |
| pH | | | | | 6.0-9.0 | 35 IAC 304.125 |
| $BOD_5$ | | | | 20 | 40 | 35 IAC 304.120(b) |
| Total Suspended Solids | | | | 25 | 50 | 35 IAC 304.120(b) |
| Oil and Grease | | | | 15 | 30 | 35 IAC 304.124 |
| Phenols | | | | 0.3 | 0.6 | 35 IAC 304.124 |
| Chromium (Total) | | | | | 1.0 | 40 CFR 122.44 |
| Chromium (Hexavalent) | | | | 0.1 | 0.3 | 35 IAC 304.124 |
| Fluoride | | | | 15 | 28.6 | 35 IAC 304.124<br>40 CFR 122.44(l) |
| Ammonia as N | | | | | | |
| Mar-May/Sept-Oct | | | | | 9.1 | 40 CFR 122.44(l) |
| Jun-Aug | | | | | 9.4 | 35 IAC 304.212 |
| Nov-Feb | | | | | 4.8 | 35 IAC 304.212 |
| PFAS | | | | | Report | 35 IAC 309.146 |
| PFAS Sum | | | | | Report | 35 IAC 309.146 |
| Outfall: 007 | | | | | | |
| Flow | | | | | Estimate | 35 IAC 309.146 |
| Total Residual Chlorine | | | | | 0.05 | 40 CFR 125.3 |
| Outfall: 003, 004, 005, 006, and 008 | | | | | | |
| SWPPP | | | | | | 40 CFR 122.26(b)(14) |

Load Limit Calculations:

A. Load limit calculations for the following pollutant parameters were based on an average flow of 7.128 MGD and a maximum flow of 8.64 MGD and using the formula of average or maximum flow (MGD) X concentration limit (mg/l) X 8.34 = the average or maximum load limit (lbs/day): $BOD_5$, Ammonia, Cyanide, and Fluoride.

B. Production based load limits were calculated by multiplying the average production by the effluent limit contained in 40 CFR 419, Subpart B - Cracking Subcategory. Production figures were utilized in the calculation of load limits for the following parameters TSS, Oil and Grease, Phenols, COD, Chromium (Total), Chromium (Hex), and Sulfide.

The following sample calculation shows the methodology utilized to determine production-based load limitations:

The method of calculating load limits based on 40 CFR 419, includes the calculation of various size factors, process factors, and multipliers based on the production capacity of various refining units. An example of the procedure can be found at 40 CFR 419.43 (c)(2).

Treatment of Refinery Wastewater and Stormwater

All refinery process water and process area stormwater discharge to an integrated treatment plant. This treatment plant consists of multiple oil/water separators, sour water stripping, desalting, multiple aeration tanks, an induced gas floatation system, clarification, and activated sludge. The treated wastewater discharges to outfall 001.

The permittee is part of the Time-Limited Water Quality Standard for chloride (Case # IPCB 2019-008) and the chloride water quality standard is currently stayed.

Stormwater Runoff

Outfall 002 consists of a discharge from the Stormwater Retention Basin. Water in this retention basin consists of refinery stormwater, already treated process water, utility water, boiler blowdown, tank farm stormwater, hydrostatic test water, biomass, some offsite stormwater, and stormwater from the Oxbow, Oneok, Linde, and Seneca areas.

Normally, this basin does not discharge. It is slowly pumped into the wastewater treatment plant and discharged through outfall 001 after treatment with some treated stormwater coming back to it. The only time that this would discharge is if there is a high rain event. Outfall 002 discharge approximately once per year for two to three days. The permittee must still meet limits for this discharge similar to that of outfall 001, although there are no load limits due to the highly intermittent discharge due to stormwater.

Outfall 003 contains stormwater runoff the south side of the facility. As part of the drainage on the south side of the facility, drainage around the facility goes clockwise from the east side, around south, around to the west side. Outfalls 004, 005, and 006 all discharge to the same drainage ditch at different points before discharging to the Illinois & Michigan Canal. Outfall 008 is separate from the outfalls 003-006 and consists of the stormwater from the north side of the plant and discharges to a separate ditch before discharging to the Illinois & Michigan Canal. The discharge from outfalls 003, 004, 005, 006, and 008 all consist only of stormwater runoff from parking lot areas only and do not have any stormwater from the process area.

PFAS

To address Per-and polyfluoroalkyl substances (PFAS) under the NPDES permit program the Illinois Environmental Protection Agency (IEPA), Bureau of Water, Permit Section has implemented a PFAS Reduction Initiative. Under this initiative, it has been determined that those facilities who are classified as a major discharger by USEPA regulations because of the type of industry, volume of wastewater, or type of wastewater being discharged, there is the potential for the facility to use and/or discharge PFAS compounds. Because of this potential many of these facilities will be required by IEPA to perform monitoring for PFAS compounds in their discharges and to implement Best Management Practices to reduce the potential of discharging PFAS to surface waters. Monitoring for PFAS has been added to the effluent limitations, monitoring, and reporting page(s) for outfalls 001 and 002 and Special Conditions 28 and 29 have been added to the permit as well.

The majority of stormwater at the site discharges through outfalls 001 and 002. Since outfalls 003, 004, 005, 006, and 008 all consist only of stormwater runoff from parking lot areas only and do not have any stormwater from the process area, they will not be tested for PFAS compounds.

The load limits appearing in the permit will be the more stringent of the State and Federal Guidelines.

The following explain the conditions of the proposed permit:

The special conditions serve to clarify the monitoring, limitations, and reporting requirements and include pH reporting, stormwater pollution

plan requirements, monitoring location, stormwater BAT/BCT language, DMR submission, biomonitoring requirements, stormwater credits, TDS and chloride requirements, 316(b) requirements, and PFAS monitoring and reduction requirements.

Cooling Water Intake Structure (CWIS) Description and Operation Discussion provided by facility:

*Description of Cooling Water Intake Structure (CWIS)*

The facility takes in water from the Chicago Sanitary and Ship Canal approximately 30 miles from the South Branch of the Chicago River to one mile below the Lockport Dam where it merges with the Des Plaines River. As it passes the Citgo Refinery, the intake carries the treated effluent from the three large water reclamation plants operated by the Metropolitan Water Reclamation district of Greater Chicago (MWRD). The water intake is 160 feet in width and the measured depth is approximately 25 feet. Travelling screens of 13 meshes (1.41 mm opening) are installed in the well and measured 7 feet 2 inches wide and are cleaned every 4 hours. The open area of the screening is 51.4%. The designed capacity of the CWIS is 11,000 GPM (15.85 MGD). The average water use is 3,145 GPM. The intake structure pumps in water with an average and maximum velocity of 0.16 and 0.33 feet per second, respectively. The velocity through the screens at maximum flow would be 0.41 ft/s at normal water level and 0.44 ft/s at low water level.

*Chosen Method of Compliance with Impingement Mortality Standard*

The facility's cooling water intake system is BTA for impingement mortality in accordance with 40 CFR 125.94(c)(2) and is BTA for entrainment by minimizing adverse environmental impact. The facility operates a cooling water intake structure that has a maximum through-screen design intake velocity of less than 0.5 fps to minimize flows withdrawn from the Chicago Sanitary and Ship Canal to support non-contact cooling water use at the facility.

Agency Discussion:

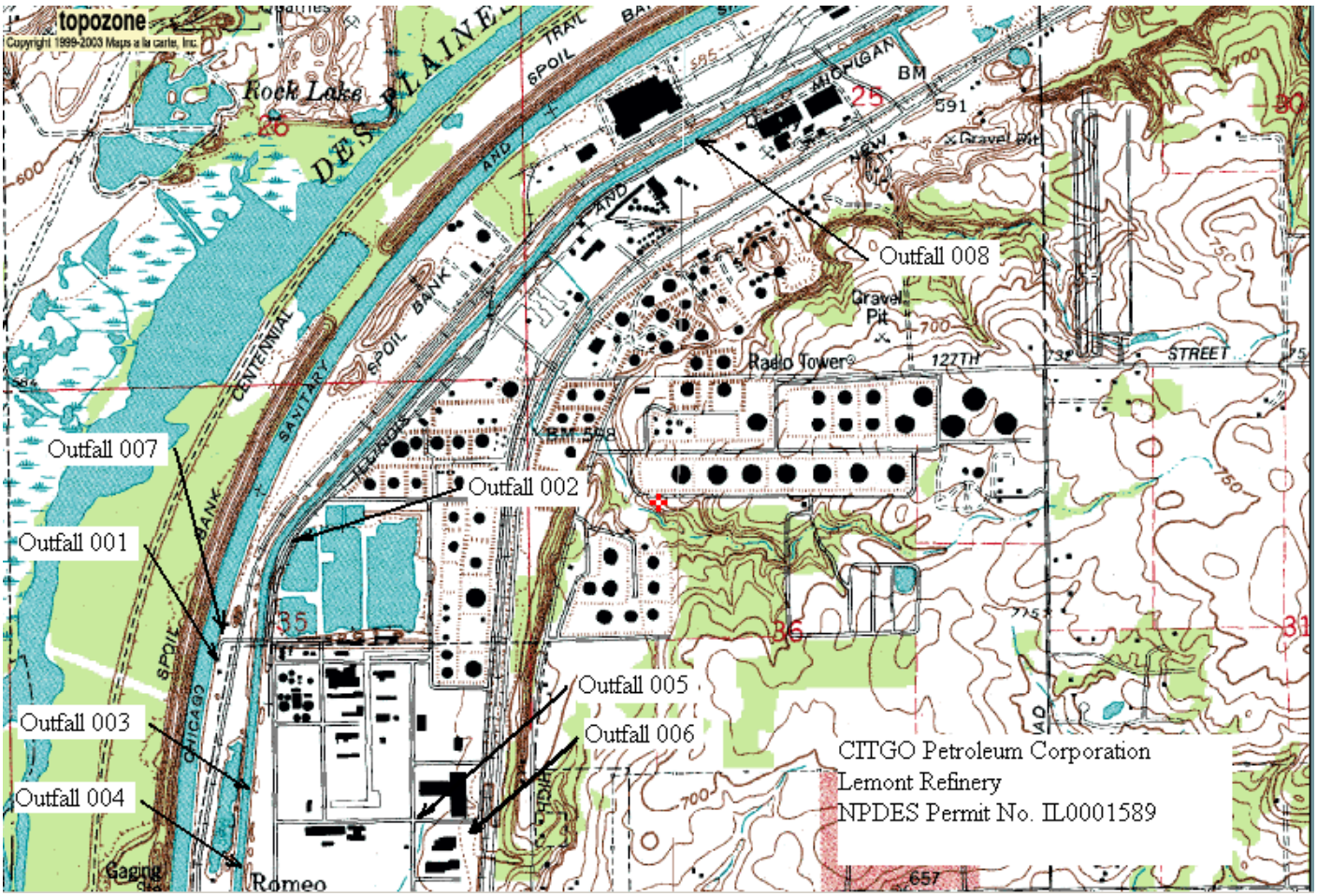
40 CFR 122.21(r)(1)(ii) states that all existing facilities must submit for review the information required under paragraphs (r)(2) – (8). The facility has submitted r(2) – (8).

The facility's cooling water intake flow is a maximum of 15.85 MGD which is less than 125 MGD. Therefore, if the facility is not required to submit the information required by (r)(9) – (13). The entrainment effects of the intake structures are not known to be significant.

The Water Quality Standards section was tasked with reviewing the biological data submitted in fulfillment of the (r)(4) requirement, which specifies that a "Source water baseline biological characterization" be performed to characterize the biological community in the vicinity of the cooling water intake structure. The memo dated February 1, 2021 from Yetunde Agbesola of the water quality standards section states that "based on the information provided with the NPDES permit renewal application, the Applicant has fully complied with the requirements of 40 CFR 122.21(r)(4).

CITGO Petroleum Corporation submitted, in accordance with Section 316(b) of the Clean Water Act, the required information under 40 CFR 122.21(r)(1)(ii). The structure meets the BTA standard for Impingement Mortality for Existing Units at Existing Facilities (Section IV. A. of the new rule) by operating a cooling water intake structure that has a maximum through-screen design intake velocity of 0.5 fps (option 2 of the new rule).

The structure conditionally meets the BTA standard for Entrainment for Existing Units at Existing Facilities (Section IV. B. of the new rule) by operating at a low flow velocity with 0.5-inch screen and use of cooling towers (the rule requires a BTA analysis using Best Professional Judgement on a site-specific basis).


topozone
Rock Lake
DES PLAINES
TRAIL
SPOIL
AND
BANK
CENTENNIAL
SANITARY
CHICAGO
Outfall 008
Gravel Pit
Radio Tower
127TH
STREET
Outfall 007
Outfall 002
Outfall 001
Outfall 005
Outfall 006
Outfall 003
Outfall 004
CITGO Petroleum Corporation
Lemont Refinery
NPDES Permit No. IL0001589
Gaging
Romeo

Public Notice of Draft Permit

Public Notice Number MEL:22061301.docx is hereby given by Illinois EPA, Division of Water Pollution Control, Permit Section, 2520 West Iles Avenue, Post Office Box 19276, Springfield, Illinois 62794-9276 (herein Agency) that a draft National Pollutant Discharge Elimination System (NPDES) Permit Number IL0001589 has been prepared under 40 CFR 124.6(d) for CITGO Petroleum Corporation, 135th and New Avenue, Lemont, Illinois 60439 for discharge into Chicago Sanitary and Ship Canal, Illinois and Michigan Canal from the CITGO Petroleum Corporation - Lemont Refinery, 135th and New Avenue, Lemont, Illinois 60439 (Will County). The applicant is engaged in the operation of a petroleum refinery (SIC 2911). Wastewater is generated by the refining of crude oil into gasoline, diesel fuel, turbine fuel, aromatic solvents, aliphatic solvents, molten sulfur, and miscellaneous products. Plant operation results in an average discharge of 5.79 MGD of process wastewater, cooling tower blowdown, non-process wastewater (stormwater, utility water, boiler blowdown), sanitary wastewater, hydrostatic test water, chemical cleaning, process water from Seneca, Chicago Carbon, and BOC, and scrubber wastewater from outfall 001, the intermittent discharge of stormwater basin overflow from outfall 002, 0.01 MGD of intake screen backwash from outfall 007, and the intermittent discharge of stormwater from outfalls 003, 004, 005, 006, and 008.

The application, draft permit and other documents are available for inspection and may be copied at the Agency between 9:30 A.M. and 3:30 P.M. Monday through Friday. A Fact Sheet containing more detailed information is available at no charge. For further information, call the Public Notice Clerk at 217/782-0610.

Interested persons are invited to submit written comments on the draft permit to the Agency at the above address. The NPDES Permit and Joint Public Notice numbers must appear on each comment page. All comments received by the Agency not later than 30 days from the date of this publication shall be considered in making the final decision regarding permit issuance.

Any interested person may submit written request for a public hearing on the draft permit, stating their name and address, the nature of the issues proposed to be raised and the evidence proposed to be presented with regards to these issues in the hearing. Such requests must be received by the Agency not later than 30 days from the date of this publication.

If written comments and/or requests indicate a significant degree of public interest in the draft permit, the permitting authority may, at its discretion, hold a public hearing. Public notice will be given 30 days before any public hearing.

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NPDES Permit No. IL0001589

Illinois Environmental Protection Agency

Division of Water Pollution Control

2520 West Iles Avenue

Post Office Box 19276

Springfield, Illinois 62794-9276

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM

Reissued (NPDES) Permit

Expiration Date:

Issue Date:
Effective Date:

Name and Address of Permittee:

CITGO Petroleum Corporation
135th and New Avenue
Lemont, Illinois 60439

Facility Name and Address:

CITGO Petroleum Corporation - Lemont Refinery
135th and New Avenue
Lemont, Illinois 60439
(Will County)

| Discharge Number and Name: | | Receiving Waters: |
|---|---|---|
| 001 | Treated Refinery Wastewater | Chicago Sanitary and Ship Canal |
| 002 | Stormwater Retention Basin | Illinois and Michigan Canal |
| 003 | Stormwater | Illinois and Michigan Canal |
| 004 | Stormwater | Illinois and Michigan Canal |
| 005 | Stormwater | Illinois and Michigan Canal |
| 006 | Stormwater | Illinois and Michigan Canal |
| 007 | Intake Screen Backwash | Chicago Sanitary and Ship Canal |
| 008 | Stormwater | Illinois and Michigan Canal |

In compliance with the provisions of the Illinois Environmental Protection Act, Title 35 of Ill. Adm. Code, Subtitle C and/or Subtitle D, Chapter 1, and the Clean Water Act (CWA), the above-named permittee is hereby authorized to discharge at the above location to the above-named receiving stream in accordance with the standard conditions and attachments herein.

Permittee is not authorized to discharge after the above expiration date. In order to receive authorization to discharge beyond the expiration date, the permittee shall submit the proper application as required by the Illinois Environmental Protection Agency (IEPA) not later than 180 days prior to the expiration date.

Darin E. LeCrone, P.E.
Manager, Permit Section
Division of Water Pollution Control

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NPDES Permit No. IL0001589

Effluent Limitations and Monitoring

1. From the effective date of this permit until the expiration date, the effluent of the following discharge(s) shall be monitored and limited at all times as follows:

Outfall(s): 001 - Treated Refinery Wastewater (DAF = 5.79 MGD / DMF = 8.35 MGD)

| | LOAD LIMITS lbs/day DAF (DMF) | | CONCENTRATION LIMITS mg/l | | | |
|---|---|---|---|---|---|---|
| PARAMETER | 30 DAY AVERAGE | DAILY MAXIMUM | 30 DAY AVERAGE | DAILY MAXIMUM | SAMPLE FREQUENCY | SAMPLE TYPE |
| Contributory Waste Streams: | | | | | | |
| 1) Process Wastewater<br>2) Cooling Tower Blowdown<br>3) Non-Process Wastewater, Stormwater, Utility Water, Boiler Blowdown<br>4) Sanitary Wastewater | | | 5) Hydrostatic Test Water<br>6) Chemical Cleaning<br>7) Seneca, Oxbow, Linde Process Water<br>8) Scrubber Wastewater | | | |
| Flow (MGD) | See Special Condition 1 | | | | Continuous | Measure |
| pH | See Special Condition 2 | | | | 1/Week | Grab |
| Temperature* | | | | | 1/Week | Measure |
| Total Residual Chlorine | | | | 0.05 | 1/Week | Grab |
| $BOD_5$ | 966 | 2472 | | | 1/Week | Composite |
| $CBOD_5$ | | | 20 | 40 | 1/Week | Composite |
| Total Suspended Solids | 1475 | 2414 | 25 | 50 | 1/Week | Composite |
| Oil and Grease | 536 | 1006 | 15 | 20 | 1/Week | Grab |
| Phenols | 10 | 29 | 0.3 | 0.6 | 1/Week | Composite |
| Ammonia as N | 145 | 418 | 3.0 | 6.0 | 1/Week | Composite |
| COD | 12,871 | 24,804 | | | 1/Week | Composite |
| Chromium (Total) | 9.3 | 26.5 | | 1.0 | 1/Week | Composite |
| Chromium (Hexavalent)* | 0.70 | 1.8 | 0.1 | 0.3 | 1/Month | Grab |
| Sulfide | 9.7 | 22 | | | 1/Week | Composite |
| Cyanide | 4.8 | 14 | 0.1 | 0.2 | 1/Week | Composite |
| Total Dissolved Solids | See Special Condition 8 | | | | 1/Week | Composite |
| Phosphorus (Total) | | | | Monitor Only | 1/Month | Composite |
| Nitrogen (Total) | | | | Monitor Only | 1/Month | Composite |
| Mercury** | | | | Monitor Only | 2/Year | Grab |
| Sulfate | | | | Monitor Only | 1/Month | Composite |

NPDES Permit No. IL0001589

Effluent Limitations and Monitoring

1. From the effective date of this permit until the expiration date, the effluent of the following discharge(s) shall be monitored and limited at all times as follows:

Outfall(s): 001 - Treated Refinery Wastewater (DAF = 5.79 MGD / DMF = 8.35 MGD)

| | LOAD LIMITS lbs/day DAF (DMF) | | CONCENTRATION LIMITS mg/l | | | |
|---|---|---|---|---|---|---|
| PARAMETER | 30 DAY AVERAGE | DAILY MAXIMUM | 30 DAY AVERAGE | DAILY MAXIMUM | SAMPLE FREQUENCY | SAMPLE TYPE |
| Contributory Waste Streams: | | | | | | |
| 1) Process Wastewater<br>2) Cooling Tower Blowdown<br>3) Non-Process Wastewater, Stormwater, Utility Water, Boiler Blowdown<br>4) Sanitary Wastewater<br>5) Hydrostatic Test Water<br>6) Chemical Cleaning<br>7) Seneca, Oxbow, Linde Process Water<br>8) Scrubber Wastewater | | | | | | |
| PFAS*** | | | | Report | *** | *** |
| PFAS Sum*** | | | | *** | *** | *** |

*The monthly maximum temperature shall be reported on the DMR form.
**Mercury must be monitored using USEPA method 1631E using the heated digestion option in Section 11.1.1.2. Prior to analysis for mercury, digest the sample using the option in 1631E of heating samples at 50°C for 6 hours in a bromine chloride (BrCl) solution in closed vessels. Sampling shall take semiannually.
*** See Special Conditions 27 and 28 for PFAS testing procedures

NPDES Permit No. IL0001589

Effluent Limitations and Monitoring

1. From the effective date of this permit until the expiration date, the effluent of the following discharge(s) shall be monitored and limited at all times as follows:

Outfall(s): 002 - Stormwater Retention Basin (Intermittent Discharge)

| | LOAD LIMITS lbs/day DAF (DMF) | | CONCENTRATION LIMITS mg/l | | | |
|---|---|---|---|---|---|---|
| PARAMETER | 30 DAY AVERAGE | DAILY MAXIMUM | 30 DAY AVERAGE | DAILY MAXIMUM | SAMPLE FREQUENCY | SAMPLE TYPE |
| Contributory Waste Streams: | | | | | | |
| 1) Refinery Stormwater | | 7) Biomass | | | | |
| 2) Treated Process Water (Fire Water) | | 8) Off Site Stormwater Runoff | | | | |
| 3) Utility Water | | 9) Exxon Mobil Terminal Stormwater | | | | |
| 4) Boiler Blowdown | | 10) Oxbow Stormwater | | | | |
| 5) Tank Farm Stormwater | | 11) Oneok Stormwater | | | | |
| 6) Hydrostatic Test Water | | 12) Linde Stormwater | | | | |
| | | 13) Seneca Stormwater | | | | |
| Flow (MGD) | See Special Condition 1 | | | | * | Measure |
| pH | See Special Condition 2 | | | | * | Grab |
| $BOD_5$ | | | 20 | 40 | * | Grab |
| Total Suspended Solids | | | 25 | 50 | * | Grab |
| Oil and Grease | | | 15 | 30 | * | Grab |
| Phenols | | | 0.3 | 0.6 | * | Grab |
| Chromium (Total) | | | | 1.0 | * | Grab |
| Chromium (Hexavalent) | | | 0.1 | 0.3 | * | Grab |
| Fluoride | | | 15 | 28.6 | * | Grab |
| Ammonia as N | | | | | * | Grab |
| Mar-May/Sep-Oct | | | | 9.1 | | |
| Jun-Aug | | | | 9.4 | | |
| Nov-Feb | | | | 4.8 | | |
| PFAS* | | | | Report | ** | ** |
| PFAS Sum* | | | | ** | *** | * |

*Daily When Discharging

** See Special Conditions 27 and 28 for PFAS testing procedures

NPDES Permit No. IL0001589

Effluent Limitations and Monitoring

1. From the effluent date of this permit until the expiration date, the effluent of the following discharge(s) shall be monitored and limited at all times as follows:

Outfall(s): 007 - Intake Screen Backwash: 0.027 MGD DAF

| | LOAD LIMITS lbs/day DAF (DMF) | | CONCENTRATION LIMITS mg/l | | | |
|---|---|---|---|---|---|---|
| PARAMETER | 30 DAY AVERAGE | DAILY MAXIMUM | 30 DAY AVERAGE | DAILY MAXIMUM | SAMPLE FREQUENCY | SAMPLE TYPE |
| Flow (MGD) | See Special Condition 1 | | | | 1/Week | Estimate |
| Total Residual Chlorine | | | | 0.05 | Daily when Chlorinating | Grab |

Outfalls: 003*, 004*, 005*, 006*, and 008* - Stormwater Runoff: Intermittent

See Special Condition 10 for Stormwater Pollution Prevention Plan

NPDES Permit No. IL0001589

## Special Conditions

SPECIAL CONDITION 1. Flow (in Million Gallons per Day) shall be reported as a monthly average and a daily maximum on the DMR form.

SPECIAL CONDITION 2. The pH shall be in the range 6.0 to 9.0. The monthly minimum and monthly maximum values shall be reported on the DMR form.

SPECIAL CONDITION 3. Samples taken in compliance with the effluent monitoring requirements shall be taken at a point representative of the discharge, but prior to entry into the receiving stream.

SPECIAL CONDITION 4. If an applicable effluent standard or limitation is promulgated under Sections 301(b)(2)(C) and (D), 304(b)(2), and 307(a)(2) of the Clean Water Act and that effluent standard or limitation is more stringent than any effluent limitation in the permit or controls a pollutant not limited in the NPDES Permit, the Agency shall revise or modify the permit in accordance with the more stringent standard or prohibition and shall so notify the permittee.

SPECIAL CONDITION 5. This permit may be modified to include different final effluent limitations or requirements which are consistent with applicable laws, regulations, or judicial orders. The Agency will public notice the permit modification.

SPECIAL CONDITION 6. Mathematical composites for oil, fats and greases shall consist of a series of grab samples collected over any 24-hour consecutive period. Each sample shall be analyzed separately and the arithmetic mean of all grab samples collected during a 24-hour period shall constitute a mathematical composite. No single grab sample shall exceed a concentration of 75 mg/l.

SPECIAL CONDITION 7. For the purpose of this permit discharges from outfalls 003, 004, 005, 006, and 008 are limited to stormwater, free from process and other wastewater discharges. Stormwater from Outfall 004 comes form the Matheson Tri-Gas operation.

SPECIAL CONDITION 8. The NPDES permit will have a TDS Load Limit of 348,000 pounds per day as a daily maximum limit applicable in the winter months (December through April). This is based on a DAF of 5.79 MGD and a maximum reported effluent TDS of 7,197 mg/L (The maximum effluent TDS concentration since 2010).

SPECIAL CONDITION 9. (Outfalls 001 and 002) The Agency has determined that the effluent limitations in this permit constitute BAT/BCT for storm water which is treated in the existing treatment facilities for purposes of this permit reissuance, and no pollution prevention plan will be required for such storm water. In addition to the chemical specific monitoring required elsewhere in this permit, the permittee shall conduct an annual inspection of the facility site to identify areas contributing to a storm water discharge associated with industrial activity, and determine whether any facility modifications have occurred which result in previously-treated storm water discharges no longer receiving treatment. If any such discharges are identified the permittee shall request a modification of this permit within 30 days after the inspection. Records of the annual inspection shall be retained by the permittee for the term of this permit and be made available to the Agency on request.

SPECIAL CONDITION 10.

STORM WATER POLLUTION PREVENTION PLAN (SWPPP) for Outfalls 003, 004, 005, 006, and 008

A. A storm water pollution prevention plan shall be maintained by the permittee for the storm water associated with industrial activity at this facility. The plan shall identify potential sources of pollution which may be expected to affect the quality of storm water discharges associated with the industrial activity at the facility. In addition, the plan shall describe and ensure the implementation of practices which are to be used to reduce the pollutants in storm water discharges associated with industrial activity at the facility and to assure compliance with the terms and conditions of this permit. The permittee shall modify the plan if substantive changes are made or occur affecting compliance with this condition.

    1. Waters not classified as impaired pursuant to Section 303(d) of the Clean Water Act.

        Unless otherwise specified by federal regulation, the storm water pollution prevention plan shall be designed for a storm event equal to or greater than a 25-year 24-hour rainfall event.

    2. Waters classified as impaired pursuant to Section 303(d) of the Clean Water Act

        For any site which discharges directly to an impaired water identified in the Agency's 303(d) listing, and if any parameter in the subject discharge has been identified as the cause of impairment, the storm water pollution prevention plan shall be designed for a storm event

equal to or greater than a 25-year 24-hour rainfall event. If required by federal regulations, the storm water pollution prevention plan shall adhere to a more restrictive design criteria.

B. The operator or owner of the facility shall make a copy of the plan available to the Agency at any reasonable time upon request.

Facilities which discharge to a municipal separate storm sewer system shall also make a copy available to the operator of the municipal system at any reasonable time upon request.

C. The permittee may be notified by the Agency at any time that the plan does not meet the requirements of this condition. After such notification, the permittee shall make changes to the plan and shall submit a written certification that the requested changes have been made. Unless otherwise provided, the permittee shall have 30 days after such notification to make the changes.

D. The discharger shall amend the plan whenever there is a change in construction, operation, or maintenance which may affect the discharge of significant quantities of pollutants to the waters of the State or if a quarterly visual observation required by paragraph H or the annual facility inspection required by paragraph I of this condition indicates that an amendment is needed. The plan should also be amended if the discharger is in violation of any conditions of this permit, or has not achieved the general objective of controlling pollutants in storm water discharges. Amendments to the plan shall be made within 30 days of any proposed construction or operational changes at the facility, and shall be provided to the Agency for review upon request.

E. The plan shall provide a description of potential sources which may be expected to add significant quantities of pollutants to storm water discharges, or which may result in non-storm water discharges from storm water outfalls at the facility. The plan shall include, at a minimum, the following items:

1. A topographic map extending one-quarter mile beyond the property boundaries of the facility, showing: the facility, surface water bodies, wells (including injection wells), seepage pits, infiltration ponds, and the discharge points where the facility's storm water discharges to a municipal storm drain system or other water body. The requirements of this paragraph may be included on the site map if appropriate. Any map or portion of map may be withheld for security reasons.

2. A site map showing:

   i. The storm water conveyance and discharge structures;

   ii. An outline of the storm water drainage areas for each storm water discharge point;

   iii. Paved areas and buildings;

   iv. Areas used for outdoor manufacturing, storage, or disposal of significant materials, including activities that generate significant quantities of dust or particulates.

   v. Location of existing storm water structural control measures (dikes, coverings, detention facilities, etc.);

   vi. Surface water locations and/or municipal storm drain locations

   vii. Areas of existing and potential soil erosion;

   viii. Vehicle service areas;

   ix. Material loading, unloading, and access areas.

   x. Areas under items iv and ix above may be withheld from the site for security reasons.

3. A narrative description of the following:

   i. The nature of the industrial activities conducted at the site, including a description of significant materials that are treated, stored or disposed of in a manner to allow exposure to storm water;

ii. Materials, equipment, and vehicle management practices employed to minimize contact of significant materials with storm water discharges;

iii. Existing structural and non-structural control measures to reduce pollutants in storm water discharges;

iv. Industrial storm water discharge treatment facilities;
v. Methods of onsite storage and disposal of significant materials.

4. A list of the types of pollutants that have a reasonable potential to be present in storm water discharges in significant quantities. Also provide a list of any pollutant that is listed as impaired in the most recent 303(d) report.

5. An estimate of the size of the facility in acres or square feet, and the percent of the facility that has impervious areas such as pavement or buildings.

6. A summary of existing sampling data describing pollutants in storm water discharges.

F. The plan shall describe the storm water management controls which will be implemented by the facility. The appropriate controls shall reflect identified existing and potential sources of pollutants at the facility. The description of the storm water management controls shall include:

1. Storm Water Pollution Prevention Personnel - Identification by job titles of the individuals who are responsible for developing, implementing, and revising the plan.

2. Preventive Maintenance - Procedures for inspection and maintenance of storm water conveyance system devices such as oil/water separators, catch basins, etc., and inspection and testing of plant equipment and systems that could fail and result in discharges of pollutants to storm water.

3. Good Housekeeping - Good housekeeping requires the maintenance of clean, orderly facility areas that discharge storm water. Material handling areas shall be inspected and cleaned to reduce the potential for pollutants to enter the storm water conveyance system.

4. Spill Prevention and Response - Identification of areas where significant materials can spill into or otherwise enter the storm water conveyance systems and their accompanying drainage points. Specific material handling procedures, storage requirements, spill cleanup equipment and procedures should be identified, as appropriate. Internal notification procedures for spills of significant materials should be established.

5. Storm Water Management Practices - Storm water management practices are practices other than those which control the source of pollutants. They include measures such as installing oil and grit separators, diverting storm water into retention basins, etc. Based on assessment of the potential of various sources to contribute pollutants, measures to remove pollutants from storm water discharge shall be implemented. In developing the plan, the following management practices shall be considered:

i. Containment - Storage within berms or other secondary containment devices to prevent leaks and spills from entering storm water runoff. To the maximum extent practicable storm water discharged from any area where material handling equipment or activities, raw material, intermediate products, final products, waste materials, by-products, or industrial machinery are exposed to storm water should not enter vegetated areas or surface waters or infiltrate into the soil unless adequate treatment is provided.

ii. Oil & Grease Separation - Oil/water separators, booms, skimmers or other methods to minimize oil contaminated storm water discharges.

iii. Debris & Sediment Control - Screens, booms, sediment ponds or other methods to reduce debris and sediment in storm water discharges.

iv. Waste Chemical Disposal - Waste chemicals such as antifreeze, degreasers and used oils shall be recycled or disposed of in an approved manner and in a way which prevents them from entering storm water discharges.

v. Storm Water Diversion - Storm water diversion away from materials manufacturing, storage and other areas of potential storm water contamination. Minimize the quantity of storm water entering areas where material handling equipment of activities, raw material, intermediate products, final products, waste materials, by-products, or industrial machinery are exposed to storm water using green infrastructure techniques where practicable in the areas outside the exposure area, and otherwise divert storm water away from exposure area.

vi. Covered Storage or Manufacturing Areas - Covered fueling operations, materials manufacturing and storage areas to prevent contact with storm water.

vii. Storm Water Reduction - Install vegetation on roofs of buildings within adjacent to the exposure area to detain and evapotranspirate runoff where precipitation falling on the roof is not exposed to contaminants, to minimize storm water runoff; capture storm water in devices that minimize the amount of storm water runoff and use this water as appropriate based on quality.

6. Sediment and Erosion Prevention - The plan shall identify areas which due to topography, activities, or other factors, have a high potential for significant soil erosion. The plan shall describe measures to limit erosion.

7. Employee Training - Employee training programs shall inform personnel at all levels of responsibility of the components and goals of the storm water pollution control plan. Training should address topics such as spill response, good housekeeping and material management practices. The plan shall identify periodic dates for such training.

8. Inspection Procedures - Qualified plant personnel shall be identified to inspect designated equipment and plant areas. A tracking or follow-up procedure shall be used to ensure appropriate response has been taken in response to an inspection. Inspections and maintenance activities shall be documented and recorded.

G. Non-Storm Water Discharge - The plan shall include a certification that the discharge has been tested or evaluated for the presence of non-storm water discharge. The certification shall include a description of any test for the presence of non-storm water discharges, the methods used, the dates of the testing, and any onsite drainage points that were observed during the testing. Any facility that is unable to provide this certification must describe the procedure of any test conducted for the presence of non-storm water discharges, the test results, potential sources of non-storm water discharges to the storm sewer, and why adequate tests for such storm sewers were not feasible.

H. Quarterly Visual Observation of Discharges - The requirements and procedures for quarterly visual observations are applicable to all outfalls covered by this condition.

1. You must perform and document a quarterly visual observation of a storm water discharge associated with industrial activity from each outfall. The visual observation must be made during daylight hours. If no storm event resulted in runoff during daylight hours from the facility during a monitoring quarter, you are excused from the visual observations requirement for that quarter, provided you document in your records that no runoff occurred. You must sign and certify the document.

2. Your visual observation must be made on samples collected as soon as practical, but not to exceed 1 hour or when the runoff or snow melt begins discharging from your facility. All samples must be collected from a storm event discharge that is greater than 0.1 inch in magnitude and that occurs at least 72 hours from the previously measurable (greater than 0.1 inch rainfall) storm event. The observation must document: color, odor, clarity, floating solids, settled solids, suspended solids, foam, oil sheen, and other obvious indicators of storm water pollution. If visual observations indicate any unnatural color, odor, turbidity, floatable material, oil sheen or other indicators of storm water pollution, the permittee shall obtain a sample and monitor for the parameter or the list of pollutants in Part E.4.

3. You must maintain your visual observation reports onsite with the SWPPP. The report must include the observation date and time, inspection personnel, nature of the discharge (i.e., runoff or snow melt), visual quality of the storm water discharge (including observations of color, odor, floating solids, settled solids, suspended solids, foam, oil sheen, and other obvious indicators of storm water pollution), and probable sources of any observed storm water contamination.

4. You may exercise a waiver of the visual observation requirement at a facility that is inactive or unstaffed, as long as there are no industrial materials or activities exposed to storm water. If you exercise this waiver, you must maintain a certification with your SWPPP stating that the site is inactive and unstaffed, and that there are no industrial materials or activities exposed to storm water.

5. Representative Outfalls - If your facility has two or more outfalls that you believe discharge substantially identical effluents, based on similarities of the industrial activities, significant materials, size of drainage areas, and storm water management practices occurring

within the drainage areas of the outfalls, you may conduct visual observations of the discharge at just one of the outfalls and report that the results also apply to the substantially identical outfall(s).

6. The visual observation documentation shall be made available to the Agency and general public upon written request.

I. The permittee shall conduct an annual facility inspection to verify that all elements of the plan, including the site map, potential pollutant sources, and structural and non-structural controls to reduce pollutants in industrial storm water discharges are accurate. Observations that require a response and the appropriate response to the observation shall be retained as part of the plan. Records documenting significant observations made during the site inspection shall be submitted to the Agency in accordance with the reporting requirements of this permit.

J. This plan should briefly describe the appropriate elements of other program requirements, including Spill Prevention Control and Countermeasures (SPCC) plans required under Section 311 of the CWA and the regulations promulgated there under, and Best Management Programs under 40 CFR 125.100.

K. The plan is considered a report that shall be available to the public at any reasonable time upon request.

L. The plan shall include the signature and title of the person responsible for preparation of the plan and include the date of initial preparation and each amendment thereto.

M. Facilities which discharge storm water associated with industrial activity to municipal separate storm sewers may also be subject to additional requirement imposed by the operator of the municipal system

Construction Authorization

Authorization is hereby granted to construct treatment works and related equipment that may be required by the Storm Water Pollution Prevention Plan developed pursuant to this permit.

This Authorization is issued subject to the following condition(s).

N. If any statement or representation is found to be incorrect, this authorization may be revoked and the permittee there upon waives all rights there under.

O. The issuance of this authorization (a) does not release the permittee from any liability for damage to persons or property caused by or resulting from the installation, maintenance or operation of the proposed facilities; (b) does not take into consideration the structural stability of any units or part of this project; and (c) does not release the permittee from compliance with other applicable statutes of the State of Illinois, or other applicable local law, regulations or ordinances.

P. Plans and specifications of all treatment equipment being included as part of the stormwater management practice shall be included in the SWPPP.

Q. Construction activities which result from treatment equipment installation, including clearing, grading and excavation activities which result in the disturbance of one acre or more of land area, are not covered by this authorization. The permittee shall contact the IEPA regarding the required permit(s).

REPORTING

R. The annual inspection report shall include results of the annual facility inspection which is required by Part I of this condition. The report shall also include documentation of any event (spill, treatment unit malfunction, etc.) which would require an inspection, results of the inspection, and any subsequent corrective maintenance activity. The report shall be completed and signed by the authorized facility employee(s) who conducted the inspection(s). The annual inspection report is considered a public document that shall be available at any reasonable time upon request.

S. The first report shall contain information gathered during the one year time period beginning with the effective date of coverage under this permit and shall be submitted no later than 60 days after this one year period has expired. Each subsequent report shall contain the previous year's information and shall be submitted no later than one year after the previous year's report was due.

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Special Conditions

T. If the facility performs inspections more frequently than required by this permit, the results shall be included as additional information in the annual report.

U. The permittee shall retain the annual inspection report on file at least 3 years. This period may be extended by request of the Illinois Environmental Protection Agency at any time.

Annual inspection reports shall be submitted electronically at epa.prmtspeccondtns@illinois.gov or mailed to the following address:

Illinois Environmental Protection Agency
Bureau of Water
Compliance Assurance Section
Annual Inspection Report
2520 West Iles Avenue
Post Office Box 19276
Springfield, Illinois 62794-9276

SPECIAL CONDITION 11. The Permittee shall record monitoring results on Discharge Monitoring Report (DMR) electronic forms using one such form for each outfall each month.

In the event that an outfall does not discharge during a monthly reporting period, the DMR Form shall be submitted with no discharge indicated.

The Permittee is required to submit electronic DMRs (NetDMRs) instead of mailing paper DMRs to the IEPA unless a waiver has been granted by the Agency. More information, including registration information for the NetDMR program, can be obtained on the IEPA website, http://www.epa.state.il.us/water/net-dmr/index.html.

The completed Discharge Monitoring Report forms shall be submitted to IEPA no later than the 25th day of the following month, unless otherwise specified by the permitting authority.

Permittees that have been granted a waiver shall mail Discharge Monitoring Reports with an original signature to the IEPA at the following address:

Illinois Environmental Protection Agency
Division of Water Pollution Control
Attention: Compliance Assurance Section, Mail Code # 19
2520 West Iles Avenue
Post Office Box 19276
Springfield, Illinois 62794-9276

SPECIAL CONDITION 12. For the purpose of this permit, discharges from outfall 002 are limited to overflow from the stormwater retention basin, free from additional process or other discharges.

SPECIAL CONDITION 13. The permittee shall monitor the nitrogen concentration of its oil feed stocks and report the concentrations to the Agency on an annual basis. Reports shall be submitted no later than 60 days after the end of the calendar year.

SPECIAL CONDITION 14. The permittee may use the upset provision as an affirmative defense provided all the requirements of 40 CFR 122.41(n) are met.

SPECIAL CONDITION 15. The use and operation of the wastewater treatment facilities shall be under the supervision of a certified Class K operator.

SPECIAL CONDITION 16. Storm Water Credit for Outfall 001:

An additional stormwater credit for the following parameters shall be calculated based on 100% of the stormwater flow as defined below.

NPDES Permit No. IL0001589

Special Conditions

Pounds per 1000 gallons of stormwater

| Parameter | Average | Maximum |
|---|---|---|
| COD | 1.5 | 3.0 |
| Chromium (Total) | 0.0018 | 0.005 |
| Chromium (Hexavalent) | 0.00052 | 0.00052 |

Dry Weather Flow – The average flow from the wastewater treatment plant for the last three consecutive zero precipitation days. Previously collected stormwater which is sent to process treatment during this period shall not be included in this computation.

Stormwater Flows – The stormwater runoff treated in the wastewater treatment facility is that portion of flow greater than the dry weather flow. Measurement of previously collected contaminated stormwater from tank dikes may also be used in computing stormwater credits.

SPECIAL CONDITION 17. This facility meets the allowed mixing criteria for thermal discharges pursuant to 35 IAC 302.102. No reasonable potential exists for the discharge to exceed thermal water quality standards. This determination is based on a maximum average flow of 8.65 MGD and a maximum effluent temperature 94˚F. The permittee shall monitor the flow and temperature of the discharge prior to entry into the receiving water body. Monitoring results shall be reported on the monthly Discharge Monitoring Report. This permit may be modified to include formal temperature limitations should the results of the monitoring show that there is a reasonable potential to exceed a thermal water quality standard. Modification of this permit shall follow public notice and opportunity for comment.

SPECIAL CONDITION 18. The permittee was granted a variance from the water quality standard for Total Dissolved Solids (TDS) for the discharge at outfall 001 in accordance with Illinois Pollution Control Board Order PCB 05-85. The permittee shall continue their work with the watershed workgroup in accordance with the schedule contained in this order. This permit may be modified to include any final limitations or monitoring requirements which may be necessary based on the results of the study, or future Illinois Pollution Control Board actions with result to Total Dissolved Solids water quality standards. This variance expires on December 15, 2009.

SPECIAL CONDITION 19. The Permittee shall monitor the effluent from outfalls 001 and 002 and report concentrations (in mg/l) of the following listed parameters on a semi-annual basis. If no discharge from Outfall 003 occurs during a semi-annual (six month) period, no metals monitoring is required at Outfall 002 and "No Discharge" shall be reported on the DMR for that semi-annual reporting period. The sample shall be a 24-hour effluent composite except as otherwise specifically provided below and the results shall be submitted on the monthly DMR's to IEPA. The parameters to be sampled are:

| STORET CODE | PARAMETER | Minimum detection limit |
|---|---|---|
| 01002 | Arsenic | 0.001 mg/l |
| 01007 | Barium | 0.5 mg/l |
| 01027 | Cadmium | 0.003 mg/l |
| 01042 | Copper | 0.005 mg/l |
| 00718 | Cyanide (grab) (weak acid dissociable) | 5.0 ug/l |
| 00720 | Cyanide (grab not to exceed 24 hours) (total) | 5.0 ug/l |
| 01045 | Iron (total) | 0.5 mg/l |
| 01046 | Iron (Dissolved) | 0.5 mg/l |
| 01051 | Lead | 0.05 mg/l |
| 01055 | Manganese | 0.5 mg/l |
| 01067 | Nickel | 0.005 mg/l |
| 01147 | Selenium | 0.075 mg/l |
| 01077 | Silver (total) | 0.003 mg/l |
| 01087 | Vanadium | 0.008 mg/l |
| 01092 | Zinc | 0.50 mg/l |

Unless otherwise indicated, concentrations refer to the total amount of the constituent present in all phases, whether solid, suspended or dissolved, elemental or combined, including all oxidation states.

SPECIAL CONDITION 20. The permittee shall at all times properly operate and maintain the intake structure, the operation of which has been determined to be the equivalent of Best Technology Available (BTA) described at 40 CFR 125.94(c) and 40 CFR 125.94(d). The

permittee shall withdraw the amount of cooling water needed only to cool the system plus any incidental loss from the cooling system. With regard to non-cooling intake water (i.e. other process and non-process water), the permittee shall withdraw the amount of water needed for those functions plus any required as backup and safety requires.

The permittee has submitted information on the cooling water intake structure operation in accordance with Section 316(b) of the Clean Water Act. This permit may also be revised or modified in accordance with any laws, regulations, or judicial orders pursuant to Section 316(b) of the Clean Water Act.

SPECIAL CONDITON 21. The permittee shall measure intake flow from the intake structure on a daily basis and report it as a monthly average and daily maximum on a monthly basis on the DMR form. Sample type for flow may be by an actual measurement or a calculation.

SPECIAL CONDITION 22. The permittee shall conduct visual or remote inspections of the cooling water intake structure on a weekly basis at minimum to ensure that these items are maintained and operating to function as designed. If the permittee cannot perform the inspection due to inclement weather or a similar reason, the permittee shall perform the inspection as soon as possible afterwards.

SPECIAL CONDITON 23. Pursuant to 40 CFR 125.97(c), the permittee shall submit an annual certification statement signed by the responsible corporate office as defined in 40 CFR 122.22 subject to the following:

1. If the information contained in the previous year's annual certification is still pertinent, you may simply state as such in a letter to the Agency and the letter, along with any applicable data submission requirements specified in this section shall constitute the annual certification.

2. If you have substantially modified operation of any unit at your facility that impacts cooling water withdrawals or operation of your cooling water intake structures, you must provide a summary of those changes in the report. In addition, you must submit revisions to the information required at 40 CFR 122.21(r) in your next permit application.

The permittee may request to reduce the information required, if conditions at the facility and in the waterbody remain substantially unchanged since the previous application so long as the relevant previously submitted information remains representative of current source water, intake structure, cooling water system, and operating conditions. Any habitat designated as critical or species listed as threatened or endangered after issuance of the current permit whose range of habitat or designated critical habit includes waters where a facility intake is located constitutes potential for a substantial change that must be addressed by the owner/operator in subsequent permit applications, unless the facility received an exemption pursuant to 16 U.S.C. 1537(o) or a permit pursuant to 16 U.S.C. 1539(a) or there is no reasonable expectation of take. The permittee must submit its request for reduced cooling water intake structure and waterbody application information to the Agency at least two years and six months prior to the expiration of this NPDES permit. The Permittee's request must identify each element in this subsection that it determines has not substantially changed since the previous permit application and the basis for the determination.

SPECIAL CONDITION 24. The permittee shall retain all records supporting the Agency's determination of BTA for entrainment until such time as the Agency revises the Determination of BTA for Entrainment in the permit.

SPECIAL CONDITION 25. The permittee has submitted information on the cooling water intake structure configuration and operating in accordance with Section 316(b) of the Clean Water Act, Section 122.21(r)(2) through (r)(8).

Based on a review of this information, the Agency has made the Best Professional Judgement (BPJ) determination that the operation of the cooling water intake structures meets Best Technology Available (BTA) for entrainment in accordance with the provisions of 40 CFR 124.94(d). The facility has chosen a 0.5 Feet Per Second Through-Screen Design Velocity provision outlined in 40 CFR 125.94(c)(2) and is determined to be the equivalent of Best Technology Available (BTA) for cooling water intake structures to prevent/minimize impingement mortality.

This permit may also be revised or modified in accordance with any laws, regulations, or judicial orders issued pursuant to Section 316(b) of the Clean Water Act.

However, the Permittee shall comply with the requirements of the Cooling Water Intake Structure Existing Facilities Rule as found at 40 CFR 122.21(r) as defined at 40 CFR 125.92(k). Any application materials and submissions required for compliance with the Existing Facilities Rule, shall be submitted to the Agency no later than 4 years from the effective date of this permit.

Special Conditions

Nothing in this permit authorizes take for the purpose of a facility's compliance with the Endangered Species Act.

SPECIAL CONDITION 26. The Permittee shall conduct biomonitoring using effluent collected at a point downstream of outfall 001 but prior to entry into the receiving water.

Biomonitoring

1. Acute Toxicity - Standard definitive acute toxicity tests shall be run on at least two trophic levels of aquatic species (fish, invertebrate) representative of the aquatic community of the receiving stream. Testing must be consistent with Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms (Fifth Ed.) EPA/821-R-02-012. Unless substitute tests are pre-approved; the following tests are required:

   a. Fish - 96 hour static $LC_{50}$ Bioassay using fathead minnows (Pimephales promelas).

   b. Invertebrate 48-hour static $LC_{50}$ Bioassay using *Ceriodaphnia*.

2. Test Requirements - The above test shall be conducted annually using 24-hour composite samples unless otherwise authorized by the IEPA. Effluent samples must be analyzed for ammonia, chloride, and TDS, given that these parameters may be associated with acute toxicity.

3. Reporting - Results shall be reported according to EPA/821-R-02-012, Section 12, Report Preparation, and shall be submitted to IEPA, Bureau of Water, Compliance Assurance Section within one week of receipt from the laboratory. Results from ammonia, chloride, TDS analyses, as well as any other parameter believed to contribute to effluent toxicity, must be included in the bioassay report.

4. Toxicity –The Permittee has previously been granted a 10:1 ZID for ammonia, chloride, and sulfates, therefore effluent toxicity attributed to these parameters is authorized up to, but not in exceedance of, 11.0 Toxic Units (Effluent LC50 = 9.1%). However, should a bioassay result in acute toxicity to ≥50% of test organisms and the effluent is found to contain non-toxic amounts of ammonia, chloride, and TDS, the IEPA may require, upon notification, six (6) additional rounds of monthly testing on the affected organism(s) to be initiated within 30 days of the toxic bioassay. Results shall be submitted to IEPA within one (1) week of becoming available to the Permittee.

5. Toxicity Identification and Reduction Evaluation - Should any of the additional bioassays result in toxicity to ≥50% of organisms and the effluent is found to contain non-toxic amounts of ammonia, chloride, and TDS, the Permittee must contact the IEPA within one (1) day of the results becoming available to the Permittee and begin the toxicity identification evaluation process in accordance with Methods for Aquatic Toxicity Identification Evaluations, EPA/600/6-91/003. The IEPA may also require, upon notification, that the Permittee prepare a plan for toxicity reduction evaluation to be developed in accordance with Toxicity Reduction Evaluation Guidance for Municipal Wastewater Treatment Plants, EPA/833B-99/002, which shall include an evaluation to determine which chemicals have a potential for being discharged in the plant wastewater, a monitoring program to determine their presence or absence and to identify other compounds which are not being removed by treatment, and other measures as appropriate. The Permittee shall submit to the IEPA its plan for toxicity reduction evaluation within ninety (90) days following notification by the IEPA. The Permittee shall implement the plan within ninety (90) days or other such date as contained in a notification letter received from the IEPA.

The IEPA may modify this Permit during its term to incorporate additional requirements or limitations based on the results of the biomonitoring. In addition, after review of the monitoring results, the IEPA may modify this Permit to include numerical limitations for specific toxic pollutants. Modifications under this condition shall follow public notice and opportunity for hearing.

SPECIAL CONDITION 27.

A. PFAS Sample Frequency and Type of Sample.

| **Sampling Point** | **Sample Frequency** | **Sample Type** | **Report****** |
|---|---|---|---|
| Effluent | Quarterly** | Grab*** | ng/L |

** Quarterly sampling – Testing done during the first quarter (January – March) must be reported on the May Electronic Discharge Monitoring Report (NetDMR), testing done in the second quarter (April – June) must be reported on the August NetDMR, testing

done in the third quarter (July – September) must be reported on the November NetDMR, and testing done in the fourth quarter (October – December) must be reported on the February NetDMR.

*** If the permittee prefers to collect composite samples instead grab samples, the permittee will be required to seek approval through the permit modification process.

**** The Minimum Level (ML) of quantification established for PFAS by the laboratory, when using the approved analytical method, shall be submitted with the test results each reporting period on the NetDMR.

B. Test results must be reported in nanograms per liter (ng/L) as a daily maximum concentration for aqueous samples. Solid test results must be reported in nanograms per gram (ng/g) as a daily maximum.

C. USEPA Method 1633A - Analysis of Per- and Polyfluoroalkyl Substances (PFAS) in Aqueous, Solid, Biosolids, and Tissue Samples by LC-MS/MS (finalized December 2024) is to be used when testing for PFAS. When PFAS analytical methods are promulgated through rulemaking and incorporated into 40 CFR Part 136, the permittee shall follow the approved methods.

D. When testing for PFAS the laboratory shall determine their limit of quantitation (LOQ) for each analyte in accordance with the test method identified in Part 3 of this Special Condition. The LOQ is synonymous with Minimum Level (ML) and Reporting Limit. The laboratory LOQs (Minimum Levels) must not exceed the upper limit of the aqueous and solid ranges listed in the table in Part 7 of this Special Condition.

E. In addition to the testing and reporting requirements for the individual PFAS analytes listed on Part 7 of this Special Condition the permittee shall report the PFAS Sum. For purposes of this permit the PFAS Sum is the arithmetic summation of the individual analytes listed in Part 7 that are associated with a particular sampling event and location. Results must be submitted on the Net DMRs along with the individual test results.

Test results for individual analytes which are below the ML as described in Parts 1 and 4 of this Special Condition should be assigned a value of zero (0) when calculating the PFAS Sum.

F. If sample results for PFAS are consistently below the minimum level (ML) of quantification for two consecutive years using USEPA Method 1633A or methods approved under 40 CFR 136, once finalized, the permittee may request a reevaluation of the testing requirements. Documentation supporting the request for a reduction in monitoring for PFAS must be made by the permittee as a permit modification request.

G. Specific PFAS constituents that must be analyzed for are listed in the following table:

| **Target Analyte Name** | **Abbreviation** | **CASRN Number** | **STORET** | **Minimum Level (ML)** | |
|---|---|---|---|---|---|
| | | | | **Aqueous (ng/L)** | **Solid (ng/g)** |
| **Perfluoroalkyl carboxylic acids** | | | | | |
| Perfluorobutanoic acid | PFBA | 375-22-4 | 51522 | 4 – 16 | 0.64 – 1.6 |
| Perfluoropentanoic acid | PFPeA | 2706-90-3 | 51623 | 2 – 8 | 0.32 – 0.8 |
| Perfluorohexanoic acid | PFHxA | 307-24-4 | 51624 | 1 – 4 | 0.16 – 0.4 |
| Perfluoroheptanoic acid | PFHpA | 375-85-9 | 51625 | 1 – 4 | 0.16 – 0.4 |
| Perfluorooctanoic acid | PFOA | 335-67-1 | 51521 | 1 – 4 | 0.16 – 0.4 |

| | | | | | |
|---|---|---|---|---|---|
| Perfluorononanoic acid | PFNA | 375-95-1 | 51626 | 1 – 4 | 0.16 – 1.3 |
| Perfluorodecanoic acid | PFDA | 335-76-2 | 51627 | 1 – 4 | 0.16 – 0.4 |
| Perfluoroundecanoic acid | PFUnA | 2058-94-8 | 51628 | 1 – 4 | 0.16 – 0.5 |
| Perfluorododecanoic acid | PFDoA | 307-55-1 | 51629 | 1 – 4 | 0.16 – 0.4 |
| Perfluorotridecanoic acid | PFTrDA | 72629-94-8 | 51630 | 1 – 4 | 0.16 – 0.4 |
| Perfluorotetradecanoic acid | PFTeDA | 376-06-7 | 51631 | 1 – 4 | 0.16 – 0.4 |
| **Perfluoroalkyl sulfonic acids** | | | | | |
| **Acid Form** | | | | | |
| Perfluorobutanesulfonic acid | PFBS | 375-73-5 | 52602 | 1 – 4 | 0.16 – 0.4 |
| Perfluoropentanesulfonic acid | PFPeS | 2706-91-4 | 52610 | 1 – 4 | 0.16 – 0.4 |
| Perfluorohexanesulfonic acid | PFHxS | 355-46-4 | 52605 | 1 – 4 | 0.16 – 0.4 |
| Perfluoroheptanesulfonic acid | PFHpS | 375-92-8 | 52604 | 1 – 4 | 0.16 – 0.4 |
| Perfluorooctanesulfonic acid | PFOS | 1763-23-1 | 52606 | 1 – 4 | 0.16 – 0.4 |
| Perfluorononanesulfonic acid | PFNS | 68259-12-1 | 52611 | 1 – 4 | 0.16 – 0.4 |
| Perfluorodecanesulfonic acid | PFDS | 335-77-3 | 52603 | 1 – 4 | 0.16 – 0.4 |
| Perfluorododecanesulfonic acid | PFDoS | 79780-39-5 | 52632 | 1 – 4 | 0.16 – 0.4 |
| **Fluorotelomer sulfonic acids** | | | | | |
| 1H,1H,2H, 2H-Perfluorohexane sulfonic acid | 4:2 FTS | 757124-72-4 | 52607 | 4 – 15 | 0.64 – 1.5 |
| 1H,1H, 2H,2H-Perfluorooctane sulfonic acid | 6:2 FTS | 27619-97-2 | 52608 | 4 – 15 | 0.64 – 1.5 |
| 1H,1H, 2H,2H-Perfluorodecane sulfonic acid | 8:2 FTS | 39108-34-4 | 52609 | 4 – 15 | 0.64 – 1.5 |
| **Perfluorooctane sulfonamides** | | | | | |
| Perfluorooctanesulfonamide | PFOSA | 754-91-6 | 51525 | 1 – 4 | 0.16 – 0.4 |
| N-methyl perfluorooctanesulfonamide | NMeFOSA | 31506-32-8 | 52641 | 1 – 4 | 0.16 – 0.4 |
| N-ethyl perfluorooctanesulfonamide | NEtFOSA | 4151-50-2 | 52642 | 1 – 4 | 0.16 – 0.4 |
| **Perfluorooctane sulfonamidoacetic acids** | | | | | |

| | | | | | |
|---|---|---|---|---|---|
| N-methyl perfluorooctanesulfonamidoacetic acid | NMeFOSAA | 2355-31-9 | 51644 | 1 – 4 | 0.16 – 0.4 |
| N-ethyl perfluorooctanesulfonamidoacetic acid | NEtFOSAA | 2991-50-6 | 51643 | 1-4 | 0.16 – 0.4 |
| **Perfluorooctane sulfonamide ethanols** | | | | | |
| N-methyl perfluorooctanesulfonamidoethanol | NMeFOSE | 24448-09-7 | 51642 | 10 – 40 | 1.6 – 4 |
| N-ethyl perfluorooctanesulfonamidoethanol | NEtFOSE | 1691-99-2 | 51641 | 10 – 40 | 1.6 – 4 |
| **Per- and Polyfluoroether carboxylic acids** | | | | | |
| Hexafluoropropylene oxide dimer acid | HFPO-DA | 13252-13-6 | 52612 | 2 – 8 | 0.64 – 1.6 |
| 4,8-Dioxa-3H-perfluorononanoic acid | ADONA | 919005-14-4 | 52636 | 2 – 8 | 0.64 – 1.5 |
| Perfluoro-3-methoxypropanoic acid | PFMPA | 377-73-1 | PF002 | 4 – 16 | 0.32 – 0.8 |
| Perfluoro-4-methoxybutanoic acid | PFMBA | 863090-89-5 | PF006 | 4 – 15 | 0.32 – 0.8 |
| Nonafluoro-3,6-dioxaheptanoic acid | NFDHA | 151772-58-6 | 52626 | 2 – 7 | 0.32 –0.8 |
| **Ether sulfonic acids** | | | | | |
| 9-Chlorohexadecafluoro-3-oxanonane-1- sulfonic acid | 9Cl-PF3ONS | 756426-58-1 | PF003 | 4 – 15 | 0.64 – 1.5 |
| 11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid | 11Cl-PF3OUdS | 763051-92-9 | PF004 | 4 – 15 | 0.64 – 1.5 |
| Perfluoro(2-ethoxyethane)sulfonic acid | PFEESA | 113507-82-7 | 52629 | 2 – 8 | 0.32 – 0.7 |
| **Fluorotelomer carboxylic acids** | | | | | |
| 3-Perfluoropropyl propanoic acid | 3:3 FTCA | 356-02-5 | PF001 | 5 – 20 | 0.80 – 5 |
| 2H,2H,3H,3H-Perfluorooctanoic acid | 5:3 FTCA | 914637-49-3 | PF007 | 25 – 100 | 4 – 10 |
| 3-Perfluoroheptyl propanoic acid | 7:3 FTCA | 812-70-4 | PF005 | 25 – 100 | 4 – 10 |

SPECIAL CONDITION 28. PFAS Minimization Program:

New Special Condition for BMP Minimization:

A. PFAS Reduction Initiative:

1. Within 6 months from the effective date of the permit the Permittee shall develop and implement a PFAS reduction initiative. The reduction initiative must include Best Management Practices (BMPs).

2. Best Management Practices (BMPs) must include an evaluation based on product substitution, reduction, or elimination of PFAS in

discharges as detected by USEPA Method 1633A, or methods approved under 40 CFR 136, once finalized. When developing a BMP, the following should be considered, at a minimum:

a. Evaluation of the potential for the industrial facility to use products containing PFAS or have knowledge or suspect wastewater being discharged under the NPDES permit to contain PFAS.

b. Evaluation of Pollution prevention/source reduction opportunities which may include:

i. Product elimination or substitution when a reasonable alternative to using PFAS is available in the industrial process,

ii. Accidental discharge minimization by optimizing operations and good housekeeping practices,

iii. Equipment decontamination or replacement (such as in metal finishing facilities) where PFAS products have historically been used to prevent discharge of legacy PFAS following the implementation of product substitution.

c. Identification of the measures being taken to reduce PFAS loading from the facility, and any available information, including facility wastewater testing for PFAS, and/or the loading reduction achieved.

3. BMPs for PFAS must be reevaluated in accordance with paragraph 1 b) of this Special Condition and updated on an annual basis. The reevaluated BMP's must include any updates made since the previous BMP was submitted.

4. The Permittee is required to submit a PFAS reduction report annually to the Illinois Environmental Protection Agency at the address indicated under paragraph 2) of this Special Condition, with the first report due 12 months from the permit effective date. Subsequent annual reports shall be due 12 months following the previous report's due date.

PFAS reduction reports must include the following information:

a. The name, address, and NPDES permit number of the Permittee,

b. The current BMP for the facility. Reevaluated BMP's must also include all updates made since the previous BMP was submitted.

B. The Permittee shall submit the PFAS reduction reports identified under paragraphs 1) of this Special Condition electronically or in writing to one of the following addresses:

1. EPA.PrmtSpecCondtns@Illinois.gov, or

2. Illinois Environmental Protection Agency
Bureau of Water
Compliance Assurance Section
Mail Code #19
2520 West Iles Avenue
Post Office Box 19276
Springfield, Illinois 62794-9276

SPECIAL CONDITION 29. Citgo Petroleum – Lemont Refinery (IL0001589) timely filed a Time-Limited Water Quality Standard (TLWQS) for chloride (Case# IPCB 2019-008) and is participating in the chloride workgroup for the SAWS dischargers. Since they timely filed, the chloride water quality standard is stayed. Citgo Petroleum must continue to participate in the workgroup and must comply with the Board Order resulting from the TLWQS (Case # IPCB 2019-008).