

NPDES Permit No. IL0001953
Notice No. FJH:20012601.docx

Public Notice Beginning Date: September 14, 2023

Public Notice Ending Date: October 16, 2023

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 Permittee:

Alto Pekin, LLC
P.O. Box 10
Pekin, Illinois 61555

Name and Address of Facility:

Alto Pekin, LLC
1300 S. 2nd Street
Pekin, Illinois 61554
(Tazewell 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 Permittee. 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 Francisco J. Herrera at 217/782-0610.

The applicant is engaged in wet and dry milling of corn with the starch being converted into ethanol, the germ being sold to other facilities for extraction of the corn oil, and the other non-starch materials being sold as animal feeds. In addition, yeast used in the fermentation process is refined, dried, and sold (SIC 2869 and 2046). Wastewater is generated from the production of approximately 156,000,000 gallons per year of fuel grade alcohol, from the treatment of influent water prior to use in boilers and other production processes, from various cooling and condensing processes, and from stormwater runoff. Plant operation results in an average discharge of 34.73 MGD of non-contact cooling waters, treated process wastewater, boiler blowdown, source water treatment wastes (i.e. filter backwash, reverse osmosis reject, softener regenerant, etc.), and stormwater runoff from outfall 001, 0.87 MGD of treated wet mill process wastewater from outfall B01, 0.26 MGD of dry mill wastewater including sand filter backwash, reverse osmosis reject, cooling tower blowdown, and softener regenerant from outfall C01, 1.253 MGD of yeast plant non-contact cooling water from outfall 002, and an intermittent discharge of cooling water intake screen backwash from outfall 003.

The following modifications are proposed:

The name of the permittee and the facility have been changed from Pacific Ethanol Pekin, LLC to Alto Pekin, LLC.

In accordance with the Agreed Interim Order in *People v. Pacific Ethanol Pekin, LLC*, Case No. 18-CH-06 in the Circuit Court for the Tenth Judicial Circuit, Tazewell County, dated August 20, 2018, the permittee submitted an application on October 19, 2018 to modify its NPDES permit to incorporate a mixing zone for thermal discharges to the Illinois River. The Agency has reviewed the proposed temperature limits and CORMIX modeling and found that the proposed dilution factors, used to approximate temperature at the edge of the mixing zone, are appropriate. The Agency will incorporate the proposed mixing zone as Special Condition 3 of the permit, replacing the previous temperature condition.

Outfall 003 was added for the discharge of the cooling water intake screen backwash to the Illinois River. This discharge has occurred since the installation of the current cooling water intake structure in the 1960s and an antidegradation assessment will not be required since it is an existing discharge.

Monitoring for Total Nitrogen (as N) and Total Suspended Solids have been added to Outfall 001, PFAS monitoring has been added to Outfall B01 and the Total Residual Chlorine limit has been lowered to 0.038 mg/L for Outfalls 001, 002, and 003.

Special Condition 1 has been modified to include monitoring of the intake flow.

Special Condition 4 of the previous permit was removed from the permit as the mixing zone modeling and study has been completed. Special Conditions have been renumbered due to the removal of previous conditions.

Special Condition 9 (previously Special Condition 10) was updated to reflect current electronic reporting requirements.

Special Condition 15 of the previous permit was removed from the permit as the Agency has evaluated the cooling water intake structure and operational design.

Special Condition 21 was added for benchmark testing of Total Suspended Solids for stormwater at Outfall 001.

Special Condition 22 of the previous permit was removed due to the completion of the new treatment system.

Special Conditions 23, 24, and 25 have been added to include the Agency's BTA determination for impingement mortality and entrainment and other requirements under the Section 316(b) Rule.

Special Conditions 26 and 27 have been added for PFAS monitoring at Outfall B01 and implementation BMPs for PFAS.

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

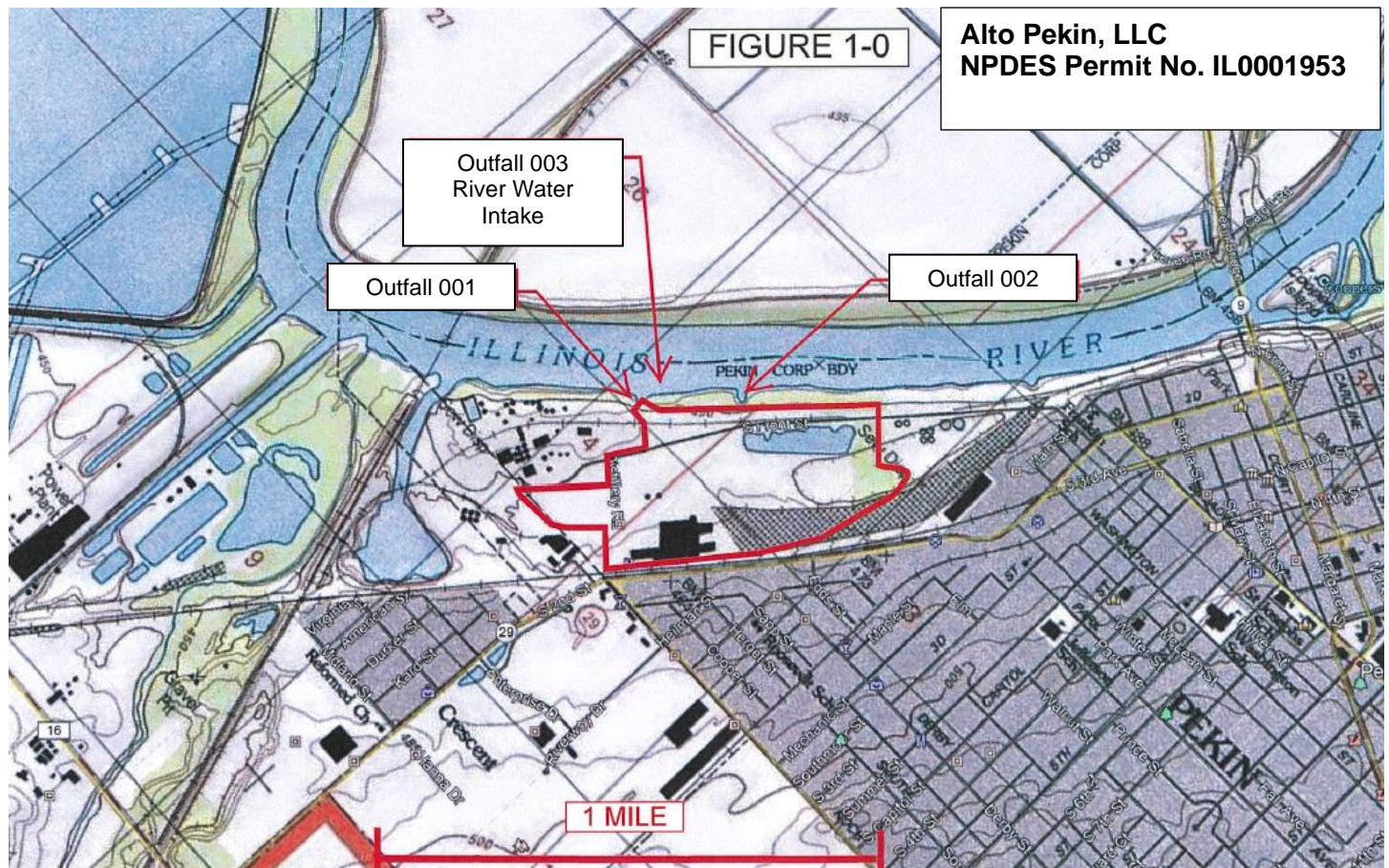
<u>Outfall</u>	<u>Receiving Stream</u>	<u>Latitude</u>	<u>Longitude</u>	<u>Stream Classification</u>	<u>Integrity Rating</u>
001	Illinois River	40° 33' 27" North	89° 40' 04" West	General Use	Not Rated
002	Illinois River	40° 33' 35" North	89° 39' 54" West	General Use	Not Rated
003	Illinois River	40° 33' 29" North	89° 40' 05" 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_D-05, receiving the discharges from outfalls 001, 002 and 003 is on the draft 2016 Illinois Integrated Water Quality Report and Section 303(d) List 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*.

The following parameters have been identified as the pollutants causing impairment:

<u>Impairment</u>	<u>Potential Cause</u>
Fish Consumption	Mercury, Polychlorinated Biphenyls



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

Outfall 001:

PARAMETER	LOAD LIMITS lbs/day DAF (DMF)		REGULATION	CONCENTRATION LIMITS mg/L		REGULATION
	30 DAY AVERAGE	DAILY MAXIMUM		30 DAY AVERAGE	DAILY MAXIMUM	
Flow (MGD)				Monitor Only		35 IAC 309.146
pH				Shall be within range 6–9 s.u.		35 IAC 304.125
Temperature						35 IAC 302.211 40 CFR 125.3 & 35 IAC 302.208
Total Residual Chlorine					0.038	35 IAC 309.146
Total Suspended Solids						35 IAC 309.146
BOD ₅				Monitor Only		35 IAC 309.146
Phosphorus (as P)				Monitor Only		35 IAC 309.146
Sulfate				Monitor Only		35 IAC 309.146
Boron				Monitor Only		35 IAC 309.146
Total Nitrogen (as N)				Monitor Only		35 IAC 309.146

Outfall B01:

PARAMETER	LOAD LIMITS lbs/day DAF (DMF)		REGULATION	CONCENTRATION LIMITS mg/L		REGULATION
	30 DAY AVERAGE	DAILY MAXIMUM		30 DAY AVERAGE	DAILY MAXIMUM	
Flow (MGD)				Monitor Only		35 IAC 309.146
Total Suspended Solids	181.3	468.4	35 IAC 304.120(b)	25	50	35 IAC 304.120(b)
BOD ₅	145.1	374.7	35 IAC 304.120(b)	20	40	35 IAC 304.120(b)
Ammonia (as N)			35 IAC 304.122			35 IAC 304.122
Phosphorus (as P)	7.26		35 IAC 304.123(g)	1.0		35 IAC 304.123(g)
PFAS					Report	35 IAC 309.146

Outfall C01:

PARAMETER	LOAD LIMITS lbs/day DAF (DMF)		REGULATION	CONCENTRATION LIMITS mg/L		REGULATION
	30 DAY AVERAGE	DAILY MAXIMUM		30 DAY AVERAGE	DAILY MAXIMUM	
Flow (MGD)						35 IAC 309.146

Outfall 002:

PARAMETER	LOAD LIMITS lbs/day DAF (DMF)		REGULATION	CONCENTRATION LIMITS mg/L		REGULATION
	30 DAY AVERAGE	DAILY MAXIMUM		30 DAY AVERAGE	DAILY MAXIMUM	
Flow (MGD)						35 IAC 309.146
pH				Shall be within range 6–9 s.u.		35 IAC 304.125
Temperature						35 IAC 302.211 40 CFR 125.3 & 35 IAC 302.208
Total Residual Chlorine					0.038	35 IAC 309.146

Outfall 003:

PARAMETER	LOAD LIMITS lbs/day		REGULATION	CONCENTRATION		REGULATION
	<u>DAF (DMF)</u>			<u>LIMITS mg/L</u>		
	30 DAY AVERAGE	DAILY MAXIMUM		30 DAY AVERAGE	DAILY MAXIMUM	
Flow (MGD)						35 IAC 309.146
pH				Shall be within range 6–9 s.u.		35 IAC 304.125 40 CFR 125.3 &
Total Residual Chlorine					0.038	35 IAC 302.208

Load Limit Calculations:

- A. Load limit calculations for Outfall B01 for the following pollutant parameters were based on an average flow of 0.87 MGD and a maximum flow of 1.123 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): BOD₅, TSS, and Phosphorus.
- B. Production based load limits were calculated by multiplying the average production by the effluent limit contained in 40 CFR 406.17(a). Production figures utilized in these calculations for the following subcategories are as follows:

<u>Subcategory</u>	<u>Production Rate</u>
Subpart A – Wet Corn Milling Subcategory	105,340 stdbu

Federal production based load limits were calculated for BOD₅ and TSS.

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

BOD 30 Day Average: 105,340 stdbu * 20 lbs/day BOD/1,000 stdbu = 2,107 lbs/day
 BOD Daily Max: 105,340 stdbu * 60 lbs/day BOD/1,000 stdbu = 6,320 lbs/day
 TSS 30 Day Average: 105,340 stdbu * 30 lbs/day BOD/1,000 stdbu = 3,160 lbs/day
 TSS Daily Max: 105,340 stdbu * 90 lbs/day BOD/1,000 stdbu = 9,481 lbs/day

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 of the permit serve the purpose of clarifying monitoring requirements, monitoring location, DMR submission, ammonia limitations, temperature limitations, compliance schedule, operator certification requirements, additional monitoring requirements for Outfall 001, and Storm Water Pollution Prevention Plan (SWPPP) requirements.

Process wastewaters generated from the wet mill operations are treated in the on-site wastewater treatment plant consisting of screening, equalization, pH adjustment, anaerobic digestion, aeration, and primary and secondary clarification.

All sanitary wastes are collected and discharged to the City of Pekin No. 1 Sewage Treatment Plant.

Process wastes generated from the dry mill are treated utilizing anaerobic digesters permitted under IEPA Permit No. 2006-EB-2626. The treated dry mill process wastes are then recycled for use as process makeup water. Boiler blowdown generated at the dry mill is also recycled to be reused as dry mill process water. The dry mill process wastes are not permitted to be discharged to surface water.

Fly ash is no longer being generated from this facility as the coal-fired boilers were taken out of service in 2016. As a result, the on-site ash handling system no longer receives sluice water. IEPA Permit Number 2018-EO-62929 requires complete groundwater recapture which occurs by utilizing a series of production wells. Pumped groundwater is also used to supplement the facility's non-contact cooling.

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

The Alto Pekin, LLC (Alto) facility utilizes Illinois River water for once-through cooling. Water is drawn in approximately five feet below the surface of the river through four 24 inch diameter pipelines. Each pipe has a stainless steel intake strainer that is 30.75 inches in diameter and eight and a half feet long. The strainers consist of 7/16 inch diameter holes on 5/8 inch centers and are located 3.5 feet from each other. The intake pipelines are perpendicular to the flow of the river. No changes to this original design, which was implemented in the 1980's, is anticipated. Moreover, no additional modifications to the intake structure are anticipated in the future.

Cooling Water Intake Structure Operation

The Alto Pekin facility intake is operated 24 hours a day, 7 days a week, 365 days a year. The main intake pump is operated by maintaining a minimum pressure in the main header feeding the Alto facility. During normal operations, the water is withdrawn from three of the four intake pipelines. The fourth pipeline is out of service typically due to its need to be backwashed. Backwashing is initiated manually based on pipeline backpressure.

Per 40 CFR 125.92(g), the DIF means the value assigned during the intake design to the maximum instantaneous rate of flow of water the cooling water intake system is capable of withdrawing from a source water, not including fire or back-up pumps. Per 40 CFR 125.92(a), after October 14, 2019 the AIF is defined as the average volume of water withdrawn on an annual basis by the cooling water intake structures over the previous five years. The calculation of actual intake flow includes days of zero flow, but does not include flows associated with emergency and fire suppression capacity. Based on these definitions and the known Alto Pekin facility capacity and operation, the actual intake flow (AIF) and the design intake flow (DIF) for the Alto Pekin facility is 26.9 MGD and 31.5 MGD, respectively.

As described, the river water is utilized for cooling only, and therefore it can be assumed that 100% of the Illinois River water withdrawn is for cooling purposes. Table 1 provides a summary of the intake flows from 2013 to 2019. The intake river water utilized for cooling is supplemented by well water. This minimizes water withdrawn for cooling purposes at the Alto facility from the Illinois River.

Table 1- Summary of the Alto Facility Intake Flows

	2013	2014	2015	2016	2017	2018	2019	AIF	DIF
Average Intake Flow (MGD)	23.2	25.6	25.9	26.9	26.1	27.8	27.9	26.9	31.5

Through-Screen Velocity

An intake water velocity exceeding 0.5 feet per second (fps) is believed to impair fish swimming ability, and at or below 0.5 fps is the velocity range believed to protect fish from mortality due to impingement. Velocity of the water at the intake openings was calculated using the standard equation below. As indicated on Table 5, the Alto Facility intake through-screen velocity (TSV) is 0.49 fps.

$TSV = Q/A$, where;

TSV = through-screen velocity

Q = volume of water pumped

A = net area of the submerged openings

$TSV = Q / A = (\text{Flow in MGD} \times 1,000,000) / (\text{Area in sq. ft} \times 7.48 \text{ gal / cu. ft} \times 86400 \text{ sec / day})$

Table 2- Through-Screen Velocity Calculations

River Intake Design Intake Flow:	31.5 MGD
No. of Intake Pipelines Operating:	3
Flow per Intake Pipe:	10.5 MGD 10,500,000 gpd 121.53 gps 16.25 cfs
Diameter of Intake Pipeline Screen:	2.56 ft.
Length of Pipe Screen Inlet:	8.5 ft.
Total Surface Area of Pipe Inlet Screen:	73.59 ft ²
Percent Open Area:	45%
Through-Screen Velocity:	0.49 fps

Source Waterbody Physical and Biological Description

The Alto facility's withdraws water for process cooling from the left bank of the Illinois River near River Mile 152. The Illinois River near River Mile 152 is within the La Grange Reach. The La Grange Reach of the Illinois River extends from the La Grange Lock and Dam at River Mile 80.2 to the tailwater of the Peoria Lock and Dam at River Mile 157.7. The La Grange Pool is typified by slow to moderate water velocities and soft substrates of sand and mud.

The La Grange Pool is one of eight pools along the Illinois River, which is formed by the confluence of the Kankakee River and the Des Plaines River is eastern Grundy County, approximately 10 miles southwest of Joliet. This river flows west across northern Illinois, passing Morris and Ottawa, where it is joined by the Mazon River and Fox River. At LaSalle, the Illinois River is joined by the Vermillion River, and then it flows west past Peru, and Spring Valley. In southeastern Bureau County it turns south at an area known as the "Great Bend", flowing southwest across western Illinois, past Lacon, Henry and downtown Peoria, the Chief city on the River.

South of Peoria, the Illinois River goes by East Peoria and Creve Coeur, and then Pekin, Illinois, in Tazewell County, Illinois. It is then joined by the Mackinaw River and then passes through the Chautauqua National Wildlife Refuge. Across from Havana, the Illinois River is joined by the Spoon River coming from Fulton County, Illinois, and across from Browning, it is joined by the Sangamon River, which passes through the State capital, Springfield, Illinois. The La Moine River flows into it approximately five miles southwest of Beardstown, which is south of Peoria and Pekin and north of Lincoln and Springfield.

Near the confluence of the Illinois River with the La Moine River, it turns south, flowing roughly parallel to the Mississippi River across southwestern Illinois. Macoupin Creek joins the Illinois River on the border between Greene and Jersey counties, approximately 15 miles upstream from the confluence with the Mississippi River. The Illinois River joins the Mississippi River near Grafton, approximately 25 miles northwest of downtown St. Louis and about 20 miles upstream from the confluence of the Missouri River and the Mississippi River.

The Upper Mississippi River System (UMRS) was defined by Congress in the Water Resources Development Act of 1986. The UMRS includes the Upper Mississippi River from Minneapolis, Minnesota, to Cairo, Illinois (854 river miles); the Illinois Waterway from Chicago to Grafton, Illinois (327 miles); and navigable portions of the Minnesota, St. Croix, Black, and Kaskaskia Rivers. The UMRS is commonly discussed in terms of 4 major reaches based on general geomorphic and ecological considerations. These reaches are (1) the Upper Impounded Reach, (2) the Lower Impounded Reach, (3) the Unimpounded Reach, and (4) the Illinois Waterway. The LaGrange Pool is within the Illinois Waterway reach.

Based on ten years of flow information collected from United States Geological Survey (USGS) Gage No. 05568500 for the Illinois River at Kington Mines, Illinois, river flow ranges from 1,960 cfs to 99,100 cfs with an average of 19,838 cfs. The associated 7Q10 flow of the Illinois River in the vicinity of the USGS Gage, and the Alto facility intake, is 2,983 cfs.

The Illinois River, and more specifically the La Grange Reach, has been extensively characterized under the Upper Mississippi River Restoration (UMRR) Program's Long Term Resource Monitoring (LTRM). The Illinois Natural History Survey's Illinois River Biological Station (IRBS) is one of six stations of the LTRM funded by the U.S. Army Corps of Engineers and administered by the United States Geological Survey's Upper Midwest Environmental Sciences Center, La Crosse, Wisconsin. As part of the LTRM, fish communities in La Grange Reach of the Illinois River have been monitored since 1990. Sampling from 1990-1992 was at fixed sites throughout the reach. However, beginning in 1993, a stratified random sampling design was implemented to encompass the entire 80 mile La Grange Reach.

A total of 96 species (and one hybrid) have been collected from the La Grange Reach from 1993 through 2019. Although close to one hundred fish species have been observed in the La Grange reach, the fish population is dominated by just four regionally ubiquitous species: gizzard shad (*Dorosoma cepedianum*), emerald shiner (*Notropis atherinoides*), bluegill sunfish (*Lepomis macrochirus*), and the invasive silver carp (*Hypophthalmichthys molitrix*). The most commonly observed species (gizzard shad) is considered a fragile fish species (FFS) due to their inability to survive impingent events. They are also extremely fecund. FFS fishes are generally exempted from impingement and entrainment mortality considerations.

Popular gamefish and species of commercial importance in the state of Illinois are relatively uncommon in the reach. These include the black bass species (*Micropterus* sp.), channel catfish (*Ictalurus punctatus*), yellow perch (*Perca flavescens*), walleye (*Stizostedion vitreum*), paddlefish (*Polyodon spathula*), and shovelnose sturgeon (*Scaphirhynchus platyrhynchus*). The stretch of Illinois River in the immediate vicinity of the Alto intake is channelized and managed for barge traffic. The likelihood of proximity of the Alto intake to critical breeding or foraging habitat for the commercially important species is low.

A review of the USFWS Online database identified no federally-protected aquatic species in Tazewell and Peoria Counties. Thirteen State protected aquatic species may be present near the Alto facility according to the Illinois Natural Heritage Database (as of July 23, 2018). Only two of the state protected aquatic species have been observed during LTRM in the La Grange Pool: the American eel and Lake sturgeon. With the exception of the river redhorse, the other listed species are found in swamps, slow weedy backwaters, and small creeks, and would not be expected to be present in the main channel of a large river.

Species Susceptible to Impingement and Entrainment

The maximum intake flow volume for the Alto facility is only 1.6% of the Illinois River 7Q10 flow of 2,983 cfs. The calculated intake velocity at the opening of the intake pipes is under 0.5 fps. At this low intake volume relative to stream flow and low intake velocity juvenile and adult fish are generally able to resist impingement. Although exceptionally rare in the Illinois River, American eels are known to purposely swim into intake structures. The most common species in the local fish assemblage is the gizzard shad which is an FFS and generally not included in impingement mortality considerations, especially when other intake BAT are in place.

Studies reveal that entrainable ichthyoplankton species in this reach of the Illinois river are primarily freshwater drum (*Aplodinotus grunniens*), suckers and redhorses (Catostomidae), temperate bass (Percichthyidae), and the common carp (*Cyprinus carpio*) and invasive carp species (*Hypophthalmichthys sp.*) (Nannini et.al. (2012); Wood Environment & Infrastructure Solutions, Inc. (2019)). Nannini et.al. (2012) studied temporal and spatial distribution of drifting larval fish in a reach of the lower Illinois River in 1997 and 1998. Wood Environment & Infrastructure Solutions, Inc. (2019) conducted an entrainment study for the Edwards Power Station which is roughly 3 miles upstream from the Alto facility intake.

However, with the Alto facility intake volume representing less than 2% of the 7Q10 river flow the expected entrainment losses would be de minimis. Moreover, the comparison of the design intake volume versus the 7Q10 river flow is a conservative evaluation of potential impacts. When reviewing actual monthly mean river flows from the USGS station at Kingston Mines, the seasonal low river flows typically occur in late summer-early fall (August/September) outside the peak breeding season expected during May and June.

Existing Impingement and Entrainment Technologies

The Alto facility currently does not incorporate impingement and entrainment reduction technologies. However, the plant has reduced the impact of impingement and entrainment by supplementing cooling water with well water and operating with a maximum intake rate less than 2% of the Illinois River 7Q10 flow. Additionally, when evaluating concurrent daily river flow and intake rates, the facility withdrawal is less than 1% of the Illinois River flow. The Final Rule acknowledges that site-specific characteristics such as this should be considered for facilities with lower intake flows and associated low impacts. In addition, the velocity at the water intake openings at the facility is demonstrated to be below 0.5 fps, which is a velocity believed to protect fish from mortality due to impingement.

Chosen Method of Compliance with Impingement Mortality Standard

The Alto facility must meet one of the minimum following compliance alternatives to demonstrate BTA for minimizing adverse environmental impact (AEI) from impingement under 40 CFR 125.94(c):

- Implementation of closed-cycle recirculating cooling system (i.e., cooling towers) (40 CFR 125.94(c)(1));
- Compliance with a 0.5 fps design through-screen velocity threshold (40 CFR 125.94(c)(2));
- Compliance with a 0.5 fps actual through-screen velocity threshold (40 CFR 125.94(c)(3));
- Existing CWIS with offshore velocity caps (already existing) (40 CFR 125.94(c)(4));
- Modified "fish-friendly" traveling screen with fish return systems (40 CFR 125.94(c)(5));
- Combination of technologies that minimize impingement mortality impacts (40 CFR 125.94(c)(6));
- An impingement mortality performance standard of less than or equal to 24% annual average (40 CFR 125.94(c)(7)); or,
- A de minimis rate of impingement demonstration (40 CFR 125.94(c)(11)). facility is in compliance with the 0.5 fps design through-screen velocity threshold at 40 CFR 125.94(c)(2).

The Alto facility has chosen to comply with the 0.5 fps design through-screen velocity threshold at 40 CFR 125.94(c)(2).

Historical Impingement and Entrainment Studies

Alto is not aware of any available previously conducted studies or studies obtained from other facilities addressing technology efficacy or through-facility entrainment survival. However, recent entrainment characterization studies are available from nearby Edwards Power Station, roughly 3 river miles upstream from Alto.

For context, the Edwards Power Station DIF is 599 MGD with an AIF of roughly 326 MGD. These withdrawal rates are an order of magnitude greater than Alto (i.e. intake flows equivalent to 26.9 MGD and 31.5 MGD as the AIF and DIF respectively). Since entrainment is directly related to intake volume, it is assumed that entrainment rates at PEP are an order of magnitude less than those observed at the Edwards Power Station. Major findings from the 2016 – 2017 entrainment study at Edwards Power Station (Wood Environment & Infrastructure Solutions, inc., April 2019) include:

- The period of peak entrainment occurred from late-May to late-June or late-July
- Larvae of non-native Asian carps, grass carp, and common carp collectively accounted for roughly half (46%) of all larvae collected during the 2016-2017 study
- Fish eggs (mostly freshwater drum) were a dominant component of entrainment in 2016, representing 45% of total ichthyoplankton collected; however, eggs represented a much smaller component (13%) of entrainment in 2017. Overall, fish

eggs accounted for 27% of all ichthyoplankton collected during the 2016-2017 study.

- Ichthyoplankton density was greater during evening/nighttime versus daytime sampling intervals in 2016, due to the greater abundance of fish eggs collected during evening/nighttime hours. Entrainment density was similar among daytime and evening/nighttime sampling intervals during 2017 when combining all taxa together.
- No fish species identified as endangered, threatened, or special concern were found in entrainment samples from Edwards Station in 2016 or 2017.

Agency Discussion on 316(b):

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 permittee has fulfilled these requirements through the submittal of the document entitled Clean Water Act Section 316(b) Information Required Pursuant to Special Condition 15, which is summarized above. The facility withdraws less than 125 MGD therefore they are not required to submit the information required by (r)(9)-(13).

To comply with the impingement standard, facilities are required to comply with one of the seven alternatives as outlined in 40 CFR 125.04(c) and mentioned above. The facility has chosen to comply with the design through-screen velocity of less than 0.5 ft/s, which is one of the seven BTA alternatives for impingement mortality, as defined under 40 CFR 125.94(c)(2). The through-screen velocity was found to be 0.49 ft/s using the DIF of 31.5 MGD. After comments received from USEPA Region 5 provided on May 3, 2021, the Agency concurs with USEPA's determination that compliance with the actual through-screen velocity of less than 0.5 ft/s under 40 CFR 125.94(c)(3) would be more appropriate under all conditions as required by the Section 316(b) rule. The calculated through screen velocity assumes no blockage on the screens, however, under normal operating conditions blockage would occur reducing the screen surface area and increasing the through-screen velocity. Monitoring of the velocity at the screen or calculation of the through-screen velocity has been added to Special Condition 1 in accordance with 40 CFR 125.94(c)(3).

In accordance with 40 CFR 125.98(f)(2), the following factors must be considered by the Agency for site-specific BTA determinations for entrainment and a response is offered below each factor:

I. Numbers and types of organisms entrained, including, specifically, the numbers and species (or lowest taxonomic classification possible) of Federally-listed, threatened and endangered species, and designated critical habitat (e.g., prey base);

Alto references the entrainment characterization study from the Edwards Power Plant, 3 miles upstream from the Alto facility. There were no State or Federally listed fish species identified as endangered, threatened, or special concern found in entrainment samples from the Edwards Plant in 2016 or 2017.

II. Impact of changes in particulate emissions or other pollutants associated with entrainment technologies;

Alto does not currently operate any entrainment technology and is located within an industrial area and residential area. Installation of entrainment technology would result in the creation of a new emission source and increasing air emissions in an already industrial area.

III. Land availability inasmuch as it relates to the feasibility of entrainment technology;

As mentioned above, Alto is located within an industrial and residential area. The installation of entrainment technology within the Alto facility property boundary would be difficult given the limited space.

IV. Remaining useful plant life;

Alto did not mention any plans of ceasing operation at the facility within the NPDES permit application.

V. Quantified and qualitative social benefits and costs of available entrainment technologies when such information on both benefits and costs is of sufficient rigor to make a decision.

Alto did not perform any evaluation of quantified and qualitative social benefits and costs of available entrainment technologies. The facility withdraws less than 125 MGD and are not required to provide the Comprehensive Technical Feasibility and Cost Evaluation Study under 40 CFR 122.21(r)(10) and the Benefits Valuation Study under 40 CFR 122.21(r)(11).

In accordance with 40 CFR 125.98(f)(3), the following factors may be considered by the Agency for site-specific BTA determinations for entrainment and a response is offered below each factor:

I. Entrainment impacts on the waterbody.

As discussed above, Alto references the entrainment characterization study from the Edwards Power Plant. Edwards Power Plant had a DIF of 599 MGD and an AIF of roughly 326 MGD. The study suggests that entrainment impacts from the operation of Alto's intake would be an order of magnitude less than those observed at the Edwards Power Plant since entrainment is directly related to intake volume. The plant has reduced entrainment impacts by supplementing cooling water with well water and the intake flow rate being less the 2% of the Illinois River 7Q10 flow. In addition, Powerton Power Plant's intake is located downstream of the Alto facility and has a maximum intake flow of 47 MGD. It should also be noted that Edwards Power Plant has ceased operation as of December 31, 2022.

II. Thermal discharge impact.

Alto has been granted a mixing zone for thermal discharges. Special Condition 3 of the permit defines the mixing zone area and volume of the receiving water body in which mixing is allowed to occur. Water quality standards for temperature must be met at every point outside of the mixing zone.

III. Credit for reductions in flow associated with the retirement of units occurring within the ten years preceding October 14, 2014.

Alto has noted that no changes to the original intake structure design are anticipated.

IV. Impacts on the reliability of energy delivery within the immediate area.

Alto generates electricity for the facility by natural gas, so impacts to the reliability of energy delivery within the immediate area would be minimal.

V. Impacts on water consumption.

Alto's intake flow is less the 2% of the Illinois River 7Q10 flow. Water consumption from the Illinois River is reduced by supplemental cooling water from the wells.

VI. Availability of process water, gray water, waste water, reclaimed water, or other waters of appropriate quantity and quality for reuse as cooling water.

The Alto facility currently uses well water as additional cooling water.

Alto Pekin, LLC (formerly Pacific Ethanol Pekin, LLC) submitted, in accordance with Section 316(b) of the Clean Water Act, the required information under 40 CFR 122.21(r)(1)(ii). The Agency has determined that the operation of the cooling water intake structure and supplementing cooling water with well water meets the Best Technology Available (BTA) for impingement mortality and entrainment, as defined under 40 CFR 125.94(c)(2) and 40 CFR 125.94(d).

On February 22, 2021, the Agency mailed a copy of the Section 316(b) report and NPDES permit renewal application to U.S. Fish and Wildlife Service for their review as required under 40 CFR 125.98(h). The U.S. Fish and Wildlife Service did not provide any comments for this facility's CWIS during the 60-day review period. Nothing in this permit authorizes take for the purposes of a facility's compliance with the Endangered Species Act pursuant to 40 CFR 125.98(b)(1).

Public Notice of Draft Permit

Public Notice Number FJH:20012601.docx is hereby given by Illinois EPA, Division of Water Pollution Control, Permit Section, 1021 North Grand Avenue East, Post Office Box 19276, Springfield, Illinois 62794-9276 (herein Agency) that a draft National Pollutant Discharge Elimination System (NPDES) Permit Number IL0001953 has been prepared under 40 CFR 124.6(d) for Alto Pekin, LLC, P.O. Box 10, Pekin, Illinois 61554 for discharge into the Illinois River from the facility, Alto Pekin, LLC 1300 S. 2nd Street, Pekin, Illinois 61555, (Tazewell County). The applicant is engaged in wet and dry milling of corn with the starch being converted into ethanol, the germ being sold to other facilities for extraction of the corn oil, and the other non-starch materials being sold as animal feeds. In addition, yeast used in the fermentation process is refined, dried, and sold (SIC 2869 and 2046). Wastewater is generated from the production of approximately 156,000,000 gallons per year of fuel grade alcohol, from the treatment of influent water prior to use in boilers and other production processes, from various cooling and condensing processes, and from stormwater runoff. Plant operation results in an average discharge of 34.73 MGD of non-contact cooling waters, treated process wastewater, boiler blowdown, source water treatment wastes (i.e. filter backwash, reverse osmosis reject, softener regenerant, etc.), and stormwater runoff from outfall 001, 0.87 MGD of treated wet mill process wastewater from outfall B01, 0.26 MGD of dry mill wastewater including sand filter backwash, reverse osmosis reject, cooling tower blowdown, and softener regenerant from outfall C01, 1.253 MGD of yeast plant non-contact cooling water from outfall 002, and an intermittent discharge of cooling water intake screen backwash from outfall 003. All discharges are to the Illinois River.

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 to the Agency at the above address. The NPDES Permit and joint public notice 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.

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.

NPDES Permit No. IL0001953

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:

Alto Pekin, LLC
P.O. Box 10
Pekin, Illinois 61555

Facility Name and Address:

Alto Pekin, LLC
1300 S. 2nd Street
Pekin, Illinois 61554
(Tazewell County)

Discharge Number and Name:

Outfall 001 - Total Plant Effluent
Outfall B01 - Treated Process Wastewater
Outfall C01 - Dry Milling Waste Streams
Outfall 002 - Yeast Plant Non-Contact Cooling Water
Outfall 003 - Intake Screen Backwash

Receiving Waters:

Illinois River
Illinois River via Outfall 001
Illinois River via Outfall 001
Illinois River
Illinois 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.

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

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NPDES Permit No. IL0001953

Effluent Limitations and Monitoring

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 001 – Total Plant Effluent (DAF = 34.73 MGD, DMF = 45.571 MGD)

This discharge consists of:	DAF:	DMF:
1. Non-Contact Cooling Water	33.46 MGD	44.2 MGD
2. Boiler Blowdown	0.14 MGD	0.14 MGD
3. Discharges from B01	0.87 MGD	1.12 MGD
4. Discharges from C01	0.26 MGD	0.26 MGD
5. Stormwater Runoff	Intermittent	Intermittent

PARAMETER	LOAD LIMITS lbs/day		CONCENTRATION		SAMPLE FREQUENCY	SAMPLE TYPE
	<u>DAF (DMF)</u>		<u>LIMITS mg/L</u>			
	30 DAY AVERAGE	DAILY MAXIMUM	30 DAY AVERAGE	DAILY MAXIMUM		
Flow (MGD)	See Special Condition 1				Daily*	Total
pH	See Special Condition 2				2/Week*	Grab
Temperature	See Special Condition 3				Daily*	Continuous
Total Residual Chlorine***				0.038	1/Month*	Grab
Total Suspended Solids	See Special Condition 21				1/Quarter****	Grab
BOD ₅				Monitor Only**	1/Month*	Composite
Phosphorus (as P)				Monitor Only	Semi-Annual*	Composite
Sulfate				Monitor Only	Semi-Annual*	Composite
Boron				Monitor Only	Semi-Annual*	Composite
Total Nitrogen (as N)				Monitor Only	Semi-Annual*	Composite

Additional monitoring requirements for Outfall 001 are provided in Special Condition 14.

*For Outfall 001, during conditions when the sampling manhole will not provide representative samples due to the high water level of the receiving stream and alternative locations for representative sampling are not available, the monitoring requirements during that period for the indicated parameters shall be waived.

**See Special Condition 15.

***See Special Condition 17.

****See Special Condition 21.

Outfall B01 – Treated Process Wastewater (DAF = 0.87 MGD, DMF = 1.1232 MGD)

PARAMETER	LOAD LIMITS lbs/day		CONCENTRATION		SAMPLE FREQUENCY	SAMPLE TYPE
	<u>DAF (DMF)</u>		<u>LIMITS mg/L</u>			
	30 DAY AVERAGE	DAILY MAXIMUM	30 DAY AVERAGE	DAILY MAXIMUM		
Flow (MGD)	See Special Condition 1				2/Week	Total
Total Suspended Solids	181.3	468.4	25	50	2/Week	Composite
BOD ₅	145.1	374.7	20	40	2/Week	Composite
Ammonia (as N)	See Special Condition 4				2/Week	Composite
Phosphorus (as P)	7.26		1.0		1/Week	Composite
PFAS*****				Report	*****	*****

*****See Special Condition 26.

NPDES Permit No. IL0001953

Effluent Limitations and Monitoring

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 C01 – Dry Milling Waste Streams (DAF = 0.26 MGD, DMF = 0.26 MGD)

This discharge consists of:	DAF:
1. Sand Filter Backwash	0.035 MGD
2. Reverse Osmosis Reject	0.097 MGD
3. Cooling Tower Blowdown	0.125 MGD
4. Zeolite Softener Regenerant	0.00003 MGD
5. Boiler Blowdown	Intermittent*

*Boiler Blowdown is recycled for reuse as dry milling process waters. However, there may be incidental discharges of boiler blowdown to Outfall C01

PARAMETER	LOAD LIMITS lbs/day		CONCENTRATION		SAMPLE FREQUENCY	SAMPLE TYPE
	<u>DAF (DMF)</u>		<u>LIMITS mg/L</u>			
	30 DAY AVERAGE	DAILY MAXIMUM	30 DAY AVERAGE	DAILY MAXIMUM		
Flow (MGD)	See Special Condition 1				2/Week	Total

Outfall 002 – Yeast Plant Non-Contact Cooling Water (DAF = 1.224 MGD, DMF = 1.224 MGD)

PARAMETER	LOAD LIMITS lbs/day		CONCENTRATION		SAMPLE FREQUENCY	SAMPLE TYPE
	<u>DAF (DMF)</u>		<u>LIMITS mg/L</u>			
	30 DAY AVERAGE	DAILY MAXIMUM	30 DAY AVERAGE	DAILY MAXIMUM		
Flow (MGD)	See Special Condition 1				2/Week	Total
pH	See Special Condition 2				2/Week	Grab
Temperature	See Special Condition 3				2/Week	Single Reading
Total Residual Chlorine*				0.038	1/Month	Grab

*See Special Condition 17.

Outfall 003 – Intake Screen Backwash* (Intermittent Discharge)

PARAMETER	LOAD LIMITS lbs/day		CONCENTRATION		SAMPLE FREQUENCY	SAMPLE TYPE
	DAF (DMF)		LIMITS mg/L			
	30 DAY AVERAGE	DAILY MAXIMUM	30 DAY AVERAGE	DAILY MAXIMUM		
Flow (MGD)	See Special Condition 1				Daily when Discharging**	Calculate****
pH*****	See Special Condition 2				Daily when Discharging**	Grab
Total Residual Chlorine***				0.038	Daily when Discharging**	Grab

*During maintenance of intake screen or trash racks, any debris collected shall not be returned to the river but shall be properly disposed.

**During routine on-site laboratory staffing.

***See Special Condition 17. Sampling for Total Residual Chlorine is required at the specified sampling frequency when the hypochlorite injection point is upstream of the backwash line.

****The flow shall be calculated based on a single reading of the velocity meter and the time duration of the discharge.

*****Sampling for pH is required at the specified sampling frequency when the hypochlorite injection point is upstream of the backwash line.

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 Discharge Monitoring Report. The flow at the CWIS's through-screen shall be monitored on a daily basis. In lieu of monitoring the flow at the through-screen face, the permittee may calculate the through-screen velocity using water flow, water depth, and the screen open areas.

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 meets the criteria for establishment of a formal mixing zone for thermal discharges pursuant to 35 IAC 302.102. The following mixing zone defines the area and volume of the receiving water body in which mixing is allowed to occur. Water quality standards for temperature must be met at every point outside of the mixing zone.

- A. The temperature at the edge of the mixing zone should be calculated hourly at Outfall 001 and twice per week at Outfall 002¹ using the equation below:

$$T_{edge} = \frac{T_e + S * T_a}{1 + S}$$

Where:

T_{edge} = Temperature at the edge of the mixing zone.

T_e = Effluent temperature

T_a = Ambient temperature (At River Water Intake)²

S = Dilution factor (See Tables 1 and 2 below)

The Dilution Factors in Table 1 are to be used to predict temperature at the edge of the mixing zone for outfalls 001 and 002 except under unusual flow circumstances at outfall 001:

Table 1			
Discharge Period	Defined Mixing Zone Area	Dilution Factor (S) Outfall 001	Dilution Factor (S) Outfall 002
April – November	250 feet wide by 510 feet long	1.9	13
December – March	250 feet wide by 1037 feet long	3.4	18

During unusual conditions, for outfall 001, where flows are greater than or equal to 10,600 cfs for April through November and 10,500 cfs for December through March, based on daily discharge data at USGS 05568500 Illinois River at Kingston Mines, IL³, the following Dilution Factors are to be used to predict the temperature at the edge of the mixing zone:

Table 2		
Discharge Period	Defined Mixing Zone Area	Dilution Factor (S) Outfall 001
April – November	250 feet wide by 510 feet long	3.2
December – March	250 feet wide by 1037 feet long	15.7

- B. There shall be no abnormal temperature changes that may adversely affect aquatic life unless caused by natural conditions. The normal daily and seasonal temperature fluctuations which existed before the addition of heat due to other than natural causes shall be maintained.
- C. The maximum temperature rise above natural temperatures ($T_{edge} - T_a$) shall not exceed 2.8° C (5°F).

¹ The temperature at Outfall 001 will be the average of the measurements recorded during the hour. The temperature at Outfall 002 will be based on the grab sample collected on that given day.

² The ambient temperature will be the average hourly temperature during the hour for Outfall 001 and the average hourly temperature at the time of sampling for Outfall 002.

³ Daily flow statistics from USGS 05568500 Illinois River at Kingston Mines will be used regularly in compliance evaluations as online data is made available. Therefore, flow data used to determine the applicable dilution factor may be provisional (p) or estimated (e) based upon when the information is accessed.

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Special Conditions

- D. The water temperature at the edge of the mixing zone defined above shall not exceed the maximum limits in the following table during more than one percent of the hours in a rolling 12 month period (excursion hours) which equates to 87.6 hours. Moreover, at no time shall the water temperature at the edge of the mixing zone exceed the maximum limits in the foregoing table by more than 1.7° C (3° F).

	<u>Jan.</u>	<u>Feb.</u>	<u>Mar.</u>	<u>April</u>	<u>May</u>	<u>June</u>	<u>July</u>	<u>Aug.</u>	<u>Sept.</u>	<u>Oct.</u>	<u>Nov.</u>	<u>Dec.</u>
° 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

- E. The monthly maximum temperature at the edge of the mixing zone (T_{edge}), the monthly maximum temperature rise ($T_{\text{edge}} - T_a$), and the number of excursion hours shall be reported on the DMR form.

SPECIAL CONDITION 4. The permittee shall monitor Ammonia as N and report the concentration in mg/L and the lbs/day being discharged. If the 30 day average exceeds 100 lbs/day then the effluent concentration shall not exceed 3 mg/L on a 30 day average basis. If the daily maximum exceeds 200 lbs/day then the effluent concentration shall not exceed 6 mg/L on a daily basis.

SPECIAL CONDITION 5. 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 6. Samples taken in compliance with the effluent monitoring requirements for Outfall B01 and C01 shall be taken at a point representative of each discharge, but prior to mixture with Outfall 001 or any other discharges.

SPECIAL CONDITION 7. Samples taken in compliance with the effluent monitoring requirements for Outfalls 001, 002 and 003 shall be taken at a point representative of the discharge, but prior to entry into the receiving stream.

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

SPECIAL CONDITION 9. 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, <https://www2.illinois.gov/epa/topics/water-quality/surface-water/netdmr/Pages/quick-answer-guide.aspx>.

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
1021 North Grand Avenue East
Post Office Box 19276
Springfield, Illinois 62794-9276

SPECIAL CONDITION 10. The provisions outlined in 40 CFR 122.41(m) and (n) are applicable to this permit.

SPECIAL CONDITION 11. The concentration and load limits contained in the monitoring and limitation section of this permit (pages 2 and 3) shall not apply to stormwater contributions.

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Special Conditions

SPECIAL CONDITION 12. For the purposes of this permit, the discharge from Outfall C01 is limited to non-contact cooling water, reverse osmosis (R.O) reject water, softener regeneration water, sand filter backwash and boiler blowdown, free from process and other wastewater discharges.

SPECIAL CONDITION 13. Pursuant to 40 CFR 406.73, there shall be no discharge of process waters generated from the manufacturing of animal feeds (formula feed concentrate) using primarily grain and grain by-products which may be supplemented by proteins, pharmaceuticals, vitamins or mineral additives.

SPECIAL CONDITION 14. The Permittee shall conduct semi-annual monitoring of the Outfall 001 effluent and report concentrations (in mg/l) of the following listed parameters. Monitoring shall begin three (3) months from the effective date of this permit. The sample shall be a 24-hour effluent composite except as otherwise specifically provided below and the results shall be submitted on Discharge Monitoring Report Forms to IEPA unless otherwise specified by the IEPA. The parameters to be sampled and the minimum reporting limits to be attained are as follows:

<u>STORET CODE</u>	<u>PARAMETER</u>	<u>Minimum reporting limit</u>
01002	Arsenic	0.05 mg/L
01007	Barium	0.5 mg/L
01027	Cadmium	0.001 mg/L
01032	Chromium (hexavalent) (grab)	0.01 mg/L
01034	Chromium (total)	0.05 mg/L
01042	Copper	0.005 mg/L
00718	Cyanide (weak acid dissociable) (grab)	5.0 ug/L
00720	Cyanide (total) (grab not to exceed 24 hours)	5.0 ug/L
00951	Fluoride	0.1 mg/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
71900	Mercury (grab)**	1.0 ng/L*
01067	Nickel	0.005 mg/L
00556	Oil (hexane soluble or equivalent) (Grab Sample only)	5.0 mg/L
32730	Phenols (grab)	0.005 mg/L
01147	Selenium	0.005 mg/L
01077	Silver (total)	0.003 mg/L
01092	Zinc	0.025 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.

*1.0 ng/L = 1 part per trillion.

**Utilize USEPA Method 1631E and the digestion procedure described in Section 11.1.1.2 of 1631E.

SPECIAL CONDITION 15. For Outfall 001, if the daily maximum concentration of BOD₅ exceeds 40 mg/L then the permittee shall submit to the Agency an explanation as to the cause of the increase in BOD₅ concentration. This explanation shall be submitted in writing to the address noted in Special Condition 9.

SPECIAL CONDITION 16. This permit authorizes the use of water treatment additives that were previously approved and those that were requested as part of the permit application. The use of any new additives, or change in those previously approved by the Agency, or if the permittee increases the feed rate or quantity of the additives used beyond what has been approved by the Agency, the permittee shall request a modification of this permit in accordance with the Standard Conditions – Attachment H

SPECIAL CONDITION 17. 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. For the purposes of this permit, TRC means those substances which include combined and uncombined forms of both chlorine and bromine and which are expressed, by convention, as an equivalent concentration of molecular chlorine.

SPECIAL CONDITION 18. No effluent shall contain settleable solids, floating debris, visible oil, grease, scum or sludge solids. Color, odor and turbidity must be reduced to below obvious levels.

Special Conditions

SPECIAL CONDITION 19. Results of semi-annual sampling shall be submitted with the June and December DMR's each year.

SPECIAL CONDITION 20.

STORM WATER POLLUTION PREVENTION PLAN (SWPPP)

A. A SWPPP shall be developed and 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. The Plan shall describe the selection, design, and installation of control measures which are to be used to reduce the pollutants in storm water discharges associated with industrial activity at the facility to comply with the requirements of this permit. The Permittee shall submit any modified plans to the Agency, when such modification includes substantive changes to the Plan, or modification is made to the Plan to ensure compliance with this permit. The SWPPP shall be implemented by the Permittee on an on-going basis.

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

Unless otherwise specified by federal regulation, the SWPPP shall be designed for a storm event equal to or greater than a 25-year 24-hour rainfall event unless federal regulations allow for a less restrictive rainfall event.

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

For any site which has a current NPDES permit and discharges directly or indirectly 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 SWPPP shall be designed for a storm event equal to or less than a 25-year 24-hour rainfall event. If required by federal regulations, the SWPPP shall adhere to a more restrictive design criteria.

3. If the Permittee discharges to an impaired water with an established U.S. EPA approved or established TMDL and the SWPPP has been modified in accordance with Part A.2, above, Illinois EPA will review the SWPPP and inform the Permittee in writing if additional pollutant control measures for rainfall events are necessary for the discharge to be consistent with the assumptions of any available waste load allocations in the TMDL.

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 an MS4 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 in writing by the Agency at any time that the Plan does not meet the requirements of this condition. After such written 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 Permittee shall modify the SWPPP whenever there is a change in construction, operation, or maintenance which may affect the discharge of significant concentrations or quantities of pollutants to the waters of the United States or if a facility inspection required by paragraph J 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;

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Special Conditions

- ii. An outline of the storm water drainage areas for each storm water discharge point, location, and identification of any MS4 to which the industrial site discharges storm water;
- iii. Paved areas and buildings;
- iv. Areas used for outdoor manufacturing, storage trash dumpsters and compactors or disposal of significant materials, including activities that generate significant quantities of dust or particulates;
- v. Location of existing or planned storm water structural control measures/practices (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, transfer, and access areas;
- x. Direction of storm water flow (use arrows);
- xi. Locations of storm water monitoring points;
- xii. Location of any potable water supply wells;
- xiii. Fueling stations;
- xiv. Immediate access roads and rail lines;
- xv. Vehicle or product machinery related to industrial activity;
- xvi. Locations and sources of run-on to the site from adjacent properties that contains significant quantities of pollutants; and
- xvii. Location of any material storage areas (i.e. deicing material, fertilizers, soil stockpiles, etc.).

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

3. A narrative description of the following potential pollutant sources:

- i. The nature of the industrial activities conducted at the site and a list of the activities exposed to storm water;
 - ii. A list of pollutant(s) or pollutant constituents associated with each identified activity above, which could be exposed to storm water or snowmelt and could be discharged from the facility. The Permittee must document all significant material that have been handled, treated, stored or disposed of, and that have been exposed to Storm Water in the three years prior to the date the Permittee prepares or amends its SWPPP. Materials, equipment, and vehicle management practices employed to minimize contact of significant materials with storm water discharges (include on site map);
 - iii. Existing or future structural and non-structural control measures/practices to reduce pollutants in storm water discharges;
 - iv. Industrial storm water discharge treatment facilities (include on site map) and;
 - v. Methods of onsite storage and disposal of significant materials.
4. Provide a list of any pollutant that is listed as a cause of impairment in the most recent 303(d) report and may be associated with the industrial site activity and may be discharged in storm water from the industrial site.
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.

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- F. The Plan shall document the location and describe the storm water management controls which are or will be implemented by the facility to meet the requirements of this permit. The appropriate controls shall reflect identified existing and potential sources of pollutants at the facility. The Permittee shall properly maintain storm water BMPs and other control measures to ensure effectiveness and continuity of operation.
- G. Storm Water Pollution Prevention Personnel: Identification by name, job titles, direct telephone numbers and email addresses (if available) of the individuals who are responsible for developing, implementing, and revising the Plan. All storm water pollution prevention personnel must have ready access to the most updated copy of the SWPPP and all associated documents and information as required by this permit.
- H. Non-Storm Water Discharges: The Permittee shall include a certification that the discharge has been tested or evaluated for the presence of non-storm water discharges. The certification shall include a description of any tests for the presence of non-storm water discharges, the methods used, the dates of the testing, and any onsite drainage points or outfalls that were observed during the testing and action(s) taken. 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.
- I. The following must be documented in the SWPPP:
1. Preventive Maintenance - The Permittee must have procedures and frequencies 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.
 2. Good Housekeeping and Pollution Prevention Practices- Good housekeeping requires the maintenance of clean, orderly facility areas that discharge storm water. Material handling areas shall be inspected and cleaned as necessary to reduce the potential for pollutants to enter the storm water conveyance system. The Permittee shall implement pollution prevention practices in areas that include, but are not limited to, trash containers, storage areas, loading docks, vehicle fueling, and maintenance. Exposed areas that may contribute pollutants to storm water shall be minimized to reduce or eliminate contaminated storm water runoff.
 3. 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. The Permittee must minimize the potential for leaks, spills, and other releases that may be exposed to storm water and develop plans for effective response to such spills if or when they occur. The Permittee must conduct spill prevention and response measures, including but not limited to, the following:
 - i. Plainly label containers (e.g., "Used Oil," "Spent Solvents," "Fertilizers and Pesticides") that could be susceptible to spillage or leakage to encourage proper handling and facilitate rapid response if spills or leaks occur;
 - ii. Implement procedures for material storage and handling, such as the use of secondary containment and barriers between material storage and traffic areas, or a similarly effective means designed to prevent the discharge of pollutants from these areas;
 - iii. Develop spill response training procedures for preventing, containing, and cleaning up leaks, spills, and other releases. Spills shall be cleaned and any contaminated water or solids shall be disposed of in accordance with applicable regulations. As appropriate, execute such procedures as soon as possible;
 - iv. Keep spill kits on-site, in easily accessible locations,
 - v. Notify appropriate facility personnel, and for significant spills, emergency response agencies and regulatory agencies, when a leak, spill, or other release occurs;
 - vi. Document all significant spills and leaks of oil or toxic or hazardous pollutants that actually occurred in the exposed areas, or that drained to a storm water conveyance, during the previous 5 years; and
 - vii. Visually inspect retained storm water (e.g. storm water in a secondary containment structure) prior to discharge, to assure the storm water contains no unnatural turbidity, color, oil films, foams, settleable solids, or deposits before discharging any collected storm water.
 4. 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

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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. The following management practices shall be considered and implemented as applicable:

- 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 pollutants from material handling equipment or activities, raw materials, 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. This includes any pesticide, herbicide, fertilizer, or any other chemical storage area;
 - vii. Mercury Switch Removal and Recycling – Mercury containing convenience lighting switches and anti-lock brake assemblies shall be removed from vehicles and recycled in an approved manner which prevents mercury from entering the storm water discharges; and
 - viii. Storm Water Reduction - To minimize storm water runoff, install vegetation on roofs of buildings within and adjacent to the exposure area to detain and evapotranspire runoff where the precipitation falling on the roof is not exposed to contaminants. Capture storm water for use as appropriate based on quality where feasible and applicable.
6. Sediment and Erosion Prevention - Where feasible and applicable, the Permittee must minimize erosion by stabilizing exposed soils at the facility and placing flow velocity dissipation devices at discharge locations. The Permittee must also use structural and non-structural control measures to prevent the discharge of sediment. If the Permittee uses polymers and/or other chemical treatments as part of its controls, it must identify the polymers and/or chemicals used and the purpose.
 7. Employee Training - The Permittee must train all employees who work in areas where industrial materials or activities are exposed to storm water, or who are responsible for implementing activities necessary to meet the conditions of this permit (e.g., inspectors, maintenance personnel), including all pollution prevention personnel. Employees shall be trained at a minimum of once per calendar year. The Permittee shall ensure the following personnel are trained on the requirements of this permit:
 - i. Personnel who are responsible for the design, installation, maintenance, and/or repair of controls (including pollution prevention measures);
 - ii. Personnel responsible for the storage and handling of chemicals and materials that could become contaminants in storm water discharges;
 - iii. Personnel who are responsible for conducting and documenting monitoring and inspections; and
 - iv. Personnel who are responsible for performing and documenting corrective actions.
 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.

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- J. Quarterly Visual Observation of Discharges - The requirements and procedures for quarterly visual observations are applicable to all outfalls covered by this condition.
1. The Permittee 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 on normal work days from the facility during a monitoring quarter, no visual observation is required for that quarter, provided the permittee documents that no observable runoff occurred. Normal work days do not include weekends or Federal holidays. The Permittee must sign and certify the documentation.
 2. Visual observation must be made on samples collected within 1 hour of an actual discharge from a storm event equal to or greater than 0.25 inch in 24 hours. If it is not possible to take a sample within the first hour of the discharge, the sample must be collected as soon as practicable after the first hour and the Permittee must explain why it was not possible to take samples within the first hour. In the case of snowmelt, the samples must be taken from an actual discharge from the site. For storm events, samples must be collected from a storm event discharge at least 72 hours from the previous discharge. The 72 hour interval does not apply if the Permittee documents that a less than 72 hour event is representative for local storm events during the sampling period. The observation must document: unnatural color, odor, clarity, floatable solids, settled solids, suspended solids, foam, oil sheen, and other obvious indicators of storm water pollution if present in the discharge. 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 test for the parameter or the list of pollutants as provided pursuant to Part E.4.
 3. The Permittee must maintain visual observation reports onsite with the SWPPP. Each report must include the observation date and time, inspection personnel, outfall location, nature of the discharge (i.e., runoff or snow melt), visual quality of the storm water discharge (including observations of unnatural color, odor, clarity, 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. The Permittee may exercise a waiver of the visual observation requirement at a facility that is inactive and unstaffed, as long as there are no industrial materials or activities exposed to storm water. If the Permittee exercises this waiver, the Permittee must maintain a certification with the 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 the Permittee's facility has two or more outfalls that are believed to 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, the Permittee may conduct visual observation of the discharge at just one of the outfalls and report that the results also apply to the substantially identical outfall(s).
 6. Visual observation documentation shall be made available to the Agency and general public upon written request.
- K. 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.
- L. This Plan shall 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 thereunder, and Best Management Programs under 40 CFR 125.100. Other program requirements such as SPCC may be referenced in the Plan.
- M. The Plan is considered a report that shall be available to the public at any reasonable time upon request.
- N. 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.
- O. Facilities which discharge storm water associated with industrial activity to an MS4 may also be subject to additional requirements imposed by the operator of the municipal separate storm sewer system.

Construction Authorization

Authorization is hereby granted to construct treatment works and related equipment that may be required by the SWPPP developed pursuant to this permit.

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

- Q. If any statement or representation is found to be incorrect, this authorization may be revoked and the Permittee thereupon waives all rights thereunder.
- R. 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;
- S. Plans and specifications of all treatment equipment being included as a part of the Storm Water Management Practice shall be included in the SWPPP.
- T. 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 Agency regarding any additional required permit(s).

REPORTING

- U. The Permittee shall submit an electronic copy of the annual inspection report to the Agency. The report shall include results of the annual facility inspection which is required by Part K 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 to the public at any reasonable time upon request.
- V. The first Annual 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.
- W. If the facility performs inspections more frequently than required by this permit, the results shall be included as additional information in the Annual Report.
- X. The permittee shall retain the annual inspection report on file at least 3 years. This period may be extended by request of the Illinois EPA at any time.

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

Illinois Environmental Protection Agency
Division of Water Pollution Control
Compliance Assurance Section #19
1021 North Grand Avenue East
Annual Inspection Report
P.O. Box 19276
Springfield, Illinois 62794-9276

- Y. The Permittee shall notify any regulated MS4 that they maintain coverage under an individual NPDES permit. The Permittee shall submit any SWPPP or any annual inspection to the MS4 upon request by the MS4 owner.

SPECIAL CONDITION 21. Benchmark monitoring for all stormwater dischargers on the site.

If the Permittee's facility has two or more outfalls that are believed to 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, the Permittee may conduct benchmark monitoring of the discharge at just one of the outfalls and report that the results also apply to the substantially identical outfall(s).

Samples shall be collected from the discharge resulting from a rainfall event that is greater than 0.1 inches in magnitude or equivalent snow melt and occurs at least 72 hours from the previously measurable (greater than 0.1 inch rainfall or equivalent snow melt) storm

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event. The samples may be collected during daylight hours Monday through Friday and is not required to be collected during adverse weather conditions.

For discharges from holding ponds or other impoundments with a retention period greater than 24 hours, a minimum of one grab sample may be taken and analyzed. For all other discharges, a grab sample shall be taken during the first thirty minutes of the discharge for analysis.

The Permittee shall record monitoring results on the Discharge Monitoring Report (DMR) for all Outfalls receiving storm water on a quarterly basis.

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

The permittee shall compare each sample to the following pollutant benchmark concentration.

<u>Parameter</u>	<u>Benchmark Monitoring Concentration</u>
Total Suspended Solids	100 mg/L

If a sample is greater in concentration than the benchmark concentrations listed above, the permittee shall attach a report to the next DMR with an explanation as to why the concentration has exceeded the benchmark concentrations, the measures being taken to ensure that the benchmark concentrations will be achieved in the future and what SWPPP modifications, if any, are needed. After a total of four samples have been collected from qualifying storm events the concentrations from the four samples shall be averaged. If the average concentration from the four samples exceeds the above benchmark concentration, then the sample frequency shall continue as once per month for the remainder of the permit. If the average concentration from the four samples does not exceed the above benchmark concentration, then the permittee has fulfilled the benchmark monitoring requirements for total suspended solids for the permit term and no additional monitoring is required.

SPECIAL CONDITION 22. 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.

SPECIAL CONDITION 23. The facility utilizes a once-through cooling system for cooling of plant condensers and is determined to be equivalent to Best Technology Available (BTA) for cooling water intake structures to prevent/minimize impingement mortality and entrainment provisions of 40 CFR 125.94(c)(3) and 40 CFR 125.94(d), respectively. The actual through screen velocity of less than 0.5 feet per second is determined to meet the impingement and entrainment compliance standards under Section 316(b) of the Clean Water Act. 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.

In subsequent permit reissuance applications, the permittee shall provide all the information required in 40 CFR 122.21(r). Pursuant to 40 CFR 125.95(c), the permittee may request to reduce the cooling water intake structure information required for subsequent permit applications to the Agency 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 habitat 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. 1536(o) or a permit pursuant to 16 U.S.C. 1539(a) or there is no reasonable expectation of take. This request shall be submitted at least two years and six months prior to the expiration of the NPDES permit. The request must identify each element in 40 CFR 122.21(r) that it determines has not substantially changed since the previous permit application and the basis for the determination. The Agency has the discretion to accept or reject any part of the request.

Nothing in this permit authorizes take for the purposes of a facility's compliance with the Endangered Species Act pursuant to 40 CFR 125.98(b)(1).

SPECIAL CONDITION 24. The permittee shall routinely monitor the differential pressure at the intake screenhouse for indications of intake blockage or fouling. Routine diver inspections, cleaning, and maintenance will be continued.

SPECIAL CONDITION 25. Pursuant to 40 CFR 125.97(c), the permittee shall submit an annual certification statement signed by the authorized representative with information on the following, no later than January 31st for the previous year at the address found in

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Special Condition 9:

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 there are substantial modifications to the operation of any unit that impacts the cooling water withdrawals or operation of the cooling water intake structure, provide a summary of those changes.

Along with the annual certification statement, the permittee shall include a report on the amount of well water used as supplementing cooling water as a monthly average and a daily maximum to ensure compliance the Agency's determination of BTA for entrainment pursuant to 40 CFR 125.96(b).

SPECIAL CONDITION 26.

- 1) PFAS Sample Frequency and Type of Sample.

<u>Sampling Point</u>	<u>Sample Frequency</u>	<u>Sample Type</u>	<u>Report</u>
Effluent	Quarterly**	Grab	ng/L

** Quarterly sampling – Testing done during the first quarter (January – March) must be reported on the April Electronic Discharge Monitoring Report (NetDMR), testing done in the second quarter (April – June) must be reported on the July NetDMR, testing done in the third quarter (July – September) must be reported on the October NetDMR, and testing done in the fourth quarter (October – December) must be reported on the January NetDMR.

- 2) Test results must be reported in nanograms per liter (ng/L) as a daily maximum concentration.
- 3) Monitoring for Per- and polyfluoroalkyl Substances (PFAS) shall be performed using USEPA 3rd draft test method 1633 or subsequent draft test method. Upon USEPA's final approval and incorporation under 40 CFR 136, the approved method shall be used for PFAS testing.
- 4) The Minimum Level (ML) of Detection identified in paragraph 6) of this Special Condition is based on the USEPA's 3rd Draft Method 1633, dated December 2022. The permittee shall use these minimum levels of detection until they are replaced by subsequent draft methods, or a final method is defined under 40 CFR 136. At that time of update the permittee shall use the revised minimum level of detection values as part of this permit.
- 5) Following two years of quarterly sampling, the permittee may request a reduction in testing frequency, or an elimination of testing, by filing an NPDES permit modification request with the Agency. Quarterly sampling shall continue until such time as the Agency modifies the NPDES permit to either reduce or eliminate the quarterly sampling requirement.
- 6) Specific PFAS constituents that must be analyzed for are listed in the following table:

Target Analyte Name	Abbreviation	CAS Number	STORET	Minimum Level (ML) of Detection	
Perfluoroalkyl carboxylic acids				Aqueous (ng/L)	Solids (ng/g)
Perfluorobutanoic acid	PFBA	375-22-4	51522	2.0	0.8
Perfluoropentanoic acid	PFPeA	2706-90-3	51623	2.0	0.4
Perfluorohexanoic acid	PFHxA	307-24-4	51624	2.0	0.2
Perfluoroheptanoic acid	PFHpA	375-85-9	51625	2.0	0.2
Perfluorooctanoic acid	PFOA	335-67-1	51521	2.0	0.2
Perfluorononanoic acid	PFNA	375-95-1	51626	2.0	0.2
Perfluorodecanoic acid	PFDA	335-76-2	51627	2.0	0.2

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Perfluoroundecanoic acid	PFA	2058-94-8	51628	2.0	0.2
Perfluorododecanoic acid	PFA	307-55-1	51629	2.0	0.2
Perfluorotridecanoic acid	PFA	72629-94-8	51630	2.0	0.2
Perfluorotetradecanoic acid	PFA	376-06-7	51631	2.0	0.2
Perfluoroalkyl sulfonic acids					
Acid Forms					
Perfluorobutanesulfonic acid	PFB	375-73-5	52602	2.0	0.2
Perfluoropentanesulfonic acid	PFP	2706-91-4	52610	2.0	0.2
Perfluorohexanesulfonic acid	PFH	355-46-4	52605	2.0	0.2
Perfluoroheptanesulfonic acid	PFH	375-92-8	52604	2.0	0.2
Perfluorooctanesulfonic acid	PFO	1763-23-1	52606	2.0	0.2
Perfluorononanesulfonic acid	PFN	68259-12-1	52611	2.0	0.2
Perfluorodecanesulfonic acid	PFD	335-77-3	52603	2.0	0.2
Perfluorododecanesulfonic acid	PFD	79780-39-5	52632	2.0	0.2
Fluorotelomer sulfonic acids					
1H,1H, 2H, 2H-Perfluorohexane sulfonic acid	4:2FTS	757124-72-4	52605	5.0	0.8
1H,1H, 2H, 2H-Perfluorooctane sulfonic acid	6:2FTS	27619-97-2	62606	10	0.8
1H,1H, 2H, 2H-Perfluorodecane sulfonic acid	8:2FTS	39108-34-4	52603	10	0.8
Perfluorooctane sulfonamides					
Perfluorooctanesulfonamide	PFOSA	754-91-6	51525	2.0	0.2
N-methyl perfluorooctanesulfonamide	NMeFOSA	31506-32-8	52641	2.0	0.2
N-ethyl perfluorooctanesulfonamide	NEtFOSA	4151-50-2	52642	2.0	0.2
Perfluorooctane sulfonamidoacetic acids					
N-methyl perfluorooctanesulfonamidoacetic acid	NMeFOSAA	2355-31-9	51644	2.0	0.2
N-ethyl perfluorooctanesulfonamidoacetic acid	NEtFOSAA	2991-50-6	51643	2.0	0.2
Perfluorooctane sulfonamide ethanols					
N-methyl perfluorooctanesulfonamidoethanol	NMeFOSE	24448-09-7	51642	10	2
N-ethyl perfluorooctanesulfonamidoethanol	NEtFOSE	1691-99-2	51641	20	2
Per- and Polyfluoroether carboxylic acids					
Hexafluoropropylene oxide dimer acid	HFPO-DA	13252-13-6	52612	5.0	0.8
4,8-Dioxa-3H-perfluorononanoic acid	ADONA	919005-14-4	52636	5.0	0.8
Perfluoro-3-methoxypropanoic acid	PFMPA	377-73-1	PF002	2.0	0.4

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Perfluoro-4-methoxybutanoic acid	PFMBA	863090-89-5	PF006	2.0	0.4
Nonafluoro-3,6-dioxaheptanoic acid	NFDHA	151772-58-6	52626	5.0	0.4
Ether sulfonic acids					
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	9Cl-PF3ONS	756426-58-1	PF003	5.0	0.8
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	11Cl-PF3OUdS	763051-92-9	PF004	5.0	0.8
Perfluoro(2-ethoxyethane)sulfonic acid	PFEESA	113507-82-7	52629	2.0	0.4
Fluorotelomer carboxylic acids					
3-Perfluoropropyl propanoic acid	3:3FTCA	356-02-5	PF001	10	1.0
2H,2H,3H,3H-Perfluorooctanoic acid	5:3FTCA	914637-49-3	PF007	20	5.0
3-Perfluoroheptyl propanoic acid	7:3FTCA	812-70-4	PF007	20	5.0

7) SPECIAL CONDITION 27. PFAS Minimization Program:

1) PFAS Reduction Initiative:

- a) 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 (BMP's).
- b) Best Management Practices (BMPs) must include an evaluation based on product substitution, reduction, or elimination of PFAS in discharges as detected by method 1633. When developing a BMP, the following should be considered, at a minimum:
 - i) 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.
 - ii) Evaluation of Pollution prevention/source reduction opportunities which may include:
 - (1) Product elimination or substitution when a reasonable alternative to using PFAS is available in the industrial process,
 - (2) Accidental discharge minimization by optimizing operations and good housekeeping practices,
 - (3) 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.
 - iii) 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.
- c) BMP's 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.
- d) 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:

- i) The name, address, and NPDES permit number of the Permittee,
- ii) The current BMP for the facility. Reevaluated BMP's must also include all updates made since the previous BMP was submitted.

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- 2) The Permittee shall submit the PFAS reduction reports identified under paragraphs 1) of this Special Condition electronically or in writing to the one of the following addresses:
 - a) EPA.PrmtSpecCondtns@Illinois.gov, or
 - b) Illinois Environmental Protection Agency
Bureau of Water
Compliance Assurance Section
Mail Code #19
1021 North Grand Avenue East
Post Office Box 19276
Springfield, Illinois 62794-9276