NPDES Permit No. IL0002623
Notice No. JMC:13020501 IL0002623 Carus Chemical Company.doc

Public Notice Beginning Date: **June 25, 2013**

Public Notice Ending Date: **July 25, 2013**

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
1021 North Grand Avenue East
Post Office Box 19276
Springfield, Illinois 62794-9276
217/782-0610

Name and Address of Discharger:

Carus Chemical Company
1500 Eighth Street
P.O. Box 1500
LaSalle, Illinois 61301

Name and Address of Facility:

Carus Chemical Company
1500 Eighth Street
P.O. Box 1500
LaSalle, Illinois 61301
(LaSalle 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 Jamie Cowles at 217/782-0610.

The applicant is engaged in the manufacture and distribution of potassium permanganate, sodium permanganate, formulate permanganates, copper manganese dioxide catalysts, and liquid and dry phosphate blends (SIC 2819 and 2869). Waste water is generated from treating incoming potable water for use in the boilers, boiler blowdown discharges, non-contact cooling water discharges from the pilot plant, barometric condenser water from the potassium permanganate plant and stormwater exposed to industrial activity.

Plant operation results in a proposed discharge of 1.672 MGD of water softener regeneration wastewater, reverse osmosis reject, multi-media filter backwash, boiler blowdown, barometric condenser water, non-contact cooling water, stormwater runoff, and emergency waste storage site stormwater from outfall 001.

The following modification is proposed: The company has increased production and requires more purified water for manufacturing and also requires more cooling water. Current average flow of combined wastewaters discharged to the Little Vermilion River is 1.592 MGD and the future flow will be 1.672 MGD.

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

Outfall	Receiving Stream	Latitude		Longitude		Stream Classification	Integrity Rating
001	Little Vermilion River	41° 20' 05"	North	89° 04' 57"	West	General Use	Not Rated

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

The stream segment (DR-01) receiving the discharge from outfall(s) 001 is on the draft 2012 303(d) list of impaired waters and is not a biologically significant stream on the 2008 Illinois Department of Natural Resources Publication – *Integrating Multiple Taxa in a Biological Stream Rating System*.

Impaired Designated Use	Pollutants Causing Impairment	
Aquatic Life	Chloride, pH, Phosphorus (Total), Total Suspended Solids, Zinc	
Primary Contact Recreation	Fecal Coliform Bacteria	

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

Outfall: 001 - Water Softener Regeneration Wastewater, Reverse Osmosis Reject, Multi-Media Filter Backwash, Boiler Blowdown, Barometric Condenser Water, Non-Contact Cooling Water, Stormwater Runoff, and Emergency Waste Storage Site Stormwater (average flow = 1.672 MGD)

	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)						
pH						35 IAC 304.125
Temperature						35 IAC 302.211
Total Suspended Solids	136	162			15	40 CFR 122.44(l)
Total Residual Chlorine					0.05	40 CFR 125.3
Chloride				Monitor Only		35 IAC 302.208
Ammonia (as N)						35 IAC 355
Spring/Fall	10.6	24.7		1.2	2.8	35 IAC 355
Summer	6.2	30.8		0.7	3.5	35 IAC 355
Winter	18.5	31.7		2.1	3.6	35 IAC 355
Phosphorous				Monitor Only		35 IAC 304.123

Load Limit Calculations:

Load limit calculations for the following pollutant parameters were based on the existing permitted average flow of 1.056 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): Total Suspended Solids and Ammonia.

The concentration and load limits for total suspended solids, manganese an ammonia and the load limit for chlorine will remain at current permitted levels to prevent backsliding pursuant to 40 CFR 122.44(l).

The following explain the conditions of the proposed permit:

While the average discharge from the facility will increase from 1.559 to 1.672 MGD the loading from the facility will either decrease or remain at current permitted levels.

All other conditions of the current permit will remain the same.

Antidegradation Assessment for Carus Chemical Corporation
NPDES Permit No. IL0002623 LaSalle County

The subject facility has applied for an NPDES permit for increased flows of cooling water and reverse osmosis reject water. The company has increased production and requires more purified water for manufacturing and also requires more cooling water. Current average flow of combined wastewaters discharged to the Little Vermilion River is 1.592 MGD and the future flow will be 1.672 MGD. Process wastewater is sent to the POTW for treatment and is therefore not considered in this review. Information used in this review comes in part from an Antidegradation Assessment document produced by Andrews Engineering, Inc., and dated April 30, 2013.

Identification and Characterization of the Affected Water Body.

This facility discharges from a lagoon to the Little Vermilion River (segment code DR-01), which is a General Use water and has a 7Q10 flow of zero cfs. The Little Vermilion River is listed on the draft 2012 Illinois Integrated Water Quality Report and Section 303(d) List as impaired for aquatic life and primary contact uses. The causes of aquatic life impairment are chloride, pH, total phosphorus, total suspended solids and zinc. The cause of primary contact use impairment is fecal coliform bacteria. The Little Vermilion River at the location of the effluent outfall is not listed as a biologically significant stream in the 2008 Illinois Department of Natural Resources Publication *Integrating Multiple Taxa in a Biological Stream Rating System* nor is it given an integrity rating in that report. The Little Vermilion River is designated as an enhanced water at this location pursuant to the dissolved oxygen water quality standard.

Identification of Proposed Pollutant Load Increases or Potential Impacts on Uses.

The Carus plant is supplied with city water for cooling and other processes. This water is of good quality, but contains dissolved minerals that are removed and concentrated in the reverse osmosis process. These minerals will also increase in loading in the effluent simply because more water is being used by the facility for cooling purposes. No adverse impacts to aquatic life or other water body uses are anticipated.

Fate and Effect of Parameters Proposed for Increased Loading.

The dissolved minerals will persist in the receiving stream and will mix with downstream waters. No discernable increase will be noted in the Illinois River, the near-by ultimate receiving stream. Water quality standards will be met and no adverse impacts will occur to water body uses.

Purpose and Anticipated Benefits of the Proposed Activity.

More purified water and cooling water are necessary to support increases in production at this facility. The increase in production allows the company to be viable in the market and allows it to remain a local employer.

Assessments of Alternatives for Less Increase in Loading or Minimal Environmental Degradation.

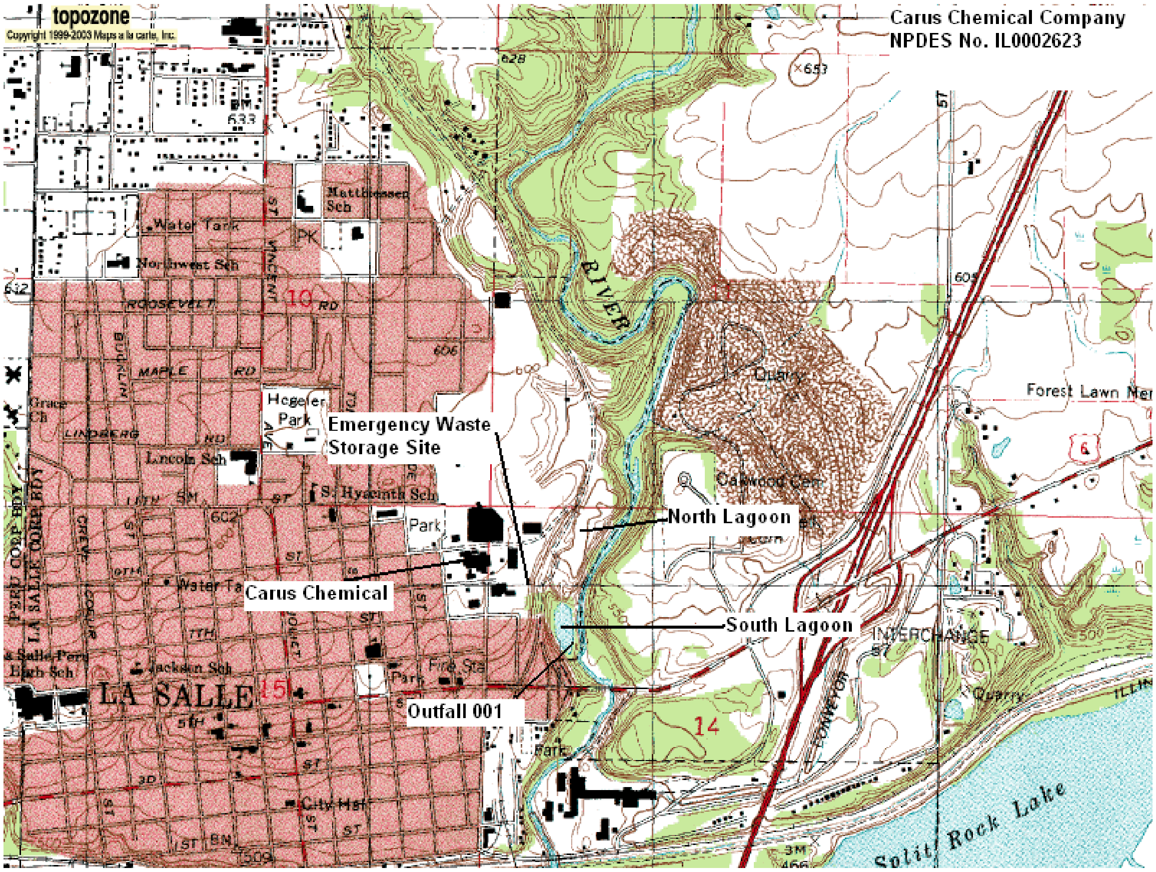
The facility is has an existing process for producing purified water and for cooling plant processes. The system is increasing slightly in volume due to production increases. Minimal pollutant loading occurs. Investigating complete wastewater redesign is impractical. Discharge to surface waters is the only viable option. The facility considered using effluent for cropland irrigation, but given the urban location, this option also is not viable.

Summary Comments of the Illinois Department of Natural Resources, Regional Planning Commissions, Zoning Boards or Other Entities

The Illinois Department of Natural Resources was consulted regarding threatened and endangered species issues via the EcoCAT system on May 13, 2013. No endangered or threatened species were identified from the area. A natural area site was identified, but the discharge will not impact this site.

Agency Conclusion.

This preliminary assessment was conducted pursuant to the Illinois Pollution Control Board regulation for Antidegradation found at 35 Ill. Adm. Code 302.105 (antidegradation standard) and was based on the information available to the Agency at the time the draft permit was written. We tentatively find that the proposed activity will result in the attainment of water quality standards; that all existing uses of the receiving stream will be maintained; that all technically and economically reasonable measures to avoid or minimize the extent of the proposed increase in pollutant loading have been incorporated into the proposed activity; and that this activity will benefit the community at large by allowing a local employer to remain viable and to continue to provide jobs. Comments received during the NPDES permit public notice period will be evaluated before a final decision is made by the Agency.


Carus Chemical Company
NPDES No. IL0002623
Emergency Waste
Storage Site
North Lagoon
Carus Chemical
South Lagoon
Outfall 001
LA SALLE
Split Rock Lake
topozone

NPDES Permit No. IL0002623

Illinois Environmental Protection Agency

Division of Water Pollution Control

1021 North Grand Avenue East

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:

Carus Chemical Company
1500 Eighth Street
P.O. Box 1500
LaSalle, Illinois 61301

Facility Name and Address:

Carus Chemical Company
1500 Eighth Street
P.O. Box 1500
LaSalle, Illinois 61301

Discharge Number and Name:

001 Water Softener Regeneration Wastewater, Reverse Osmosis Reject, Multi-Media Filter Backwash, Boiler Blowdown, Barometric Condenser Water, Non-Contact Cooling Water, Stormwater Runoff, and Emergency Waste Storage Site Stormwater

Receiving Waters:

Little Vermilion River

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.

Alan Keller, P.E.
Manager, Permit Section
Division of Water Pollution Control

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NPDES Permit No. IL0002623

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:

	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
Outfall: 001 - Water Softener Regeneration Wastewater, Reverse Osmosis Reject, Multi-Media Filter Backwash, Boiler Blowdown, Barometric Condenser Water, Non-Contact Cooling Water, Stormwater Runoff and Emergency Waste Storage Site Stormwater (average flow = 1.672 MGD)						
Flow	See Special Condition 1				Daily	
pH	See Special Condition 2				1/Week	Grab
Temperature	See Special Condition 3				1/Week	Single Reading
Total Suspended Solids	136	162		15	1/Month	24-hr Composite
Total Residual Chlorine	See Special Condition 4			0.05	1/Week	Grab
Chloride			Monitor Only		1/Year	24-hr Composite
Phosphorous			Monitor Only		1/Month	Grab
Ammonia (as N)						
Spring/Fall	10.6	24.7	1.2	2.8	1/Month	Grab
Summer	6.2	30.8	0.7	3.5	1/Month	Grab
Winter	18.5	31.7	2.1	3.6	1/Month	Grab

*Sampling frequency shall be daily when discharging emergency waste storage site stormwater. At all other times sampling frequency shall be once per month.

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Special Conditions

SPECIAL CONDITION 1. Flow shall be measured in units of Million Gallons per Day (MGD) and reported as a monthly average and a daily maximum on the monthly Discharge Monitoring Report.

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. This facility is not allowed any mixing with the receiving stream in order to meet applicable water quality thermal limitations. Therefore, discharge of wastewater from this facility must meet the following thermal limitations prior to discharge into the receiving stream.

A. The discharge must not exceed the maximum limits in the following table during more than one percent of the hours in the 12 month period ending with any month. Moreover, at no time shall the water temperature of the discharge exceed the maximum limits in the following table by more the 1.7° C (3° F).

	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
°F	60	60	60	90	90	90	90	90	90	90	90	60
°C	16	16	16	32	32	32	32	32	32	32	32	16

B. In addition, the discharge shall not cause abnormal temperature changes that may adversely affect aquatic life unless caused by natural conditions.

C. The discharge shall not cause the maximum temperature rise above natural temperatures to exceed 2.8° C (5° F).

D. The monthly maximum value shall be reported on the DMR form.

SPECIAL CONDITIONS 4. All samples for Total Residual Chlorine shall be analyzed by an applicable method contained in 40 CFR 136, equivalent in accuracy to low-level amperometric titration. Any analytical variability of the method used shall be considered when determining the accuracy and precision of the results obtained.

SPECIAL CONDITION 5. The Permittee shall record monitoring results on Discharge Monitoring Report (DMR) 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 may choose to submit electronic DMRs (eDMRs) instead of mailing paper DMRs to the IEPA. More information, including registration information for the eDMR program, can be obtained on the IEPA website, http://www.epa.state.il.us/water/edmr/index.html.

The completed Discharge Monitoring Report forms shall be submitted to IEPA no later than the 15th day of the following month, unless otherwise specified by the permitting authority.

Permittees not using eDMRs 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
1021 North Grand Avenue East
Post Office Box 19276
Springfield, Illinois 62794-9276

Attention: Compliance Assurance Section, Mail Code # 19

SPECIAL CONDITION 6. 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.

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Special Conditions

SPECIAL CONDITION 7. 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 8. 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 9. The use or operation of this facility shall be by or under the supervision of a Certified Class K operator.

SPECIAL CONDITION 10. For the purpose of this permit, the discharge 001 is limited to water softener regeneration wastewater, reverse osmosis reject, multi-media filter backwash, boiler blowdown, barometric condenser water, non-contact cooling water, stormwater runoff, and emergency waste storage site stormwater, free from process and other wastewater discharges. In the event that the permittee shall require the use of water treatment additives, the permittee must request a change in this permit in accordance with the Standard Conditions -- Attachment H.

SPECIAL CONDITION 11. The effluent, alone or in combination with other sources, shall not cause a violation of any applicable water quality standard outlined in 35 Ill. Adm. Code 302.