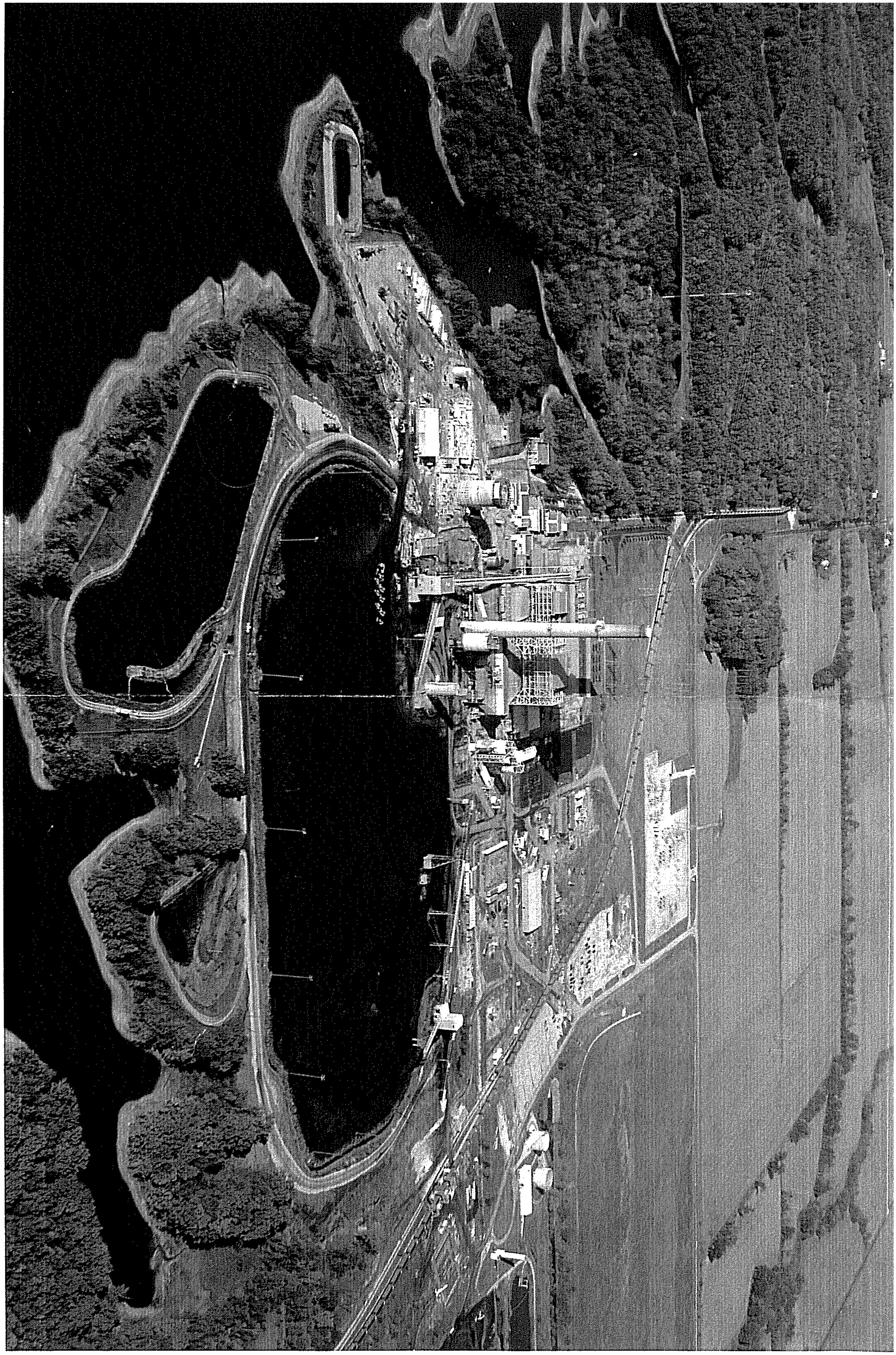
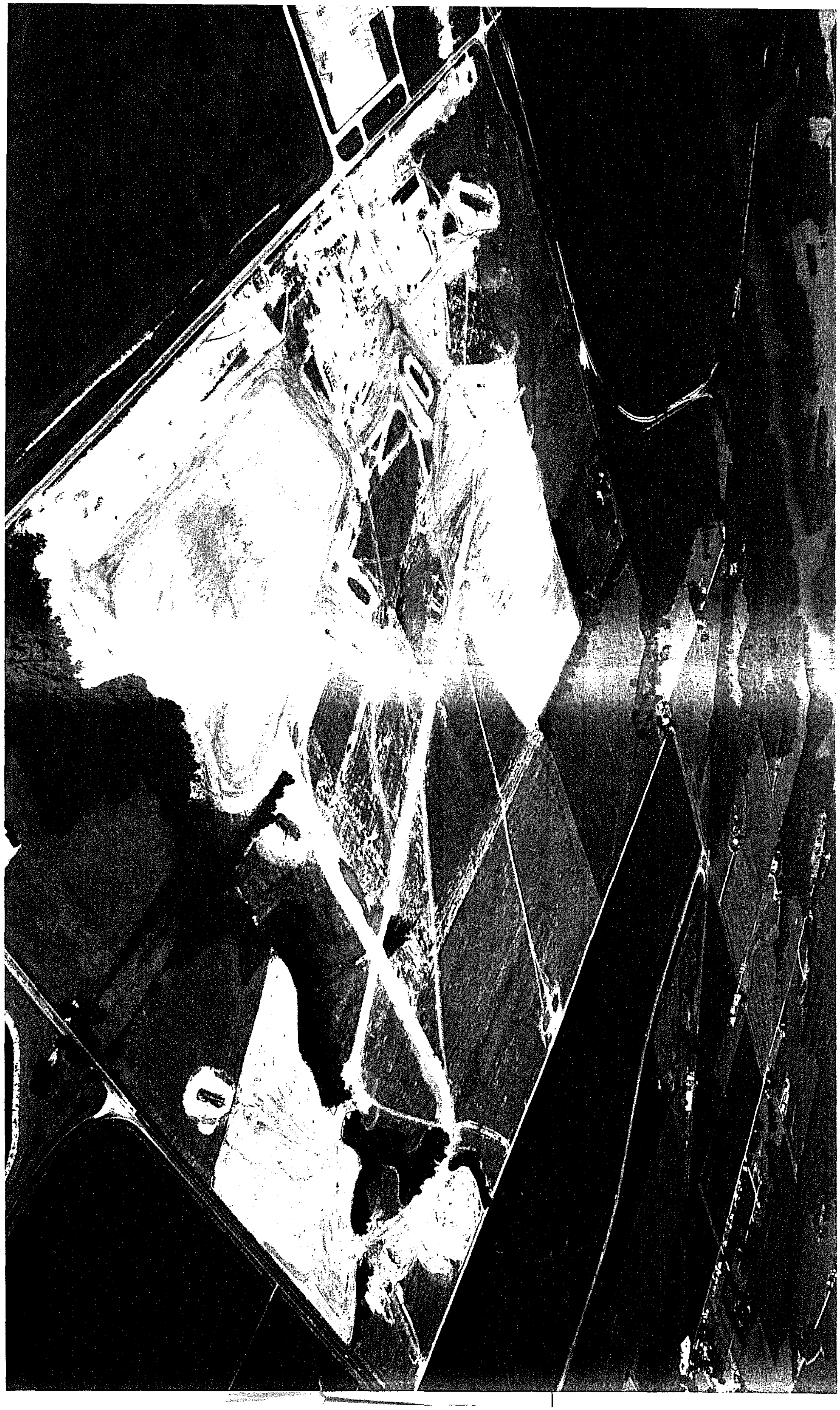
IEPA EXHIBIT
No. 1





IEPA EXHIBIT

No. 2

ILLINOIS POLLUTION CONTROL BOARD
March 18, 2010

AMEREN ENERGY GENERATING CO.,	)	
	)	
Petitioner,	)	
	)	
v.	)	PCB 09-38
	)	(Thermal Demonstration-Water)
ILLINOIS ENVIRONMENTAL PROTECTION AGENCY,	)	
	)	
Respondent.	)	

AMY ANTONIOLLI, DAVID M. LORING, and GABRIEL M. RODRIQUEZ, SCHIFF HARDEN, LLP, APPPEARED ON BEHALF OF PETITIONER; and

DEBORAH J. WILLIAMS and JOEY LOGAN-WILKEY APPEARED ON BEHALF OF THE ILLINOIS ENVIRONMENTAL PROTECTION AGENCY.

OPINION AND ORDER OF THE BOARD (by A.S. Moore):

On December 15, 2008, Ameren Energy Generating Company (Ameren) filed a petition (Pet.) to modify the site specific thermal standards previously granted[1] by the Board pursuant to 35 Ill. Adm. Code 302.211(j)(5). The thermal standards apply to heated effluent discharge from Ameren's Coffeen Power Station in Montgomery County to the manmade, artificial cooling lake known as Coffeen Lake. Coffeen Lake was formed by damming the McDavid Branch of the East Fork of Shoal Creek approximately two miles directly south of the Village of Coffeen. With a watershed area of approximately 18 square miles, the lake discharges over a spillway to the East Fork of Shoal Creek.

Ameren asserts that compliance with the existing standards is technically infeasible or unreasonably cost-prohibitive. Pet. at 5. Ameren reports that such continued compliance would require additional expenditures of $13 million-$18 million for additional cooling towers or continued costly reduction of power generation during periods of warm weather.

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[1] As outlined in the petition (Pet. at 2-4), in 1977 and 1982 the Board initially established site specific standards for Coffeen Lake upon petition by the Coffeen Power Station's then-owner and operator under 35 Ill. Adm. Code 302.211(j)(5). CIPS v.. IEPA, PCB 77-158, PCB 78-100 (cons.)(Mar. 19, 1982). CIPS sought and obtained relief from the original May and October thermal limits by way of variance. CIPS (Coffeen Power Station) v. IEPA, PCB 97-131 (June 5, 1997). A condition of the variance required CIPS to conduct studies and collect data regarding the effect of the Station's discharges on the lake's fishery, resulting in variance termination in 1999 after a fish kill. Southern Illinois University-Carbondale (SIUC) fishery studies from 1997-2006 were provided in support of the current petition. Pet. Exh. 11.

Ameren therefore seeks an increase in thermal limits applicable during the calendar months of May and October.[2] Ameren has presented evidence and argument that the modification meets the standards of 35 Ill. Adm. Code 302.211(j)(5), and the intent of the Environmental Protection Act (Act) 415 ILCS 5/100 *et seq*.

On April 24, 2009, the Illinois Environmental Protection Agency (Agency) filed a recommendation (Rec.) that the Board deny Ameren's petition. The Agency argues that Ameren has failed to demonstrate that the proposed modification is environmentally acceptable and within the intent of the Act and has failed to demonstrate that the alternatives to the proposed modification to the thermal standard are technically infeasible and economically unreasonable. In particular, the Agency expressed concerns regarding (1) temperature and dissolved oxygen in Coffeen Lake, (2) total phosphorus and mercury levels in Coffeen Lake, and (3) lake habitat erosion[3]. Rec. at 1. The Agency did, however, suggest that the Board impose certain conditions if the Board were to grant the requested modification.

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[2] The current, two-condition thermal discharge temperature limits applicable to the Station provide that discharges shall not result in a temperature, as measured at the outside edge of the mixing zone of Coffeen Lake, which

1) Exceeds 105 degrees F as a monthly average from June through September, and 112 degrees F as a maximum for more than 3 % of hours during that same period, and

2) Exceeds 89 degrees F as a monthly average from October through May, and 94 degrees F as a maximum for more than 2 % of hours during that same period.

Ameren proposes a three-condition limit as follows (note slight change in #2 from above, and new #3):

1) Exceeds 105 degrees F as a monthly average from June through September, and 112 degrees F as a maximum for more than 3 % of hours during that same period, and

2) Exceeds 89 degrees F as a monthly average from November through April, and 94 degrees F as a maximum for more than 2 % of hours during that same period.

3) Exceeds 96 degrees F as a monthly average, in each of the months of May and October, and 102 degrees F as a maximum for more than 2% of hours in each of those same months. Pet at. 5-6.

[3] Eroded fish habitats or "habitat erosion" is a phenomenon described the 2007 SIUC Report as follows:

> Water currents associated with power-cooling discharges cause the biota behavior to be more characteristic of slow-moving rivers than of reservoirs. As a result, fish movement increases over that of ambient reservoirs. The movement is, in large part, dictated by forage abundance and locality. In power-cooling

The Board held a hearing[4] in Montgomery County on June 23, 2009. Ameren presented four expert witnesses in support of its petition. The Agency presented no witnesses. Two members of the public presented oral public comment at hearing, and followed their hearing presentations up with written comments. Two additional persons filed written comment, so that the Board considered four public comments. In addition to echoing the Agency's concerns, the public commenters expressed concerns, among others, about the effect on Coffeen Lake's watershed of planned longwall mining at Deer Run Mine, which includes a planned subsidence of the McDavid Branch of the East Fork of Shoal Creek. Tr. 249-253, PC 1-4.[5]

The record in this proceeding is extensive and rich in information, reflecting as it does studies conducted over three decades by various environmental consultants and eminent Illinois institutions documenting the effects of Coffeen's thermal discharges on the Coffeen Lake fish habitat. Ameren has provided additional information throughout this proceeding in response to questions posed by the Board, as well as concerns expressed by the Agency and commenters. Ameren's position as to agreeable conditions has evolved in response to the various questions and suggestions it has received.

Based on the record in this proceeding, the Board finds that Ameren has provided adequate proof to demonstrate that the proposed modification satisfies the requirements of the Act and Board rules. The Board finds that the site specific thermal standard for the discharge to the Coffeen Lake will be environmentally acceptable and within the intent of the Act. Even under the modified standards, the Board finds Lake Coffeen will continue to provide conditions capable of supporting shellfish, fish and wildlife, and recreational uses consistent with good management practices. The Board further finds that Ameren has invested $26.7 million since 2000 to enhance thermal controls, and will control the thermal component of its effluent by technologically feasible and economically reasonable methods, including use of existing cooling towers and reduced power generation or "de-rating"[6], when necessary. 35 Ill. Adm. Code 106.202(b)(1) and 302.211(j)(3).

> reservoirs, forage species often inhabits water temperatures near their thermal maximums because the food supply is more abundant there. If a sudden pulse of lethally hot water is pulsed through and some fish happen to be located in a cove away from the main water flow, the fish can be forced to stay in the cove until the slug of hot water passes. If lethally hot water temperatures persist in the main channel long enough, water temperatures in the coves will increase until they are similar to those in the main channel. This phenomenon, described as eroded fish habitats, results in smaller but more frequent fish kills. .Ag. Exh. 1 at 10.

[4] The transcript of the June 23, 2009 hearing is cited as "Tr."

[5] The oral and written public comments are treated in more detail later in this opinion. See, *infra,* at 28-29, 42-43.

[6] "De-rating" refers to adjusting an electrical generating unit down from full load and operating at less than full capacity. Tr. at 58-59.

The Board does not discount the depth of the concerns expressed by the public commenters who value Lake Coffeen for the fishing and other recreational opportunities this manmade lake offers. But, the Board believes that the record as a whole justifies the requested modification.

Accordingly, the Board grants Ameren's petition for modified site-specific thermal standards subject to conditions outlined in this opinion and order.

In this opinion, the Board first sets forth the legal framework within which the Board determines whether to issue site specific thermal standards pursuant to 35 Ill. Adm. Code 106.200 *et seq.* and 35 Ill. Adm. Code 302.211(j)(5). Next, the Board provides the procedural history, and the factual background of the case. The Board then describes the petitioners' requested relief. The Board then presents the parties' arguments, and responses to expressed concerns. This examination is followed by the Board's discussion of the regulatory criteria before reaching its conclusions on each of them.

LEGAL FRAMEWORK

Federal Requirements

The federal Clean Water Act (CWA) imposes requirements on state permitting authorities for control of thermal discharges. Section 301 of the CWA, 33 U.S.C. 1311, provides that permits issued under the National Pollutant Discharge Elimination System (NPDES) program must include any applicable state standard. Section 402 of the CWA, 33 U.S.C. 1342, requires thermal discharges to be permitted under the NPDES procedures.

Under Section 316(a) of the CWA, the Board can establish alternative thermal standards based on a demonstration that the alternative standard will "assure the protection and propagation of a balanced, indigenous population of shellfish, fish and wildlife in and on that body of water." 33 U.S.C. 1326(a) provides

> With respect to any point source otherwise subject to the provisions of section 301 or section 306 of this Act, whenever the owner or operator of any such source, after opportunity for public hearing, can demonstrate to the satisfaction of the Administrator (or, if appropriate, the State) that any effluent limitation proposed for the control of the thermal component of any discharge from such source will require effluent limitations more stringent than necessary to assure the protection and propagation of a balanced, indigenous population of shellfish, fish, and wildlife in and on the body of water into which the discharge is to be made, the Administrator (or, if appropriate, the State) may impose an effluent limitation under such sections for such plant, with respect to the thermal component of such discharge (taking into account the interaction of such thermal component with

other pollutants), that will assure the protection and propagation of a balanced, indigenous population of shellfish, fish, and wildlife in and on that body of water. 33 U.S.C. 1326(a).

United States Environmental Protection Agency (USEPA) rules implementing Section 316 are codified at 40 CFR 125 Subpart H. 40 CFR Section 125.73 provides:

> Thermal discharge effluent limitations or standards established in permits may be less stringent than those required by applicable standards and limitations if the discharger demonstrates to the satisfaction of the [permitting authority] that such effluent limitations are more stringent than necessary to assure the protection and propagation of a balanced, indigenous community of shellfish, fish, and wildlife in and on the body of water into which the discharge is made. 40 CFR 125.73(a).

The current guidance provided by USEPA on CWA Section 316(a) demonstrations is the "Interagency 316(a) Technical Guidance Manual and Guide for Thermal Effects Sections of Nuclear Facilities Environmental Impact Statements (DRAFT)", May 1, 1977, hereafter cited as "Section 316(a) Manual at __." The Section 316(a) Manual is available at: http://www.epa.gov/npdespub/pubs/owm0001.pdf The Section 316(a) Manual itself states that "The manual is intended to be used as a general guidance and as a starting point for discussions", and that State Directors "are not rigidly bound by the contents of this document." Section 316(a) Manual at 8-9, Pet. Br. at 2.

The Section 316(a) Manual indicates that "predictive studies" are appropriate for new sources, facilities discharging only for an evaluation period, facilities discharging into waters that were previously despoiled, and facilities making major operational changes. Section 316(a) Manual at 11.

The federal regulations at 40 CFR 122 provide for two possible types of predictive 316(a) demonstrations, Type II: Protection of Representative Important Species and Type III: Alternative Demonstrations. The Section 316(a) Manual states that a Type II Demonstration should fully develop three key biological components: completion of the Biotic Category Rationale (begun during early screening procedures), development of Representative Important Species (RIS) Rationale, and synthesize of all information into a Master Rationale. Section 316(a) Manual at 34.

Current Standards Applicable to Lake Coffeen

Section 13 of the Act authorizes the Board to adopt water quality and effluent standards, including thermal standards. 415 ILCS 5/13 (2008). The Board's generally applicable water quality temperature standards are found at 302.211.[7]

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[7] 35 Ill. Adm. Code 302.211 provides:

a) Temperature has STORET number (F°) 00011 and (C°) 00010.

b) There shall be no abnormal temperature changes that may adversely affect aquatic life unless caused by natural conditions.

As noted earlier, the current specific thermal standard applicable to Coffeen Lake was established by the Board in 1982 for Central Illinois Public Service Company (CIPS), the station's owner and operator at the time. Pet. at 2, referring to CIPS v. IEPA, PCB 77-158, PCB 78-100 (consolidated) (March 18, 1982). The current standard provides:

> The thermal discharge to Coffeen Lake from the Central Illinois Public Service Company's Coffeen Power Station shall not result in a temperature, measured at the outside edge of the mixing zone in Coffeen Lake, which:
>
> 1. Exceeds 105 degrees Fahrenheit as a monthly average, from June through September, and 112 degrees Fahrenheit as a maximum for more than three percent of the hours during that same period.
> 2. Exceeds 89 degrees Fahrenheit as a monthly average, from October through May, and 94 degrees Fahrenheit as a maximum for more than two percent of the hours during that same period. Pet. at 2.

The language of the specific thermal standard for Coffeen Lake was incorporated into Ameren's current NPDES permit as Special Condition No. 5. Pet. at 2.

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c) The normal daily and seasonal temperature fluctuations which existed before the addition of heat due to other than natural causes shall be maintained.

d) The maximum temperature rise above natural temperatures shall not exceed 2.8° C (5° F).

e) In addition, the water temperature at representative locations in the main river shall not exceed the maximum limits in the following table during more than one percent of the hours in the 12-month period ending with any month. Moreover, at no time shall the water temperature at such locations exceed the maximum limits in the following table by more than 1.7° C (3° F).

	°C	°F		°C	°F
JAN.	16	60	JUL.	32	90
FEB.	16	60	AUG.	32	90
MAR.	16	60	SEPT,	32	90
APR.	32	90	OCT.	32	90
MAY	32	90	NOV.	32	90
JUNE	32	90	DEC.	16	60

Requirements and Standard for Decision in Artificial Cooling Lake Demonstrations

The Board regulations at 35 Ill. Adm. Code 302.211 (j)(5) and (j)(3) set forth requirements for the adoption of site specific thermal standards for discharges to an "artificial cooling lake" (ACL)[8], such as the Coffeen Lake. These are consistent with the requirements of Section 316(a) of the CWA.[9]

Section 302.211(j)(5) provides that "if an adequate showing as provided in subsection (j)(3) is found, the Board shall promulgate specific thermal standards to be applied to that discharge to that artificial cooling lake." 35 Ill. Adm. Code 302.211(j)(5). The requirements for the ACL demonstration are set forth at 35 Ill. Adm. Code 302.211(j)(3), (j)(4), and (j)(5) as follows:

> 3) At an adjudicative hearing the discharger shall satisfactorily demonstrate to the Board that the artificial cooling lake receiving the heated effluent will be environmentally acceptable, and within the intent of the Act, including, but not limited to:
>
> > A) provision of conditions capable of supporting shellfish, fish and wildlife, and recreational uses consistent with good management practices, and
> >
> > B) control of the thermal component of the discharger's effluent by a technologically feasible and economically reasonable method.
>
> 4) The required showing in subsection (j)(3) may take the form of an acceptable final environmental impact statement or pertinent provisions of environmental assessments used in the preparation of the final environmental impact statement, or may take the form of showing pursuant to Section 316(a) of the Clean Water Act (CWA) (33 U.S.C. 1251 et seq.), which addresses the requirements of subsection (j)(3).

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[8] By Board rule, an "artificial cooling lake" is defined as:

> Any manmade lake, reservoir, or other impoundment, constructed by damming The flow of a stream, which is used to cool the water discharged from the condensers of a steam-electric generating plant for recirculation in substantial part to the condensers. 35 Ill. Adm. Code 301.225.

[9] Section 316(a) of the CWA and 40 CFR 125 Subpart H address alternate thermal limitations in terms of effluent standards. Although the Board's rule for ACL demonstrations provides for the use of a Section 316(a) showing, the demonstration required under the Board's Section 302.211(j)(3) is for water quality standards that apply at the outside edge of the mixing zone in the artificial cooling lake and not as effluent limits.

5) If an adequate showing as provided in subsection (j)(3) is found, the Board shall promulgate specific thermal standards to be applied to the discharge to that artificial cooling Lake. 35 Ill. Adm. Code 106.202(b).

Additionally, the Board has adopted procedural rules pertaining to ACL demonstration required under Section 302.211(j)(3) at 35 Ill. Adm. Code 106.200 *et seq*. These rules set forth requirements for the petition content, Agency recommendation, and burden of proof. The burden of proof in thermal demonstration proceedings is on the petitioner. 35 Ill. Adm. Code 206.210.

PROCEDURAL BACKGROUND

On December 15, 2008, Ameren filed this petition for the modification of site specific thermal standard applicable to discharges to Coffeen Lake. The petition was accompanied by Exhibits 1-16, a motion for expedited review, and a waiver of hearing.

On March 5, 2009, the Board accepted the petition for hearing, and denied Ameren's motion for expedited review. While Ameren waived hearing, the Board found that hearing is required under the terms of 35 Ill. Adm. Code 302.211(j)(3). Also on March 5, 2009, the Board's Hearing Officer Carol Webb directed Ameren to address prehearing questions posed by Board staff.

On April 7, 2009, the Agency filed a motion for extension of time to file the recommendation. On April 8, 2009, the Hearing Officer granted the motion for extension subject to Ameren's request that the recommendation be filed by April 17, 2009. On April 27, 2009, the Agency filed its recommendation that the Board deny Ameren's requested relief and a motion for leave to file *instanter*, which is hereby granted.

On May 6, 2009, the Hearing Officer granted Ameren until May 12, 2009 to respond to the Agency's recommendation as requested by the petitioner. On May 12, 2009, Ameren filed its response to the Agency's recommendation (Pet. Resp. to Rec.), answers to the Hearing Officer's prehearing questions (Pet. Resp. to HOO), and the prefiled testimony of Ann B. Shortelle, Ph.D., James R. McLaren, Ph.D., and James L. Williams, Jr.

Pursuant to notice duly given[10], on June 23, 2009, Hearing Officer Carol Webb conducted a hearing in this matter at the City Hall Council Chambers, 120 East Ryder Street, Litchfield, Montgomery County. Four witnesses testified at hearing on behalf of Ameren: James B. McLaren, Ph.D with ASA Analysis & Communication, Inc. (ASA), Anne Shortelle, Ph.D. with MACTEC Engineering & Consulting, Inc. (MACTEC), James L. Williams, Jr. with Ameren, and Michael Smallwood with Ameren. Hearing Officer Webb found all four witnesses credible. The Agency did not present any witnesses, although it did introduce one exhibit.

[10] The Board published newspaper notice of hearing notice of the hearing in the *Litchfield News-Herald* on May 20, 2009.

On July 10, Ameren filed a response to information requested during the hearing. (Pet. Resp. to Hearing).

On July 13, the Agency filed a motion to supplement the record with SIUC Reports from 2000 to 2005. This motion was granted by the Hearing Officer on August 5, 2009.

On July 16, 2009, Ameren filed a supplemental response to its earlier response to information requested during the hearing. (Pet. Supp. Resp. to Hearing)

On July 22, 2009, the Agency filed a motion to correct the transcript of the June 23, 2009 hearing. Ameren did not object. The Hearing Officer granted the Agency's motion to correct the transcript on August 5, 2009.

On August 13, 2009, Ameren filed its Post Hearing Brief. (Pet. Br.) On September 16, 2009, the Agency filed its Post Hearing Brief. (Ag. Br.) On September 28, 2009, Ameren filed a Post Hearing Reply Brief. (Pet. Reply Br.)

Finally, the Board received four Public Comments: Mary Bates (PC #1), Prairie Rivers Network (PC #2), Joyce Blumenshine (PC #3), and Mary Ellen DeClue (PC #4).

FACTUAL BACKGROUND

The Facility

Ameren operates the Coffeen Power Station (Coffeen or Station), which is a two-unit 950 megawatt (MW) coal-fired electrical generating station employing 400 people. The Station is located on 3200 acres approximately two miles southwest of Coffeen, Montgomery County. Approximately 1100 acres of the property is dedicated to the Station's artificial cooling lake, Coffeen Lake. Pet. at 6.

From an historical perspective, planning for the Coffeen Power Station began in 1958 and construction began in 1962 after the Illinois Commerce Commission granted Central Illinois Power Service (CIPS) a Certificate of Public Convenience and Necessity. In 1963, Coffeen Lake was created as an artificial impoundment to provide a source for the Station's once-through cooling water. Pet. at 7. Unit No. 1 went into service in 1965 and Unit No. 2 in 1972, providing 360 MW and 590 MW of electrical generating capacity, respectively. Pet. at 7. On May 1, 2000, CIPS transferred the ownership of its coal-fired generating stations, including the Coffeen Power Station to Ameren.[11] Pet. at 1.

Coffeen Lake as a Cooling Water Resource

[11] In March 2000, Ameren Energy Generating Company was incorporated in Illinois in conjunction with the Illinois Electric Service Customer Choice and Rate Relief Law of 1997. CIPS continues to own and operate electric and gas distribution utility services in central Illinois. Both CIPS and Ameren are subsidiaries of Ameren Corporation. Pet. at 1.

Coffeen Lake was created in 1963 as an artificial impoundment to provide a source for the Station's once-through cooling water. Pet. at 7. Ameren explains that Coffeen Lake was formed by damming the McDavid Branch of the East Fork of Shoal Creek approximately two miles directly south of the Village of Coffeen. With a watershed area of approximately 18 square miles, the lake discharges over a spillway to the East Fork of Shoal Creek. According to Ameren, Coffeen Lake experiences extended periods of low water levels. Ameren states that , "[s]everal months often lapse without a discharge over the spillway. Prior to an overflow on April 11, 2008, the lake had not discharged to the East Fork of Shoal Creek since May 2005." Pet. Exh. 10 at 2.

The Station obtains cooling water from the western arm of the lake. The cooling water passes through condensers to dissipate waste heat from both Units 1 and 2 at the Station and is then discharged back into the eastern arm of Coffeen Lake. Pet. at 11-12. Ameren indicates the path of cooling water from discharge to intake is 4.1 miles, taking 7 to 10 days to complete, depending on the number of pumps operating and the lake level. Pet. at 12.

Coffeen Lake as a Recreational Resource

Ameren states that although Coffeen Lake was created to provide cooling water to the Station, the lake has also become a resource for recreational fishing, boating, camping, hunting, and trapping. Pet. at 7. In 1986, Ameren recounts that CIPS and the Illinois Department of Conservation (now known as the Illinois Department of Natural Resources (IDNR)) entered into a Lease Agreement allowing for conservation and public recreation in certain portions of Coffeen Lake and the surrounding property. Under the Lease Agreement, the parties recognized the need to restrict and regulate public use to avoid conflict with the then current and future operation of the Station. At the time, CIPS and the Department of Conservation developed a "Site Development Management Plan" that set aside certain recreational areas for public fishing and boating. *Id.* Since September 1999, Ameren states that hunting and trapping have also been allowed. Also in 1986, a Sublease Agreement between CIPS and the Department of Conservation and the Indian Grove Campground allowed additional public recreation on the west side property of Coffeen Lake. Pet. at 8.

Thermal Control Equipment In Use

As previously stated, Ameren's discharges are governed by NPDES Permit IL 0000108, which includes the current thermal standards as Special Condition No. 5. Pet. at 2, Pet. Exh.1.

Since 2000, Ameren has undertaken capital projects to enhance cooling capacity. In 2000, Ameren developed a 70-acre supplemental cooling basin at a cost of $20,734,000. In 2002, Ameren installed a 48-cell helper cooling tower structure at a cost of $6,833,000. Pet. at 12. Ameren states that both the supplemental basin and cooling tower structure are used to condition the circulating water temperature to meet the mixing zone limits. *Id.* In 2007, Ameren experimented with solar-powered aerators ("solar bees") to stimulate circulation of water from lower depths to the surface. Pet. at 27. These aerators, which are still in operation today, were installed at a capital cost of $120,000. *Id.*

Other Environmental Projects at the Station

The Station has the ability to utilize both Illinois basin coal and western Powder River Basin (PRB) coal. In order to burn Illinois coal, Ameren states that significant environmental projects are planned for construction at the station over the next three years.

Ameren recently installed selective catalytic reduction (SCR) on both units at the Station to remove NO_x (nitrogen oxides), investing approximately $100 million in capital costs. Currently, Ameren is installing flue gas desulphurization (FGD) systems to remove SO_2 (sulfur dioxide) with an investment of over $600 million in capital. Tr. at 18. Ameren states that SO_2 scrubbers will be in place by the end of 2009, which will operate throughout the year to also reduce mercury emissions. Pet. Br. at 31.

History of Thermal Standards at Coffeen Lake

In 1978 and 1982, the Board granted alternative thermal standards for the Coffeen artificial cooling lake when it was under the ownership of CIPS in PCB 77-158, PCB 78-100 (cons.). Later in 1997, CIPS identified the need for a variance (PCB 97-131) when Coffeen adjusted its maintenance schedule to reduce costs. Historically, CIPS was able to meet the applicable thermal standards during May and October because either one or the other of the units at Coffeen were scheduled for extended annual maintenance outages during either May or October.

In the 1980s, CIPS converted from a twelve- to an eighteen-month maintenance schedule to reduce costs. The change to the maintenance schedule no longer provided a reduction in heat loading for the months of May and October. PCB 97-131, slip op. at 2 (June 5, 1997). The Board granted CIPS the 5-year thermal variance for the months of May and October, allowing higher temperatures than requested in the instant petition. CIPS expected to return to the Board 3 years later for permanent relief, however, the variance was suspended after 2 years when a fish kill occurred during July 1999. At that time, the thermal standards for May and October reverted to the previous limits under PCB 77-158/PCB 78-100, and Coffeen has relied on operational constraints and additional cooling capacity to reduce effluent temperatures since then. Pet. Exh. 11 at 1-2.

Continuing Compliance Issues at Lake Coffeen

Ameren states that to meet the current standards during times of hot, dry weather conditions and low lake levels, Ameren has scheduled planned outages and extended forced outages. Pet. at 4. Despite the enhancements that were made to the cooling system since 2000 (70-acre supplemental cooling basin and helper cooling towers), Ameren contends that the Station continues to experience loss in generation capacity during high station power output and hot weather, specifically in May and October. Pet. Exh. 15 at 5. Ameren states that at times of unseasonal warm temperatures and lack of rain, the lake level has been down by 8-10 feet. Tr. at 15, Pet. Exh.10 at 2. In order to comply with the current standards, Ameren has resorted to de-rating the Coffeen Power station in past years, resulting in a financial loss of over $5 million since 1999. Ameren is forecasting an increase in generation within the next few years from 950

MW to 1026 MW. Ameren estimates capital costs for additional cooling capacity would range from $13,053,000 to $18,266,000. Exh. 15 at 13. Ameren seeks to modify its current thermal standards for the months of May and October only.

AMEREN'S PROPOSED THERMAL STANDARDS

In the original petition, Ameren proposed the following alternative thermal standards for adoption by the Board based on the limits derived by Sargent & Lundy. Sargent and Lundy was commissioned by Ameren to assess engineering alternatives to meet the current thermal limits based on both current Station capacity as well as forecasted increases in future capacity. Pet. at. 6, Exh. 15 at 12.

> The thermal discharge to Coffeen Lake from Ameren's Coffeen Power Station shall not result in a temperature, measured at the outside edge of the mixing zone in Coffeen lake, which:
>
> 1. Exceeds 105 degrees Fahrenheit as a monthly average, from June through September, and 112 degrees Fahrenheit as a maximum for more than three percent of the hours during that same period.
>
> 2. Exceeds 89 degrees Fahrenheit as a monthly average, from November through April, and 94 degrees Fahrenheit as a maximum for more than two percent of the hours during that same period.
>
> 3. Exceeds 96 degrees Fahrenheit as a monthly average, in each of the months of May and October, and 102 degrees Fahrenheit as a maximum for more than two percent of the hours in each of those same months. Pet. at 6.

In Ameren's post hearing brief, Ameren modified the above language to incorporate an agreement between Ameren and the Illinois Department of Natural Resources. Ameren clarifies that the proposed thermal limits apply to the near-surface temperatures at the boundary of the 26-acre mixing zone, as follows: Pet. Br. at 15.

> (A) The thermal discharge to Coffeen Lake from Ameren Energy Generating Company's Coffeen Power Station shall not result in a temperature, measured at the outside edge of the mixing zone in Coffeen Lake, which:
>
> 1. Exceeds 105 degrees Fahrenheit as a monthly average, from June through September, and 112 degrees Fahrenheit as a maximum for more than three percent of the hours during that same period.
>
> 2. Exceeds 89 degrees Fahrenheit as a monthly average, from November through April, and 94 degrees Fahrenheit as a maximum for more than two percent of the hours during that same period.

3. Exceeds 96 degrees Fahrenheit as a monthly average, in each of the months of May and October, and 102 degrees Fahrenheit as a maximum for more than two percent of the hours in each of those same months.

(B) Ameren and IDNR will monitor Coffeen Lake during the period May through October for fish mortality. In the event excessive fish mortality occurs during these months, Ameren shall implement appropriate mitigation measures including the following:

1. Immediately notify the IDNR;

2. Maximize operation of the cooling basin and existing cooling towers to reduce thermal temperatures;

3. Make operation revisions to the station's typical dispatch order (e.g. "last on and first off");

4. Reduce nighttime capacity factors;

5. Monitor intake and discharge temperatures and visually inspect intake and discharge areas; and

6. No later than November 15 of each year, document mitigation measures employed during periods of excessive fish mortality.

Pet. Br. at 37-38.

In addition, Ameren stated if the requested relief is granted, Ameren and IDNR have agreed to a draft Memorandum of Understanding (MOU) to conduct additional studies on Coffeen Lake and the fishery. Resp. to Hearing at 5. The draft MOU includes provisions for: (1) Fish Population and Behavior Status Monitoring Studies, (2) Fish Stocking Pilot Study, (3) Annual Summary Data Report, (4) Corrective Action – Fish Mortality. Pet. Resp. to Hearing, Exh. C.

While the Agency's recommends that the Board deny Ameren's petition, the Agency suggests that if relief is granted to Ameren, conditions should include requirements to demonstrate that the relief will not result in violations of other water quality standards as required by 302.211(j)(2). In particular, the Agency states that Ameren has not been required to monitor discharges *from* Coffeen Lake. Ag. Br. at 7-8.

AMEREN'S PRESENTATION IN SUPPORT OF ITS ACL DEMONSTRATION

Provision of Conditions Capable of Supporting Shellfish, Fish and Wildlife, and Recreational Uses Consistent With Good Management Practices (35 Ill. Adm. Code 106.202(b)(1)(A) & 302.211(j)(3)(A))

Thermal Environment of Coffeen Lake

Ameren states that water temperatures and dissolved oxygen concentrations have been monitored by SIUC since 1997 at various depths and locations within Coffeen Lake. Pet. at 13. According to SIUC, average daily temperatures at the edge of the mixing zone in May and October have been typically 80 to 90°F, exceeding the 96°F limit on occasion, while maximum daily temperatures have not exceeded the 102°F limit during May or October. During July and August, water temperatures at the edge of the mixing zone have occasionally exceeded 100°F following seasonal weather patterns. Temperatures at the plant intake tend to be 10 to 15 degrees cooler than temperatures at the edge of the mixing zone during the period of May through October. Pet. at 13. The SIUC data also show that both temperature and dissolved oxygen in the lake is vertically stratified during the summer months, especially in the deeper parts of the lake. Pet. at 13-14.

Ameren states that Coffeen Lake is capable of supporting shellfish, fish, and wildlife, and recreational uses consistent with good management practices as required by Sections 106.202(b)(1)(A) and 302.211(j)(3)(A). Pet. at 20. Over the past 40 years since the Station has been operating, water temperatures have repeatedly occurred at or above the proposed thermal limits (96°F and 102°F). Despite the occurrence of higher temperatures, Ameren states

> Coffeen Lake supports abundant and diverse wildlife, including muskrat, turtles, heron and mussels. It also supports a robust fishery, comprised of 22 species of fish, and is well known as the home of numerous competitive sport-fishing tournaments. *Id.*

ASA Report Generally

Ameren relies on the report by ASA (Pet. Exh. 11) to demonstrate the capability of Coffeen Lake to support shellfish, fish, and wildlife, and recreational uses. Ameren commissioned ASA to evaluate the potential ecological impacts from proposed modifications to the current site specific thermal standards in Coffeen Lake. ASA produced the report entitled, "Evaluation of Potential Adverse Impacts from Revised Site-Specific Thermal Standards in May and October for Coffeen Lake" (ASA Report) dated March 2008. The ASA Report is based on extensive studies of the thermal impacts of the Coffeen Power Station on the biota of Coffeen Lake. *See* Pet. Exh. 11 at 6-1 to 6-6. The ASA Report provides "an overview of the evidence supporting the conclusion that raising the thermal limits for the months of May and October presents minimal additional risk to fish populations in the lake." Pet. Exh. 11 at 1-1.

Dr. McLaren of ASA conducted an exhaustive examination of data collected by SIUC, IDNR, INHS, and Ameren. Pet. Br. at 8. As the most recent source of information, the ASA Report relied on the 1997-2006 studies conducted by SIUC. Pet. Resp. to HOO at 3, Pet. Exh. 11 at 3-1. The SIUC studies were conducted to comply with the conditions of the 5-year variance granted in 1997 in PCB 97-131. *Id.* The SIUC data was supplemented by data collected by IDNR during the same years. Tr. at 27. Dr. McLaren commented that having this amount of long-term data collected is unusual and very fortunate in assessing the effects of the thermal regime on the fish. Tr. at 28.

ASA explains that in an assessment, the general practice is to select only certain species for detailed analysis, which are referred to as "representative important species" (RIS) [12]. RIS are chosen because they "(1) are important because of their societal or ecological value, and (2) can adequately represent other species not studied to the same extent." Pet. Exh. 11 at 3-1. Following the extensive studies conducted during 1978-1981 (Tranquilli and Larimore 1981)[13] and 1997-1999 (Heidinger et al. 2000)[14], SIUC selected three fish species as RIS to be monitored on an annual basis thereafter for compliance with the 1997 thermal variance: Largemouth Bass, Bluegill, and Channel Catfish. Pet. Exh. 11 at 3-1. IDNR concurred with the selection of the three RIS while approving the studies in 1997. Resp. to HOO at 3-4.

The ASA Report focused on the three RIS selected by SIUC. Pet. at 21-22. Dr. McLaren of ASA explains that these three are appropriate RIS, "because IDNR manages these species and because they are recreationally important species, self-reproducing, and predatory species that reflect the status of lower trophic levels."[15] Tr. at 158, Pet. Exh. 3. Since SIUC focused on these same three species in its multi-year studies, the collective body of research represents a long-term database from which to assess the thermal effects of these species of fish. Pet. Br. at 9.

Although Ameren lists white crappie among the game species present in Coffeen Lake, white crappie was not selected as a RIS because only a couple were caught during the study. In addition, while the other three RIS populations are sustained entirely by natural reproduction, the white crappie has typically only been stocked. Pet. Resp. to HOO at 4.

The ASA Report notes that the effects of the proposed thermal standards on fish populations in Coffeen Lake were evaluated using two types of assessments: (1) a "retrospective" assessment that examines past studies on Coffeen Lake, and (2) a "prospective" assessment that predicts how the lake's thermal environment might be altered under the proposed revised standards and how the fish might adapt. Pet. Exh. 11 at 1-2. These assessments are described below.

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[12] Representative, Important Species (RIS) is defined in the USEPA "Interagency 316(a) Technical Guidance Manual and Guide for Thermal Effects Sections of Nuclear Facilities Environmental Impact Statements" (May 1, 1977) at page 78-79.

[13] Tranquilli, J.A. and R.W. Larimore (eds). 1981. Final report to Central Illinois Public Service Company. Part I: Environmental studies of Coffeen Lake, a thermally-altered reservoir. INHS, Urbana, Illinois. July 1981.

[14] Heidinger, R., R. Sheehan, and R. Brooks (eds.). 2000. Ameren/CIPS Newton and Coffeen Lakes Research and Monitoring Project Status Report. Fisheries & Illinois Aquaculture Center, Southern Illinois University at Carbondale. November 2000.

[15] Trophic Level: "A feeding stratum in a food chain of an ecosystem characterized by organisms that occupy a similar functional position in the ecosystem." The American Heritage Dictionary. Second College Edition. 1982.

ASA's Retrospective Assessment

In the "Retrospective Assessment", ASA examined data collected from 1997 to 2006 by IDNR, SIUC, and Coffeen Station. ASA explains the retrospective assessment is presented "to evaluate how the populations have adapted to the recent thermal environment in the lake." Pet. Exh. 11 at 1-3. In many respects,

> A retrospective assessment provides the strongest evidence of the long-term effects of periodically higher water temperatures in that it integrates all aspects of the thermal environment on the life cycle for the fish species and the lower trophic levels in the lake, such as phytoplankton, epiphyton, macrophhytes, zooplankton, and benthos. *Id.* at 3-1.

At hearing, Dr. McLaren further explained,

> We found that the survival and growth of the early life stages, the eggs and the larvae, particularly for largemouth bass, apparently are improved by the stable warmer temperatures that occur in the late winter and early spring, and are improved by the prolonged growth season that results from the thermal discharge to the lake." Tr. at 30.

Largemouth Bass. For largemouth bass, the ASA Report states, "the fishery for it is considered to be exceptional." Pet. Exh. 11 at 3-2. The ASA Report cites to evidence that spawning of largemouth bass occurs earlier in Coffeen Lake than in other regional lakes. In terms of recruitment, the ASA report states, "Earlier spawning can impart benefits that last throughout the first year of life." Pet. Exh. 11 at 3-3. Based on several historical studies, ASA concludes, "it is apparent that elevated water temperatures in Coffeen Lake should benefit the largemouth bass population overall in terms of reproduction, growth, and survival." Pet. Exh. 11 at 3-4.

Bluegill. The ASA Report observed a prolonged spawning season in Coffeen Lake for bluegill, from April to October in the eastern arm of the lake and May to October in the western arm. Pet. Exh. 11 at 3-6, 3-7. However, the ASA Report states, "The influence of water temperatures on bluegill growth in Coffeen Lake is unclear." Pet. Exh. 11 at 3-7. During the five-year period from 1999-2003, within the range of temperatures experienced in Coffeen Lake, "the thermal environment appeared to have no effect on the first year growth rates." Pet. Exh. 11 at 3-7. The ASA Report goes on to state, "There is evidence that competition for food is limiting growth of bluegills in Coffeen Lake, resulting in a stunted population." Pet. Exh. 11 at 3-7. This competition appears to be related to the increasing survival of other small fish (sunfish, gizzard shad, and threadfin shad). The ASA Report attributes the increasing survival to the abundance of submerged macrophytes[16] in Coffeen Lake that provides refuge from predation for these smaller fish. *Id.*

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[16] Macrophyte: "A macroscopic plant in an aquatic environment." The American Heritage Dictionary. Second College Edition. 1982.

Channel catfish. ASA Report notes that the 2001 creel survey by the INHS indicated that channel catfish is the most frequently harvested fish species in Coffeen Lake. As to the effect of temperature, the ASA Report concluded that the "annual changes in the thermal environment had no effect on the condition of channel catfish in Coffeen Lake." Pet. Exh. 11 at 3-8. The ASA Report observes, "The length at age for channel catfish in Coffeen Lake falls within the range of values for other channel catfish populations studied in rivers, lakes, and other reservoirs in the Midwest or South…" Pet. Exh. 11 at 3-8.

ASA's Prospective (Predictive) Assessment

The ASA Report (Exh. 11) also contains a "Prospective Assessment" where ASA predicts how the proposed standards might alter the thermal environment of the lake during the months of May and October. Pet. Exh. 11 at ES-1. ASA assessed the thermal tolerances and requirements of the three RIS (largemouth bass, bluegill, and channel catfish) in relation to the proposed thermal standards for May and October. Pet. at 24. ASA points out that the proposed thermal limits would apply to near-surface water temperatures at the edge of the mixing zone. These temperatures represent the warmest temperatures to which fish and other organisms would be exposed outside the mixing zone. Even when temperatures approach the thermal limits of 96°F and 102°F, ASA observes that at other locations in the lake and at greater depths, the water temperatures would be in the 80s (°F) or lower, "well within the range of temperatures tolerated by RIS life stages…". Pet. Exh. 11 at 4-1, Pet. Br. at 16. Dr. McLaren testified, "Diversity in water temperatures exist in the eastern and western arms of Coffeen Lake, and at depth, providing adequate refuge; such temperature diversity would be advantageous to all fish species." Hearing Exh. 2 at 10. Further, the ASA report states that the results of electrofishing conducted in August 1995 indicate that juvenile and adult fish will avoid the highest temperatures in or near the thermal plume in the eastern arm of the lake and move away from the discharge areas. Pet. Exh. 11 at 4-1 - 4-2.

ASA also used the results of the thermal modeling conducted by Sargent & Lundy, LLC to show that warmer May temperatures do not necessarily result in a carryover effect in later months. Pet. at 25, Pet. Exh. 11 at 5-1. ASA used the concept of "degree days" [17] to "reflect longer term, cumulative effects of temperatures." Pet. at 14, Exh. 11 at 2-4. Based on the ASA Report, Ameren states, "[T]he SIUC data indicate that raising water temperature in the mixing zone during May via higher thermal limits will not necessarily result in warmer temperatures throughout the remainder of the summer." Pet. at 14. ASA found, "the meteorological conditions are the controlling factors of the temperature… The lake dissipates heat through

[17] The ASA Report explained:

> Monthly and seasonal degree-days were determined by computing the difference between mean daily temperatures and 60°F (15.6°C) and summing these differences over the desired period of time, i.e., individual month or season (*e.g.*, May-October). A threshold temperature of 60°F was chosen because it represents the minimum temperature for largemouth bass spawning (Heidinger 1975) and a reasonable, if not conservative, lower limit for growth." Pet. Exh. 11 at 2-4.

surface exchange with the atmosphere. That's influenced by ambient air temperatures, relative humidity, wind and wave reaction and solar radiation." Tr. at 32.

In summary, the ASA Report states that the proposed standards for the transition months of May and October "would more realistically reflect a natural thermal environment, where temperatures increases or decreases occur more gradually than the abrupt change inherent in the existing site-specific standards." Pet. Exh. 11 at 5-1. With the current thermal standards, Dr. McLaren explained, "There can be a very rapid increase in the water temperature at the end of May when you transition from the non-summer to the summer limits. And this can be a very stressful thing, and it certainly is not a natural situation." Tr. at 37. Dr. McLaren added that a more gradual shift in temperature provides more opportunity for fish to acclimate and move to areas with more suitable temperatures. Tr. at 196-197, Pet. Br. at 15.

ASA maintains that the warmer temperatures during May and October also tend to promote fish survival and growth. ASA cites to the exceptional largemouth bass fishery which has resulted from the earlier spawning and a prolonged growing season. ASA suggests the proposed thermal standards "would easily be tolerated" by largemouth bass. Pet. Exh. 11 at 5-1. For bluegills, ASA observes that spawning success at these temperatures is demonstrated by the abundance of small bluegill in Coffeen Lake. Id. For channel catfish, ASA finds that the warmer water temperatures during the spring months also contribute to a prolonged growing season, leaving juvenile fish which are less temperature sensitive. Id. at 5-2. Dr. McLaren testified that Ameren's proposal "lengthens the growing season for the fish. It gives them a better ability to bulk up for the winter [and] probably better over[-]winter survival to attain larger growths." Tr. at 168, Pet. Br. at 11.

The ASA Report concludes, "Since the range of temperatures occurring in the summer have not influenced recruitment, growth, or relative weight for these three species annually, it is even less likely that the detrimental effects could result from temperatures that would be experienced in May and October under the revised standards." Pet. Exh. 11 at 5-2. In addition, ASA finds that the food supply supported by the lower trophic levels in the lake (i.e. phytoplankton, epiphyton, and macrophytes, zooplankton, benthos, and phytomacrobenthos) are also adapted to the thermal environment and should not be affected by the proposed thermal standards. Pet. Exh. 11 at 5-2. ASA cites to the intensive monitoring of the fish populations in Coffeen Lake by SIUC and IDNR to demonstrate "that the fish populations have adapted and thrived in the thermal environment of the lake." Pet. Exh. 11 at 5-2.

Finally, ASA states that fish kills are unlikely to result from the proposed thermal standards. The conditions contributing to the previous fish kills (warmest temperatures, lake stratification, and depleted dissolved oxygen) would not be expected to occur during either May or October even under the proposed thermal standards. Pet. Exh. 11 at 5-3. Ameren adds that even if such conditions did occur, Ameren would be required to de-rate to comply with the proposed limits for these months. Pet. Br. at 12.

Control of the Thermal Component of the Discharger's Effluent by a Technologically Feasible and Economically Reasonable Method (35 Ill. Adm. Code 106.202(b)(1)(B) & 302.211(j)(3)(A))

Current Methods of Control

Currently, Ameren uses good management through scheduled maintenance, de-rating, and various cooling system enhancements to maintain compliance with the thermal limits. Pet. at 25-26. Since 2000, Ameren has invested in several cooling system enhancements. In 2000, Ameren constructed a 70-acre cooling basin at a capital cost of $20,734,000. In 2002, Ameren constructed a 48-cell cooling tower with a flow capacity of 200,000 gallons per minute (gpm) at a capital cost of $6,833,000 million. In 2007, Ameren experimented with solar-powered aerators ("solar bees"), which are still in operation today, at a capital cost of $120,000. Pet. at 27, Resp. to Hearing at 1. The total capital cost of the cooling system enhancements amounts to $27,687,000 to date. Pet. at 27.

With these enhancements, Ameren states that the only challenge remaining is meeting the thermal limits in the months of May and October when summer transitional temperatures are coupled with high energy consumption. Pet. at 27-28. To maintain compliance with the current thermal limits, Ameren uses a variety of operational practices at Coffeen Station in combination with the cooling system. Ameren has historically scheduled planned outages during May and October to reduce the heat loading to Coffeen Lake during those months. Ameren has also de-rated the units at the Station during evening hours and lowered the load over the weekends. Since 1999, Ameren has resorted to de-rating 64 times, resulting in costs totaling $5,584,477.17 and substantial financial hardship. Pet. at 28, Pet. Exh. 14. Without the requested relief, Ameren argues that as demand on the system increases in the future, the Station will be required to shut down or de-rate on a regular basis in order to comply with the monthly average requirements of the thermal limits in the NPDES permit. Pet. at 28. The cost of de-rating averages $2.4 million per year under forecasted operation. Pet. Exh. 15 at 8-10.

Alternatives for Compliance

As previously stated, Ameren commissioned Sargent & Lundy, LLC to assess engineering alternatives to meet the current thermal limits based on both current Station capacity as well as forecasted increases in future capacity. Pet. at 29, Pet. Exh. 15. The current maximum plant gross electrical output is 950 MW, running with an average 82% capacity factor, which is the ratio of the actual output of a power plant over a period of time and its output if it had operated at full nameplate capacity *(i.e.* manufacturer's recommended capacity) for the entire time. Electrical output is forecasted to increase to 1,026 MW with a 90% capacity factor. Pet. Exh. 15 at 5. The Sargent & Lundy Report points out that Coffeen Lake was originally designed to provide cooling capacity equivalent for operation of a 1,000 MW station with a 70% capacity factor. Pet. Exh. 15 at 5. Despite the enhancements that were made to the cooling system (70-acre supplemental cooling basin and helper cooling towers), the Station continues to experience loss in generation capacity during high station power output and hot weather, specifically in May and October. Pet. Exh. 15 at 5.

Thermal Lake Modeling: Sargent & Lundy used its own thermal lake modeling software program to evaluate the thermal performance of the Coffeen cooling system. The model was benchmarked with actual plant operating data and historic weather conditions and run to predict the response of the cooling system to the forecasted increases in capacity. Sargent & Lundy explains that when there is insufficient capacity in the cooling system to adequately pre-cool that water, the Station's generation is reduced. Exh. 15 at 6. The evaluation of the model showed a gradual increase in lost capacity factor over time, from 12% in 1980 to 21% in 2007, averaging 16% per year with a corresponding loss of $2,334,000 per year (based on 2007 dollars). *Id.* at 7. Ameren states that this is a trend that is not economically reasonable for Ameren to sustain. Based on the weather conditions experienced in 2007 that resulted in the majority of recent de-ratings, the model shows that the Station would experience a 34% loss in capacity factor under the forecasted increase in capacity, resulting in a theoretical loss of $5 million in revenue. Pet. at 29, Pet. Exh. 15 at 7, Pet. Exh. 14, Pet. Br.at 27.

Identified Compliance Alternatives: Sargent & Lundy evaluated several alternatives to improve the performance of the cooling system to meet the current thermal limits without resorting to de-rates.

1. Utilize existing system as-is with continued de-ratings
2. Install additional cooling towers
3. Add cooling basin capacity
4. Modify the Station to utilize a closed-cycle cooling tower
5. Modify the Station to utilize an air-cooled condenser on one or both units
6. Utilize the entire length of Coffeen Lake

Pet. Exh. 15 at 7.

Based on the evaluation, Sargent & Lundy concluded that only Options 1 and 2, above, to be technically feasible . Pet. at 30-31, Pet. Exh. 15 at 8-10. Although Option 1 is technically feasible, this option involves continued de-rating of units, which Ameren has stated imposes a substantial financial hardship. The cost to Ameren to de-rate 64 times during the period from January 1999 through September 2007 was $5.584 million, and costs to do so in future will only increase, averaging some $2.3 million per year under forecasted operations. Pet. at 28 and Exh. 15 at 8-10.

As for Option 2, the corresponding capital costs for the installation of additional cooling towers range from $13,053,000 for a 100,000 gpm cooling tower to $18,266,000 for 175,000 gpm. However, the least cost cooling tower option would still result in lost generation through de-rates. Pet. Exh. 15 at 13. Ameren states that even the scaled-down cooling towers at $13 million would be prohibitively expensive and would not obviate the need to de-rate in May and October. Pet. at 32. Considering capital and operating and maintenance costs, Ameren's initial prediction was that it would not recover its costs from installation of the cooling towers for 9 to 11½ years. Pet. at 33, Pet. Exh. 5 at 3. After rerunning the cost analysis with more recent data, Ameren shows that the 11½ year cost recovery time for this option would actually outlast the operating life of the cooling tower itself. Pet. Resp. to Rec. at 16. The updated analysis indicates that revenues and energy margins from the projected increase in power generation capacity will never recover the high up-front cost for this option. *Id.* at 17, Pet. Resp. to Hearing at 1-4.

Given the minimal reduction in temperature achieved by the alternative options, including de-rating, Ameren asserts that none of them are technically feasible and economically reasonable. Pet. at 33. Ameren states that relief from the current thermal limits is critical to maintain compliance and operating capacity. Ameren emphasizes that Ameren has already invested over $27.6 million in capital costs to enhance the cooling system just since 2000. *Id.* Ameren states, "Given the minimal environmental impact the requested relief would have on Coffeen Lake, the modified limit Ameren requests for May and October is the only economically reasonable alternative available." Pet. Br. at 2-3.

Economic Impact on Retail Customers

Ameren notes that in 1997, the Illinois electric markets and electric industry were restructured under the Illinois Electric Service Customer Choice and Rate Relief Law of 1997, 220 ILCS5/16-101–16-130 (2008). Pet. at 14. Ameren now competes to sell energy as well as capacity in the wholesale electricity markets. Ameren explains that functional control of the transmission facilities and wholesale markets is under the Midwest Independent System Operator (MISO), which covers all or parts of 11 states in the upper Midwest. As Ameren states, "MISO selects the lowest bid prices consistent with the need to have generators operating throughout the region to maintain reliability of the grid." Pet. at 15.

Because of the new market structure, Ameren explains that Coffeen's capacity and ability to deliver energy to the market directly impacts the market prices for electricity in Illinois. Pet. at 15. Ameren states that Coffeen is a baseload plant and currently among the most inexpensive power available in Illinois. If Coffeen's generating capability is reduced, Ameren asserts that the market must rely on higher-cost generating resources to serve the electricity demand, increasing the wholesale market price of electricity for the region. Retail customers will also feel these impacts in the daily and hourly market prices as well as in the longer term. Pet. at 16.

In addition, Ameren speaks to Coffeen's role in meeting growing demand for electricity. During 2002 through 2006, Coffeen operated with an average annual net generation of 66 percent of its 950 megawatts per hour (MWh) capacity. Pet. at 17. Anticipating a continuing demand for growth, Ameren is planning to increase the capacity utilization of Coffeen toward 90 percent by 2011. *Id.*. At the same time, Ameren notes that the energy demands of new air pollution control equipment (such as selective catalytic reduction) and flue gas desulfurization) would reduce Coffeen's net output by an estimated 22.6 MWh. *Id.*

Ameren states, "In summary, maximizing the availability of Coffeen Station to supply capacity and electricity to the wholesale electricity market in Illinois and the Midwest will insure to the benefit of retail electricity consumers in Illinois." Pet. at 17.

All Discharges from the Artificial Cooling Lake to Other Waters of the State Comply with the Applicable Provisions of Subsections (b) through (e) (35 Ill. Adm. Code 302.211(j)(1))

As for the requirements under 302.211(j)(1), Ameren states, "Ameren will ensure that such discharges comply with the applicable provisions of Section 302.211(b)-(e). Pet. at 35. As noted later, based on a suggestion by the Agency, Ameren states that it would not object to including a condition consistent with this requirement in the relief if granted. Pet. Reply Br. at 8.

The Heated Effluent Discharged to the Artificial Cooling Lake Complies with All Other Applicable Provisions of this Section, except Subsections (b) through (e) (35 Ill. Adm. Code 302.211(j)(2))

As for the provisions of 302.211(j)(2), Ameren simply states, "Ameren will ensure that such discharges comply with all other water quality criteria, except the provisions of Section 302.211(b)-(e), by relying on the results of monitoring required by its NPDES permit." Pet. at 35.

Consistency with Federal Law

Ameren states that Section 402 of the Clean Water Act (CWA), 33 U.S.C. 1342, requires thermal discharges to be permitted under the NPDES requirements. Pursuant to Section 301 of the CWA (33 U.S.C. 1311), the NPDES permit requirements include any applicable state standard. The state standard at issue here is the thermal standard adopted in PCB 77-158 that was included in Coffeen Station's NPDES permit as Special Condition No. 5. Pet. at 36.

Ameren goes on to state that under Section 316(a) of the CWA, the Board can establish alternative thermal standards based on a demonstration that the alternative standard will "assure the protection and propagation of a balanced, indigenous population of shellfish, fish and wildlife in and on that body of water." [33 U.S.C. 1326(a)] Ameren states that this standard is consistent with the Board's rules at 302.211(j)(3)(A). Pet. at 36.

AGENCY RECOMMENDATION TO DENY AND CONCERNS

On April 27, 2009, the Agency filed its recommendation that the Board deny Ameren's request for modification of the site specific thermal standards. Rec. at 1. The Agency states that Ameren has not demonstrated that the proposed thermal limits would provide conditions capable of supporting shellfish, fish and wildlife. Rec. at 9. Specifically, the Agency believes the petition fails to address the impacts of the proposed thermal standards on: (1) temperature and dissolved oxygen in Coffeen Lake, (2) total phosphorus and mercury levels in Coffeen Lake, and (3) lake habitat. Rec. at 1. The Agency also contends that Ameren has not demonstrated that alternatives to the proposed thermal limits are technically infeasible and economically unreasonable. Rec. at 20.

Conditions Capable of Supporting Shellfish, Fish and Wildlife, and Recreational Uses (35 Ill. Adm. Code 106.202(b)(1)(A) & 302.211(j)(3)(A))

Temperature and Dissolved Oxygen

The Agency states that Ameren has failed to demonstrate that the proposed thermal limits will provide conditions "capable of supporting shellfish, fish and wildlife" as required by 106.202(b)(1) and 302.211(j)(3)(A). Rec. at 9-10. The Agency reviewed the ASA Report in combination with the SIUC studies and does not agree with Ameren's interpretation of the results and conclusions. Rec. at 10. The Agency cites to the SIUC Report (March 2007) which documents fish kills in 1999, 2001, 2002 and 2005 and attributes the cause to (1) ambient conditions such as hot air temperatures combined with high discharge water temperatures and low dissolved oxygen, and (2) habitat erosion wherein small fish were trapped in a thermal refuge area that was eroded by prolonged periods of heated discharge. Rec. at 10, Ag. Exh. 1.

The Agency cites to the 2007 SIUC Report that describes the conditions contributing to the fish kills. Rec. at 10-11, citing Ag. Exh. 1 at 9-13:

> The 1999 fish kills were likely induced by a combination of elevated discharge water temperatures, prolonged periods of relatively hot air temperatures (which reduced the cooling capacity of the lakes and increased water temperatures at most depths throughout the lakes) and low levels of dissolved oxygen due to atmospheric conditions (which also induced fish kills in local ambient lakes).
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> * * *
>
> Fish kills of smaller magnitudes also occurred in the two reservoirs [Coffeen Lake and Newton Lake] during the study. Those kills were likely more directly associated with water mixing zone temperatures....This phenomenon, described as eroded fish habitats, results in smaller but more frequent fish kills such as occurred in 2001, 2002, and perhaps in Coffeen Lake in August 2005.
> 2007 SIUC Report at 9-10.

Referring to the 2004 SIUC Report, the Agency points out that SIUC concluded that extremely warm water temperatures during June through September may be lethal to fish species. Rec. at 11, referring to Ag. Exh. 2 at 3. The Agency states that during periods of high ambient temperatures, Coffeen Lake is heated to depths where dissolved oxygen is too low to support aquatic life leading to fish kills. Rec. at 11.

The Agency relied on the temperature data from the 2007 SIUC Report to evaluate the lake conditions during the 1999 fish kill. The Agency notes that during the time period of the 1999 fish kill, the hourly surface temperatures at the outer edge of the mixing zone exceeded 112°F during 83 hours in 1999, with most exceedances occurring over the 9-day period between July 23 and 31. Rec. at 11. Again referring to the SIUC Report, the Agency notes that the fish kill involved the larger of the larger fish, amounting to 242 largemouth bass and 6 channel catfish. *Id.*

In July 2001, a fish kill involved 546 channel catfish, 513 *Lepomis spp*., and 65 largemouth bass. Ag. Exh. 1 at 10. SIUC associated the fish kill with mixing zone temperatures and eroded cove habitat in the mixing zone. Minimum water temperatures increased to nearly 100°F for a prolonged period of time, and mean water temperatures were high to a depth of 3 meters. Below this depth where temperatures were cooler, dissolved oxygen was limiting at the time. *Id.*

As for dissolved oxygen, the Agency suggests the proposed thermal limits may contribute to violations of the dissolved oxygen water quality standards at Section 302.206. Ag. Br. at 7. The Agency cites to testimony by Dr. Shortelle who estimated that under the proposed limits, the number of anoxic days would increase from 18 to 23 in segment 1 of the lake and from 17 to 25 in segment 2 in May, and from 1 to 13 in segment 1 and from 1 to 11 in segment 2 in October. Ag. Br. at 7, citing to Tr. at 228-229.

The Agency points out that Dr. McLaren testified that the lethal temperature end points for largemouth bass, bluegill, and channel catfish would be exceeded by the proposed thermal limits for May and October, and that the three RIS studied are heat tolerant species. Ag. Br. at 5 citing Tr. at 154. The Agency asks, "So what does that mean for other species of fish that exist in Coffeen Lake?" Ag. Br. at 5.

The Agency finds shortcomings in the ASA Report, comparing SIUC's evaluation of temperature and dissolved oxygen related to depth and ASA's evaluation of cumulative temperature expressed as degree days. Rec. at 14. SIUC monitored water temperatures, dissolved oxygen, and water depth profiles, estimating the volume of lake that was available for fish habitat as a percentage of the water depth at temperatures between 87 and 96°F and dissolved oxygen concentrations of 1 to 4 parts per million (ppm). The Agency notes that the SIUC estimation indicated "that potentially critical periods for fish existed in the lake between June and mid-September." Rec. at 15 citing Agency Exh. 1 at 5-6. Just 4 days before the July 1999 fish kill, SIUC estimated the fish habitat available at or below 94°F with at least 4 ppm dissolved oxygen was 5-10 percent. Rec.at 15-16, citing Ag. Exh. 3. SIUC stated that the dissolved oxygen/temperature profiles indicated that certain areas of Coffeen Lake could serve as refuges, "[h]owever, during extremely critical periods, even those areas would likely have critically low quality habitat." Rec. at 16, Ag. Exh. 1 at 14.

In contrast, the Agency finds the ASA Report's prospective assessment only reflects surface temperatures and considers conditions during May and October in isolation, failing to address how higher temperatures in May could exacerbate conditions leading to a fish kill. Rec. at 14. The Agency reiterates the testimony of Dr. McLaren. When asked whether other states use degree days to set water quality standards, Dr. McLaren responded "that would be a misapplication of degree days." Ag. Br. At 4 quoting Tr. at 135.

The Agency asserts that Ameren's proposed higher temperatures in May will increase the heat load to Coffeen Lake earlier in the summer, resulting in higher temperatures throughout the remainder of the season. Rec. at 14. The Agency states that Ameren does not demonstrate that higher temperatures in May will not exacerbate conditions during the summer that cause fish kills. Pet. at 19. The Agency states that Ameren has not demonstrated that the proposed higher temperature limits in May and October will not prolong the period of stratification and corresponding lower dissolved oxygen levels for fish. Rec. at 14. The Agency also states Ameren has failed to address the varying temperatures and levels of dissolved oxygen at different depths throughout the lake and the resulting impacts on fish. Rec. at 15.

Total Phosphorus and Mercury Levels

The Agency raises the issue of the impact of the proposed thermal limits on total phosphorus and mercury levels in Coffeen Lake. In the Illinois EPA's 2008 Integrated Water Quality Report, Coffeen Lake is listed as fully supporting aquatic life uses, but not supporting fish consumption and aesthetic quality uses. The cause of impairment for fish consumption was mercury. The causes of impairment for aesthetic quality are attributed to aquatic plants, total phosphorus, and total suspended solids. Pet. at 16.

Regarding phosphorus, the Agency states that allowing increased water temperatures may increase the phosphorus levels in the lake. Since increased temperatures in October prolong stratification of the lake, the Agency asserts anoxic conditions may persist, allowing more phosphorus to be released from the sediment into the overlying water. The Agency explains that this internal loading of phosphorus contributes to algal growth. Rec. at 16. The Agency cites to the testimony of Ameren's expert witness, Dr. Shortelle, who estimated the proposed standards would result in an increased internal phosphorus loading of 48 to 96 kilograms per year. Ag. Br. at 6, citing Tr. at 225. The Agency approved a Total Maximum Daily Load (TMDL) for phosphorous in Coffeen Lake in 2007. The TMDL determined that a 64 percent reduction in phosphorus loading from tributary and internal sources would be necessary to meet the water quality standard of 0.05 mg/L. The calculation of loading capacity was based on increasing the level of the lake by 3 feet. The Agency indicates Ameren had plans at one point to raise the dam to increase the level of the lake to meet increasing production needs. Rec. at 17. The Agency asserts that Ameren has not addressed the impact of the proposed thermal limits on phosphorus levels in the lake that are already a cause of impairment. Rec. at 17-18.

The Agency is also concerned about the impact of the proposed thermal limits on mercury levels in the lake. As discussed above, the Agency states that higher temperatures in May and October prolong stratification and low dissolved oxygen levels in the lake. According to the Agency, such conditions also contribute to increased production of methylmercury. Methylmercury bioaccumulates so that it is typically found in predatory fish. Rec. at 18. The Agency states that if temperatures are allowed to increase in May and October, the levels of mercury in the fish might also increase. Rec. at 18. The Agency cites to testimony of Dr. Shortelle that increasing lake temperatures may also increase methylation. Ag. Br. at 6.

Lake Habitat

The Agency argues that Ameren's petition does not adequately address impacts on lake habitat, citing to the 2007 SIUC Report attributing causes of fish kills to habitat erosion. Rec. at 10, Ag. Exh. 1 at 10 (see *infra,* p. 2 at n. 3).

The Agency points to the link in the SIUC Reports between habitat erosion resulting from high mean water temperatures and fish kills. The Agency cites to the 2007 SIUC Report describing a fish kill in another cooling lake, Newton Lake, which stated, "The prolonged high temperatures most likely caused fish mortality in a relatively small cove where the fish's thermal refuge was broken down." Rec. at 12, quoting Ag. Exh. 1 at 11. SIUC indicated that fish kills in June/July 2002 and August 2005 in Coffeen Lake "were likely a result of eroding habitat." Rec. at 12. The fish kills involved 42 largemouth bass, 64 striped bass, and small amounts of other species in 2002 and 19 channel catfish in 2005. The 2007 SIUC Report states the Coffeen Lake has cove habitats in the discharge area "where fish could easily congregate during less severe discharge temperatures and get trapped during a sudden increase of temperatures." Ag. Exh. 1 at 11.

Technologically Feasible and Economically Reasonable Methods for Achieving Compliance (35 Ill. Adm. Code 302.211(j)(3)(A))

In its recommendation, the Agency states that Ameren has not demonstrated that the alternatives are not technically feasible and economically reasonable. Rec. at 20. The Agency asserts that both de-rating and cooling towers are currently used as a means for compliance and could be expanded. Ag. Br. at 8. The Agency refers to the Sargent & Lundy Report, stating that the 175,000 gpm helper tower would allow Ameren to maintain compliance with the current thermal limits without de-rating. The Agency notes the cost for this option was estimated at $18 million with a 11½ year cost recovery. Rec. at 12. The Agency notes that at the hearing, Ameren stated that it reran the economic analysis during its annual review and determined that such an investment would actually result in a negative $2.7 million, making the investment "not economically viable." Ag. Br. at 11.

The Agency argues that Ameren's definition of economic reasonableness appears to hinge on whether an investment will result in profit, particularly whether installing supplemental cooling will allow increased power generation to realize a net profit. The Agency points out, "It will be a very rare case where environmental controls result in a profit to the regulated entity." Ag. Br. at 9. The Agency continues to argue that de-rating and supplemental cooling are both technically feasible and economically reasonable alternatives for meeting compliance. Ag. Br. at 11.

Consistency with Federal Law

The Agency points out that any relief granted to Ameren must be treated as a "water quality standard change" and will require federal approval under Section 303(c) of the Clean Water Act. Ag. Br. at 12, 15. The Agency notes that the Board regulations requiring that the showing take the form of a Section 316(a) demonstration was designed to make the Artificial Cooling Lake demonstration approvable by USEPA, thereby satisfying the conditions necessary to issue an NPDES permit. Ag. Br. at 15. The Agency states that a water quality standard change in this case could be either a site specific thermal limit or a change in use designation. Ag. Br. at 14. The Agency suggests that unless Ameren shows the site specific thermal limits will be protective of aquatic life as designated by the general use standard, then Ameren must request a change in the use designation instead. The Agency argues that the requested relief will not be protective of aquatic life, and Ameren has not suggested a change in use designation. Ag. Br. at 15. Therefore, the Agency believes, "Ameren has not made a sufficient showing to gain federal approval of the relief requested as a water quality standard change." Ag. Br. at 15.

Agency-Suggested Conditions of Relief

The Agency suggests that if relief is granted to Ameren, conditions should include requirements to demonstrate that the relief will not result in violations of other water quality standards. In particular, the Agency cites to 302.211(j)(1)

> j) All effluents to an artificial cooling lake must comply with the applicable provisions of the thermal water quality standards as set forth in this Section and 35 Ill. Adm. Code 303, except when all of the following requirements are met:
>
> > 1) All discharges from the artificial cooling lake to other waters of the State comply with the applicable provisions of subsections (b) through (e).

The Agency states that overflows from Coffeen Lake must comply with the conditions that

> b) There shall be no abnormal temperature changes that may adversely affect aquatic life unless caused by natural conditions.
>
> c) The normal daily and seasonal temperature fluctuations which existed before the addition of heat due to other than natural causes shall be maintained.
>
> d) The maximum temperature rise above natural temperatures shall not exceed 2.8o C (5o F).
>
> e) In addition, the water temperature at representative locations in the main river shall not exceed the maximum limits in the following table during more than one percent of the hours in the 12-month period ending with any month. Moreover, at no time shall the water temperature at such locations exceed the maximum limits in the following table by more than 1.7o C (3o F).

	o C	o F		o C	o F
JAN.	16	60	JUL.	32	90
FEB.	16	60	AUG.	32	90
MAR.	16	60	SEPT.	32	90
APR.	32	90	OCT.	32	90
MAY	32	90	NOV.	32	90
JUNE	32	90	DEC.	16	60

Specifically, the Agency states that Ameren has not been required to monitor discharges from Coffeen Lake. Ag. Br. at 7-8.

CONCERNS EXPRESSED IN PUBLIC COMMENT

The Board heard public comment at the hearing from two individuals and subsequently received four written public comments. Tr. at 249-253, PC #1-4.

Mary A. Bates expressed concerns with Ameren's proposal and the absence of any discussion regarding a planned longwall mining process which may affect the viability of the watershed feeding into Coffeen Lake. Ms. Bates explains that the Deer Run Mine is scheduled to longwall mine. The longwall mining includes a planned subsidence in the area under the McDavid Branch. PC #1 at 1. The Board notes that Coffeen Lake was formed by damming the McDavid Branch of the East Fork of Shoal Creek and has a watershed area of approximately 18 square miles. Pet. at 8.

Ms. Bates points out that if the McDavid Branch is subsided during the longwall mining process and is unable to flow into Coffeen Lake, the water feeding Coffeen Lake may be greatly diminished or eliminated altogether. PC #1 at 1. Ms. Bates stated, "The mine will subside the area above the lake watershed with the stated average in the permit application of 5.7 feet." Tr. at 249. Ms. Bates adds that the Office of Surface Mining has indicated that subsidence is not considered a mining activity, so reclamation related to the subsidence of McDavid Branch would not be required. PC #1 at 1.

Mary Ellen McClue expressed concern regarding the dissolved oxygen and mercury levels in the lake and suggested aeration and alternative energy sources be considered to protect the fishery. Tr. at 250-253, PC #4. Ms. McClue reiterated the concerns of Ms. Bate regarding the longwall mining and the potential impact on the watershed draining into Coffeen Lake. PC #4.

Prairie Rivers Network (PRN) filed a public comment echoing the concerns of the Agency with regard to phosphorus and mercury levels in the lake and the economic reasonableness of the compliance alternatives. PC #2. As to the economic reasonableness of compliance options, PRN suggests that Ameren supply a more detailed cost analysis to show that the $18 million cooling tower option is actually economically infeasible. PC 2 at 3. In addition, PRN points out that Coffeen Lake lies within the Shoal Creek watershed which contains some of the State's Biologically Significant Stream reaches. PRN quotes IDNR stating, "Stream segments identified as biologically significant are unique resources in the state and we believe that the biological communities present must be protected at the stream reach, *as well as upstream of the reach*." PC #2, quoting "Integrating Multiple Taxa in Biological Stream Rating System" by IDNR[18] (emphasis added in PC.) PRN states that deterioration of the high quality aquatic community present in Shoal Creek watershed must be prevented. PC #2 at 3.

[18] www.dnr.state.il.us/orc/biostrmratings/images/BiologicalStreamRatingReportSept2008.pdf

In addition, PRN also raises the issue of increasing the lake level by 3 feet as a way to address the thermal discharge as well as decrease phosphorus and mercury concentrations. PC #2 at 3-4. PRN concludes by stating that the additional thermal loading must comply with the State's antidegradation regulations at 302.105, and that Ameren has failed to show that existing uses will be protected and that the increased heat loading is necessary to accommodate important social or economic development. PC # 2 at 4-5.

Joyce Blumenshine also filed public comment, stating Ameren should be required to conduct additional studies of Coffeen Lake watershed before any regulatory modifications are made. Ms. Blumneshine expresses further concern regarding the longwall mining plans and the potential effect on the water levels in Coffeen Lake. As to the relative cost of installing improvements to the cooling system, Ms. Blumenshine states that Ameren's electric division realized a revenue of $6.37 billion for 2008 out of a total revenue for the company of $7.84 billion. Ms. Blumenshine asks why such large companies should not be required to come up with better solutions. PC #3 at 1-2.

AMEREN'S RESPONSE TO AGENCY'S AND OTHERS' CONCERNS

Fish Kills

Ameren asserts that the Agency's selective citations to the SIUC reports suggesting that fish kills occur frequently do not fairly represent the overall findings of the decade-long SIUC studies. Resp. to Rec. at 4, 6. Ameren states that SIUC identified three, possibly four, fish kills that were linked to thermal conditions during the 10-year study. According to SIUC, of these instances, there were two (2001 and 2002), possibly three (2005), that occurred where sudden changes in water temperature resulted in entrapment of fish in coves near the discharge point (habitat erosion). Resp. to Rec. at 6. SIUC linked the other thermally-induced fish kill in July 1999 to abnormal meteorological conditions coupled with unusually warm water temperatures. Ameren points out that SIUC investigators noted that at the time, similar fish kills were reported at other southern Illinois lakes, including at least one ambient lake. Resp. to Rec. at 7.

To put the significance of the fish kills in perspective, Ameren cites to the 2006 SIUC Report which stated that the most significant fish kill in 1999 was "relatively insignificant to the sportfish populations." Resp. to Rec. Att. 1 at 10, Pet. Br. at 13. In relative terms, SIUC stated the number of largemouth bass that died from the 1999 fish kill represented only 1% of the bass population, whereas the average total annual mortality rate for largemouth bass in Coffeen Lake from 1997-2004 is approximately 42%. Resp. to Rec. Att. 1 at 9, Pet. Br. at 13.

Ameren emphasizes that since the last of the enhancements were made to the cooling system in 2002, SIUC reported no cases of thermally-induced fish kills other than the possible 2005 event, and none of those years involved entrapment. Resp. to Rec. at 7.

Temperature and Dissolved Oxygen

In response to the Agency's concern that higher thermal limits in May and October would have carryover effect that would exacerbate summer conditions, Ameren points to the findings in the ASA and Sargent & Lundy Reports. Resp. to Rec. at 10. The ASA Report examined the data from the SIUC studies conducted during 1997-2006 and found no statistically significant relationship between higher water temperatures in May and warmer water temperatures during the remainder of the season. Resp. to Rec. at 10, referring to Pet. Exh. 11 at 2-4. ASA used the concept of degree-days to assess the cumulative thermal impact, taking into account the annual variation in heat loading and meteorological conditions. ASA relied on degree-days measured at the edge of the mixing zone to represent a near worse-case assessment of whether a carryover effect would result. Resp. to Rec. at 10-12.

Although the Agency suggests that the use of degree-days does not account for the variability of temperature and dissolved oxygen by depth, Ameren argues that ASA's use of degree-days was actually overly-conservative given the near worst-case parameters used in the assessment. Resp. to Rec. at 11. The Sargent & Lundy Report used thermal lake modeling to evaluate the impacts of the proposed thermal limits under near worse-case conditions and increased Station power output. The modeling showed that the mean daily lake temperatures in June through September would be unaffected by loadings in May. Resp. to Rec. at 11.

As to the Agency's concern regarding the effect of the proposed thermal limits on dissolved oxygen, Ameren refers to the ASA Report and testimony by Dr. McLaren. ASA analyzed the SIUC data to determine whether thermal loading resulted in a carry-over effect on dissolved oxygen levels as the summer months progress. ASA plotted data from SIUC for the depth at which the 5 mg/L dissolved oxygen was first encountered each week during the summer months of 2000 through 2006. While the depth at which the 5 mg/L dissolved oxygen level varied from week to week throughout the summer, ASA indicates that the data plots show no discernable pattern that dissolved oxygen depletion increases as the summer progresses. Resp. to Rec. at 13, Hearing Exh. 2 at 6. Dr. McLaren testified that the epilimnion[19] remains oxygenated with dissolved oxygen concentrations usually well in excess of 5 mg/L. Tr. at 29, Pet. Br. at 9.

Responding to the Agency's concerns regarding temperature, dissolved oxygen, and habitat erosion, Dr. McLaren states that he found Coffeen Lake provides a diverse habitat where thermal refuge is available at any time in various parts of the lake. Tr. at 29, Pet. Br. at 9. Dr.

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[19] As to epilimnion and hypolimnion, Dr. McLaren explains,

> In stratified lakes, because of the difference in the density of the water, usually because of the temperature, you have layers called epilimnion, which is above a layer called a metalimnion where there's a thermocline. There's a rapid decrease in temperature. And then the densest water remains at the bottom in a layer that's called hypolimnion. So the epilimnion is the region where fish and possibly the metalimnion where fish would generally remain during periods of stratification within the lake. Tr. at 29.

McLaren testified, "Accordingly, there should be no adverse effect on the fishery by the proposed increase in the thermal standard for May and October." Hearing Exh. 2 at 6.

The Agency cites to the IDNR 2007 Lake Management Status Report (Pet. Exh. 12) listing the relative weight index (WR) and numbers (catch per unit effort, CPUE) of species in Coffeen Lake from 2000 - 2006. Based on the data, the Agency concludes that, the relative weight and numbers of all species in Coffeen Lake have declined. Rec. at 20, referring to Pet. Exh. 12 at 3, Resp. to Rec. at 9. Ameren responds stating that Dr. McLaren has not found that these numbers conclusively demonstrate thermal stress. Dr. McLaren testified that the numbers in the 2007 Lake Management Status Report more likely reflect competition with other species for food, angling pressure, increasing predator base, or the cyclical nature of a particular species. Tr. at 173-185, Pet. Br. at 10.

Ameren again notes that the Agency did not introduce its own expert testimony on any of the issues the Agency raised. Pet. Br. at 18.

Total Phosphorus and Mercury Levels

Ameren responds to the Agency's concerns regarding the effect of prolonged stratification and anoxic conditions on the total phosphorous and methylmercury levels in Coffeen Lake. To address the Agency's concerns, Ameren commissioned Dr. Anne B. Shortelle of MACTEC to quantify potential for additional phosphorus and mercury release related to the proposed thermal limits. Resp. to Rec. at 14. MACTEC's report is entitled, "Evaluation of Effects of Revised Thermal Standards on Phosphorus and Mercury Cycling in Coffeen Lake" (MACTEC Report). Resp. to Rec. at 14, Hearing Exh. 3 Attachment 1.

The MACTEC Report addressed the potential for the proposed thermal limits to impact the internal phosphorus loading and contribute to the Agency's concern regarding algal growth. Dr. Shortelle looked at seasonal trends with regard to phosphorus and Chlorophyll-*a*. Chlorophyll-*a* is an indicator of algal growth and grows better with more nutrients such as phosphorus. Hearing Exh. 3 Att. 2 at 2-2, Tr. at 44, Pet. Br. at 19. The MACTEC Report shows that any phosphorus released from the sediment would not be expected to reach the epilimnion where Chlorophyll-*a* is produced. Therefore, any additional phosphorus loading would not be available for biological production within Coffeen Lake to contribute to algal growth.

Dr. Shortelle's analysis continues that even if phosphorus were released from the hypolimnion (at depth) up into the epilimnion, this internal loading would be unobservable compared to the loading from external sources. Dr. Shortelle explained that if significant phosphorus were released from the sediment, it would be observed in the Chlorophyll-*a* after a fall turnover when the stratified levels in the lake mix. Dr. Shortelle testified, "This is not seen in Coffeen Lake." Tr. at 46. Dr. Shortelle compared seasonal water quality data and found no evidence that internal phosphorus loading from sediment was an important component of total phosphorus loading in Coffeen Lake. Resp. to Rec. at 14. Dr. Shortelle predicted that the increase in internal phosphorus loading attributable to the proposed thermal limits would be no more than 1.5%. Hearing Exh. 3 Att. 2 at 2-25. Dr. Shortelle concluded,

> Future modifications to thermal discharge limits from the Ameren Power Generating Plant are unlikely to present additional phosphorus loads from sediment release in the future, and therefore are not a threat to the existing water quality of Coffeen Lake. Resp. to Rec. at 14-15, Hearing Exh. 3 Att. 2.

Dr. Shortelle found that the source of phosphorus in Coffeen Lake is primarily external loading due to runoff from agriculture in the watershed. Tr. at 47, Hearing Exh. 3 Att. 2 at 2-7. Dr. Shortelle testified,

> We know that this is occurring because we can see in the areas of the lake that are closest and out of the influence of the cooling water loop, we see that phosphorus and Chlorophyll-*a* are highest there. And we see that that area of the lake is filling in with sediments, soils that are sediments, soils that are washing in from the watershed." Tr. at 47.

Ameren adds that the CWA Section 303(d) listing for Coffeen Lake does indeed list "crop production" as a source of the phosphorus impairment. Pet. Br. at 20, referring to the Illinois Integrated water Quality Report and Section 303(d) List – 2008, App. B-3.

Although the 2007 TMDL document placed an emphasis on the contribution from internal loading of phosphorus, Dr. Shortelle testified that this is not supported by the data and stems from an error in the TMDL modeling. Tr. at 47-48. Ameren introduced information regarding a 2009 Addendum to the 2007 TMDL which came about from an Agency request regarding a project Ameren is planning for the East Fork Shoal Creek. Tr. at 221. Although the report was only recently finalized and has not yet been approved by USEPA, Dr. Shortelle indicated the emphasis on internal loading of phosphorus "was lessened somewhat, partially corrected in the 2009 addendum." Tr. at 48.

In the 2007 TMDL, the Agency indicated the calculation of phosphorus loading capacity depended on increasing the level of the lake by 3 feet based on plans Ameren had to raise the dam. Rec. at 17. Ameren states that the current proposal is to transfer water from the East Fork Shoal Creek to Coffeen Lake to provide the additional water supply needed for new air pollution control equipment being installed, the FGD and SO_2 scrubbers. Pet. Br. at 32, Tr. at 83. When asked by the Board's technical staff at hearing whether raising the dam by 3 feet posed other environmental impacts by changing the contour of the lake, Dr. Shortelle replied, "Absolutely." Tr. at 236.

As to mercury, the MACTEC Report also considered the Agency's concern that the proposed thermal limits might prolong thermal stratification and low dissolved oxygen levels in the lake leading to an increase of methylmercury in fish. Dr. Shortelle explained that mercury methylation is affected by multiple parameters, not solely thermal stratification, and the suite of parameters should be evaluated as a whole before making any predictions. Based on the available data for Coffeen Lake, Dr. Shortelle found that mercury concentrations are low and that conditions do not appear favorable for methylation. Although thermal stratification might be prolonged under the proposed limits, Dr. Shortelle states that this would not substantially change lake conditions.

> This change is minor, and does not represent a change that could or would significantly increase hypolimnetic mercury methylation rates. It is anticipated that the change, if any, would be so small, that it would not result in increased mercury in the biota. Hearing Exh. 3 at 4-2.

Dr. Shortelle commented that in general, mercury levels in fish are expected to decline as a result of mercury load reductions across the region. Hearing Exh. 3 at 4-2. Ameren adds that Illinois recently adopted regulation aimed at reducing the levels of atmospheric deposition of mercury from electric generating utilities. Ameren cites the Illinois mercury rulemaking proceedings where the Agency testified that the reductions in atmospheric deposition were expected to correlate to lower mercury levels in fish within a period of a few years. Resp. to Rec. at 16, citing to In the Matter of: Proposed New 35 Ill. Adm. Code 225 Control of Emissions From Large Combustion Sources (Mercury), R06-25, Testimony of Marcia Willhite, at 162-172 (June 14, 2006).

To comply with the new regulations, Ameren has and continues to install pollution control equipment to reduce mercury emissions from its facilities. Ameren states, "In fact, pollution controls that Ameren will initiate in a matter of months will likely have an overriding beneficial impact to Coffeen Lake by actually reducing mercury loading due to air deposition." Pet. Br. at 22. Ameren states that SO_2 scrubbers will be in place by the end of 2009, which will operate throughout the year to also reduce mercury emissions. Pet. Br. at 31.

Alternatives for Achieving Compliance

Ameren reiterates that the option supported by the Agency of installing a 175,000 gpm cooling tower at a capital cost of $18 million is economically prohibitive. In preparing for the hearing in this case, Ameren refined and updated the financial analysis done by Sargent & Lundy using May 2009 capacity and energy prices as well as future market prices for power and the likelihood of additional compliance costs or CO_2 tax. Based on Ameren's Economic Value Added Model or Economic Viability Analysis (EVA), the more recent analysis shows that the 11½ year cost recovery time for this option would actually outlast the operating life of the cooling tower itself. Resp. to Rec. at 16. The updated analysis indicates that revenues and energy margins from the projected increase in power generation capacity will never recover the high up-front cost for this option. Resp. to Rec. at 17, Resp. to Hearing at 1-4.

Ameren states that given the minimal environmental impact of the requested relief, the proposed thermal limits for May and October represent the only economically reasonable alternative available. Pet. Br. at 2-3.

Environmental Impact

Ameren states, "Coffeen Lake supports abundant and diverse wildlife, including muskrat, turtles, heron and mussels. It also supports a robust fishery, comprised of 22 species of fish, and is well known as the home of numerous competitive sport-fishing tournaments." Pet. at 20.

Nonetheless, Ameren states that the regulations do not require that there necessarily be a fishery or recreational uses, only that the artificial cooling lake provide "conditions capable of supporting shellfish, fish and wildlife, and recreational uses consistent with good management practices..." 35 Ill. Adm. Code 302.211(j)(3)(A). Moreover, Ameren states, "Coffeen Lake clearly need not support an *optimal* fishery, but simply *conditions capable* of supporting a fishery." Pet. Br. at 6. Ameren cites to the Board's opinion in the original R75-2 rulemaking:

> [U]nder subsection (cc) (1) [now section 302.211(j)], it is not absolutely required that there be a fishery, or that an artificial cooling lake provide recreational or any other uses except that for which it was designed . . . [b]ut it is nonetheless felt that by requiring such conditions in a lake we will have taken a significant step in protecting water quality. Water Quality and Effluent Standards Amendments, Cooling Lakes, R75-2, slip op. at 40 (Sept. 29, 1975) (emphasis in original).

Ameren cites to the relief granted to Illinois Power in PCB 92-142 stating, "the Board found that minimal impacts to reproduction, growth and survival of some species did not constitute a significant ecological impact as long as the adjusted thermal limit would not inhibit the propagation of fish or other aquatic biota." Pet. Br. at 7, referring to Petition of Illinois Power Co. for Hearing Pursuant to 35 Ill. Adm. Code 302.211(j) to Determine Specific Thermal Standards, PCB 92-142, slip op. at 7 (August 26, 1993).

Conditions of Relief

Ameren responds to the Agency's suggestion that any relief granted to Ameren contain a condition requiring discharges from Coffeen Lake to meet the standards of 35 Ill. Adm. Code 302.211(b)-(e). Ameren notes that the discharge from Coffeen Lake to the East Fork Shoal Creek is so infrequent, that Ameren has had almost no opportunities to collect data to make a demonstration. Ameren states that making a demonstration is not necessarily a prerequisite to the Board granting relief. However, Ameren recognizes that pursuant to Section 106.200(a)(2)(C)(i)

> A Board order providing alternate thermal standards...will include...the following conditions...(i) all discharges from the artificial cooling lake to other waters of the State must comply with the applicable provisions of 35 Ill. Adm. Code 302.211(b) through (e)." Pet. Reply Br. at 7-8.

Ameren indicated it would not object to a condition consistent with 35 Ill. Adm. Code 106.200(a)(2)(c)(i) as part of the requested relief. Pet. Reply Br. at 8.

Dr. McLaren indicated that if Ameren's request for relief is granted, further studies of the fish are planned. This is in response to IDNR's desire to see the long-term database continue to develop. Tr. at 213. One study Ameren and IDNR plan to develop would be a study to investigate the ability of fish to avoid exposure to stress by seeking preferred temperatures within the Lake's environment. The study would be designed to complement IDNR data. In another study, Ameren has already committed to implement a 3-year fish stocking pilot study at the Lake in conjunction with IDNR. Ameren has agreed "to financially support a three-year pilot stocking program to introduce suitable species, such as the blue catfish, to help IDNR better assess the long term nature of maintaining a viable, recreational resource." Hearing Exh. 2 at 12.

At hearing, Ameren indicated that these studies are not being proposed as conditions to the requested relief. Tr. at 212. However, Ameren did revise its proposed language to include an agreement with IDNR to respond in the event of excessive fish mortality during the months of May and October and implement appropriate mitigation measures. Pet. Br. at 15.

Response to Public Comments

Ameren responded to each of the oral public comments made at hearing as well as the four written public comments filed.

With regard to concerns voiced by Ms. Bates (PC #1, Tr. at 249), Ms. Blumenshine (PC #3), and Ms. DeClue (PC #4, Tr. at 20-253) about the effect on lake levels from the Deer Run Mine in combination with Ameren's proposal (PC #1, Tr. at 249-250), Ameren states that it is not familiar with the mining project. Ameren does not believe that the activities associated with the longwall mining are germane to the relief requested here. Nonetheless, Ameren notes that under the proposed thermal limits, Ameren will actually draw less water from Coffeen Lake than if it were to install additional cooling towers. Ameren explains that cooling towers are extremely water consumptive since they use evaporation. Pet. Br. at 30.

In response to concerns raised by Prairie Rivers Network (PRN) (PC #2), Ameren reiterates the work done by Dr. Shortelle to support the conclusions regarding phosphorus and mercury as well as the economic analysis performed by Ameren to demonstrate the economic reasonableness of the alternatives. Although PRN disputes the use of the 2009 Addendum to the TMDL, Ameren makes it clear that Dr. Shortelle relied on her own analysis to estimate the internal phosphorus loading, not the 2009 Addendum. Pet. Br. at 30-31.

Ameren also responds to PRN's concern that Biologically Significant Stream Reaches have been identified in the Shoal Creek watershed that might be affected by discharges from Coffeen Lake. Ameren notes that discharges from Coffeen Lake are relatively rare. Even so, Ameren believe that such discharges result in an improvement to the East Fork Shoal Creek since the phosphorus concentration is actually much lower in Coffeen Lake than in the creek. Pet. Br. at 31-32, referring to Illinois EPA, 2009a, Coffeen Lake and East Fork Shoal Creek TMDL Addendum, Hanson Prof. Serv., Apr. 2009.

In its petition, Ameren indicated the East Fork of Shoal Creek is a general use water body and rated as a "B" stream under the Agency's Biological Stream Characterization system. Pet. at 8. Ameren states that the creek is not listed in the INHS's publication of "Biologically Significant Illinois Streams". Pet. at 8. As to PRN's inquiry behind Ameren's decision not to pursue raising the dam level by three feet, Ameren states that the current proposal is to transfer water from the East Fork Shoal Creek to Coffeen Lake and that permits are pending. Ameren indicates the additional water supply is needed for new air pollution control equipment being installed. Pet. Br. at 32.

In response to the inquiry from Ms. Blumenshine (PC #3) when she asked why such large companies should not be required to come up with better solutions, Ameren replies, "the requested relief will not allow Ameren to realize a profit at the cost of the environment." Pet. Br. at 33. The proposal would only allow Ameren to avoid de-rating during May and October and the corresponding economic losses. In addition, the requested relief would help to mitigate losses in net generating capacity resulting from the operation of the new air pollution control equipment being installed. Pet. Br. at 34.

Ameren also responded to the oral and written comments of Mary Ellen DeClue (PC #4, Tr. at 250-253). At hearing Ms. DeClue inquired about the use of aeration to improve oxygen levels in the lake. Tr. at 251. Ameren noted that solar-powered aerators, dubbed "solar bees", have been used on an experimental basis since 2007 to mix and cool the lake water. Ameren plans to continue using the solar bees to enhance cooling. Pet. Br. at 34.

DISCUSSION

The Board first observes that, in 1982, when the alternative thermal standards were first granted for Coffeen Lake, the criteria of the previous Rule 203(i)(5) required "a one-time showing by a power station that it has not caused nor can reasonably be expected to cause significant ecological harm to its cooling lake." PCB 77-158, PCB 78-100, slip op at 1 (March 19, 1982.)(citing Rule 203(i)(5)). That particular language is no longer present in the Board's current rules, and the current rules require the Board to revisit thermal issues despite the fact that, as Ameren states, Coffeen Station is not a new facility nor is it changing any design parameters of its generating equipment that would affect its thermal effluent discharged into Coffeen Lake. Resp. to HOO at 2, Tr. at 124.

In summary, Ameren seeks to modify the existing site specific thermal standards to increase the thermal limits applicable to heated effluent discharge from Ameren's Coffeen Power Station to Coffeen Lake. Ameren asserts that the modification of the thermal standards is needed to meet its NPDES permit limits without de-rating. Ameren believes the modified thermal limits will allow Ameren to meet increase power output to meet market demands, and mitigate the loss in net generating capacity from operation of new air pollution control equipment. Ameren has submitted extensive studies and data to demonstrate that the modified thermal limits are environmentally acceptable.

For all of the reasons set for below, the Board finds that Ameren has justified the grant of modified thermal discharge limits in compliance with the standards set in Sections 106.202(b)(1)(A) and 302.211(j)(3)(A). The Board finds that Ameren has provided information and argument to meet the question and concerns raised both by the Agency and the public commenters. Neither the Agency nor any members of the public presented expert testimony or exhibits which dispute the information which Ameren presented, and which was subject to cross-examination. Again, the only exhibits the Agency filed consisted of the 2000-2005 series of reports by SIUC.

The Board grants the requested modification effective today, subject to the conditions in the Board's order.

Supporting Documentation for Initial Coffeen Lake Thermal Demonstrations

In reviewing the record in this PCB 09-38 proceeding, the Board has revisited the record in the prior Lake Coffeen proceedings. In PCB 77-158/PCB 78-100, CIPS supported its Thermal Demonstration with, among other studies and data, a 3-year series of reports from 1979 to 1981 completed by the INHS.

For the sake of ease for public access to pertinent historical documents, the Board's Clerk's Office scanned in portions of the microfiche file from PCB 77-158 to the Clerk's Office Online (COOL), including the 1981 Tranquilli and Larimore report: Petitioner's Group Exhibit 1a: "Part I: Environmental Studies of Coffeen Lake, A Thermally-Altered Reservoir, Part II: Ecological Investigations of Shoal Creek, Final Report to Central Illinois Public Service Company", INHS, Urbana, Illinois, July 1981, John A. Tranquilli and R. Weldon Larimore, Principal Investigators; Lance G. Perry, Project Coordinator. This report is 470 pages long, not including the appendices. Also scanned in is a report entitled "Lake Coffeen – Biological and Chemical Findings", Sept. 14, 1977.

The microfiche file for PCB 77-158 also contains the extensive studies leading up to the 1981 Tranquilli and Larimore report that were performed by the INHS (1979, 1980, 1981) that appear as three separate documents: First Annual Report (1979), Second Annual Report (1980), and Final Report (1981). The combined studies apparently stacked 8-inches high. The introduction to the final report states:

> "In July 1978, at the request of Central Illinois Public Service Company (CIPS), the Illinois Natural history survey began a 3-year investigation of the environmental effects of CIPS Coffeen Power Station on Coffeen lake and its receiving stream, Shoal Creek. The overall objective of this study was to provide diagnostic data for use in determining whether Coffeen Lake and Shoal Creek were environmentally acceptable in terms of supporting shellfish, fish, wildlife, and recreational uses consistent with good management practices." Final Report to Central Illinois Public Service Company by INHS, July 1981, page 1.1.

When CIPS petitioned the Board for a variance in PCB 97-131, CIPS intended to return to the Board for permanent relief after three years in the form of a site-specific rule. When the Board granted the 5-year PCB 97-131variance in 1997, the Board included, as a condition of the variance, that CIPS continue to study the thermal effects on the fishery in Coffeen Lake. The Board also indicated the record needed more economic information to quantify the hardship. (*See* CIPS, PCB 97-131, slip op. at 5-6 (June 5, 1997). During the period of the variance, lake temperature data for May and October were to be closely monitored and compared to historical data, and the annual fish surveys were to be reviewed by the IDNR to verify that there was no significant impact. *Id.* at 3, 5.

To comply with the 1997 variance, CIPS (now Ameren) retained SIUC to continue studying Coffeen Lake, producing the 1997-2006 SIUC studies referenced in Ameren's current proposal. Subsequently, Ameren commissioned ASA to prepare a report presenting "an overview of the evidence supporting the conclusion that raising the thermal limits for the months of May and October presents minimal additional risk to fish populations in the lake." Pet. Exh. 11 at 1-1. Ameren also provided more economic information to quantify the hardship through the Sargent & Lundy Report (Pet. Exh. 12) and Ameren's updated Economic Value Added model or Economic Viability Analysis (EVA). Tr. at 15-20, 72-74, Resp. to Hearing at 1-4.

Ameren's Current Artificial Cooling Lake Demonstration

Ameren's artificial cooling lake demonstration embodied in the ASA Report draws from a long history of studies from INHS (1978-1981, 2002), IDNR (2007, covering 2000-2006), SIUC (1997-2007) as well as Ameren's consultants from Sargent & Lundy (2008) and an extensive literature review. (Pet. Exh. 11.) In response to particular Agency concerns, Ameren also supplements its thermal demonstration with the MACTEC Report (2009). Hearing Exh. 3 Att. 2.

The ASA Report includes as part of its basis the Tranquilli and Larimore 1981 Final Report by the INHS that was completed under the previous thermal demonstration for Coffeen Lake in PCB 77-158/PCB 78 covering a three-year study period from 1978-1980. The Tranquilli and Larimore (1981) report addressed several components of the aquatic community, including algae, zooplankton, benthos, and fish. Whereas the entire fish community was addressed in the report, the three species most frequently chosen for detailed study were largemouth bass, bluegill, and channel catfish. Resp. to HOO at 5.

When SIUC was retained to conduct the study under the 1997 variance, the same three species were selected as the target species, RIS, for the study. The proposed study underwent review and comment by IEPA and IDNR as well as the public. IDNR approved of the study and the selection of the three RIS to be monitored on an annual basis to comply with the variance PCB 97-131: largemouth bass, bluegill, and channel catfish. Exh. 11 at 3-1. The three RIS are also considered to represent the lower trophic levels as well. Resp. to HOO at 9. In addition, Ameren addresses consideration that was given to threatened and endangered species, nuisance species, unique and rare habitat, and other vertebrate wildlife. Resp. to HOO at 5-6, 9-10.

The ASA Report follows an approach similar to the USEPA's Ecological Risk Assessment (ERA) framework. Ameren indicates that other recent 316(a) demonstrations have shown that the decision criteria from 1977 USEPA 316(a) Manual "is congruent with this more recently developed guidance for evaluating the adversity of effects from a wide variety of ecological stressors." Resp. to HOO at 7-8. ASA's use of the ERA approach relied on multiple lines of evidence for both a retrospective assessment and a prospective (predictive) assessment of the potential risks for increasing the thermal standards in May and October in Coffeen Lake. Resp. to HOO at 8. ASA considers the studies arising from the 1997 variance as "an incremental step in compliance with the NPDES permit conditions for the Station rather than a Section 316(a) demonstration." Resp. to HOO at 8. Nevertheless, ASA provides a summary of the conclusions from their investigation similar to a 316(a) Master Rationale. Resp. to HOO at 8.

<u>Ameren Has Justified that Modified Thermal Limits Are Environmentally Acceptable</u>

The Board's rules do not explicitly require artificial cooling lake demonstrations take the form of a CWA Section 316(a) showing, but they do explicitly allow it. As discussed below, the Board finds that Ameren makes a convincing demonstration pursuant to 301.211(j)(3) and (4) and satisfies the Board's rules. The Board agrees with ASA that the amount of long-term data that has been produced in connection with Coffeen Lake is "unusual and fortunate" in assessing the effects of the thermal regime on the fish, and the Board notes that Ameren is committed to further study of the lake through agreements with IDNR.

As previously discussed, the federal regulations at 40 CFR 122 provide for two possible types of predictive CWA Section 316(a) demonstrations, Type II: Protection of Representative Important Species and Type III: Alternative Demonstrations. Based on the manner in which the studies were conducted to support Ameren's petition, the Board will consider Ameren's demonstration similar to a Type II demonstration. The Section 316(a) Manual states that a Type II Demonstration should fully develop three key biological components: completion of the Biotic Category Rationale (begun during early screening procedures), development of RIS Rationale, and synthesis of all information into a Master Rationale. Section 316(a) Manual at 34.

The Board finds that Ameren's retrospective assessment demonstrated that no appreciable harm from the thermal discharge from Coffeen Station to the three RIS: largemouth bass, channel catfish, or bluegill. As Ameren stated,

> In fact, all three RIS exhibit characteristics such as survival, growth, body condition, population size, and recruitment of young that are comparable to or exceed those for populations in other regional and national water bodies. Resp. to HOO at 8.

The Board concludes that the condition of these populations attests to the accuracy of ASA's conclusion that "Coffeen Lake's thermal regime is also suitable for lower trophic levels that provide forage for these top consumers." Resp. to HOO at 9. The record amply demonstrates the exceptional fishery and the recreational value of Coffeen Lake.

The Board finds that ASA's conclusions are consistent with the Board findings in the original rulemaking for thermal standards in cooling lakes:

> It would appear that, within limits . . . the addition of heat from a steam-electric generating plant actually aids in the growth and development of gamefish in artificial cooling lakes . . . While the continued growth of fish and other aquatic organisms during winter is unquestionably not in the natural order of things for Illinois lakes; it would appear that this phenomena nonetheless contributes to the recreational value of an artificial cooling lake. Further, it would appear that the presence of such a fishery as is evidently produced by the thermal effluent may also be a good indication of the general environmental quality and acceptability of an artificial cool lake . . . Apparently, then, the existence of this type of recreational use is compatible with the preservation of our environment. <u>Water</u>

Quality and Effluent Standards Amendments, Cooling Lakes, R75-2, slip op. at 22 (Sept. 29, 1975).

In PCB 77-158/PCB 78-100, when establishing the initial site specific standards for Lake Coffeen, the Board found conditions very similar to the conditions presented for the current proposal:

> The evidence indicates that Coffeen Lake supports a diverse fishery consisting of a total of twenty-two species and which is comparable to other central Illinois reservoirs. Coffeen Lake supports an abundance of fish second only to Lake Shelbyville in a group of 200 Midwestern and Mid-southern reservoirs studied. The Coffeen Lake fishery appears to be in good condition with the exception of the stunted condition of blue gills, a condition common to reservoirs and probably cause by too great a population for the existing food supply.
>
> The lack of significant fish kills over the years at Coffeen Lake indicates that adequate mode-rate temperature refuge areas exist to enable the fish population to survive the short-term, high-temperature conditions that exist during late summer months. CIPS, PCB 77-158/PCB 78-100, slip op. at 2-3 (March 19, 1982.)

The record here thoroughly discusses the documented fish kills since then. Of the documented fish kills in 1999, 2001, 2002, and 2005; SIUC concluded the most significant fish kill in 1999 was "relatively insignificant to the sportfish populations", involving 1% of the largemouth bass population, whereas the average annual mortality rate is 42%. Resp. to Rec. Att. 1 at 9-10, Pet. Br. at 13. ASA concluded that fish kills are unlikely to result from the proposed thermal standards since conditions contributing to the previous fish kills (warmest temperatures, lake stratification, and depleted dissolved oxygen) would not be expected to occur during either May or October. Pet. Exh. 11 at 5-3. Ameren provides the assurance that even if such conditions did occur, Ameren would be required to de-rate to comply with the proposed limits for these months. Pet. Br. at 12.

ASA concluded that "raising the thermal limits for the months of May and October presents minimal additional risk to fish populations in the lake." Pet. Exh. 11 at 1-1. In response to the Agency's concerns, ASA demonstrated that proposed thermal limits for May will not necessarily result in a carryover of warmer temperatures throughout the remainder of the summer. Pet. Exh. 11 at 2-4. ASA also demonstrated that dissolved oxygen does not exhibit a pattern of depletion throughout the summer, and that the epilimnion remains oxygenated with dissolved oxygen concentrations usually well in excess of 5 mg/L. Tr. at 29, Pet. Br. at 9. ASA found that Coffeen Lake provides a diverse habitat where thermal refuge is available at any time in various parts of the lake. Tr. at 29, Pet. Br. at 9. Based on MACTEC's analysis of phosphorus and mercury, the proposed standards are also not expected to contribute to a significant increase in internal phosphorus loading or mercury methylation. Hearing Exh. 3 Att. 2.

The Board notes that CWA Section 316(a) of the CWA contains language for alternative thermal effluent standards to "assure the protection and propagation of a balanced, indigenous population of shellfish, fish and wildlife in and on that body of water." 33 U.S.C. 1326(a). In comparison, the Board's rules at Sections 106.202(b)(1) and 302.211(j)(3)(A) require a demonstration that the cooling lake "will be environmentally acceptable, and within the intent of the Act, including, but not limited to... provision of conditions capable of supporting shellfish, fish and wildlife, and recreational uses consistent with good management practices." 35 Ill. Adm. Code 106.202(b)(1), 302.211(j)(3)(A). Although the Board's rules for alternative thermal water quality standards are somewhat different, Ameren responds to the Agency's question of whether the concept of thriving fishery is the same as a balanced indigenous community. Dr. McLaren testified

> Fisheries are managed, and this is a particularly well-managed fishery. They're managed for particular sport fish, more often than not. So you would look at it in terms of the importance of a particular game species that are being fished for and exploited, but also for the overall community composition. So the fish themselves that are being managed are only a component of the overall balanced community. And in all probability, you wouldn't have a strong recreational fishery if you didn't have a balanced community. Tr. at 126-127.

For all of the foregoing reasons, the Board finds that under the proposed modified standards for May and October, Coffeen Lake will continue to be capable of supporting shellfish, fish, and wildlife, and recreational uses consistent with good management practices as required by Sections 106.202(b)(1)(A) and 302.211(j)(3)(A).

Ameren Has Demonstrated that Existing Means for Control of the Thermal Component of Its Discharge are Economically Reasonable and Technically Feasible

For all of the reasons set forth below, the Board finds that Ameren's control of the thermal component of its effluent using the existing cooling system is by a technologically feasible and economically reasonable method. The Board recognizes that Ameren is committed to de-rate if necessary to comply with the proposed limits. Pet. Br. at 12. Based on this record, the Board does not believe that to require further environmental controls will provide any net benefit to Coffeen Lake. On the other hand, the costs to Ameren and its ratepayers of installing an additional cooling tower, or of continued de-rating to meet the existing standards, are clear.

As to Ameren's control of the thermal component of its discharge, it is uncontested that, since 2000, Ameren has invested some $26.7 million dollars to enhance cooling capabilities. Even so, it has had to de-rate some 64 times since 1999, at a cost of over $5.5 million dollars, The costs of de-rating are expected to increase overtime, averaging $2.3 million per year (2007 dollars) under the forecasted operations. Pet. at 28, Exh. 14. Costs of continued de-rating will likely be passed through to ratepayers.

It is also undisputed that the cost of the technically feasible additional enhancements available to Ameren range from $13,053,000 to $18,266,000, and that the least expensive of these options did not completely mitigate Ameren's need to de-rate. Exh. 15 at 13. Ameren's EVA indicated the cost recovery time for the $18 million option would outlast the operating life of the cooling tower itself, and Ameren would never recover the high up-front costs. Resp. to Rec. at 16-17, Resp. to Hearing at 1-4.

The Agency argues that Ameren could continue to de-rate as a means of compliance, arguing that, "It will be a very rare case where environmental controls result in a profit to the regulated entity." Ag. Br. at 9. While the Board does not disagree with the Agency, the Agency's comment neglects the fact that the uncontroverted expert testimony here supports the finding that no significant environmental impact is expected to occur as a result of Ameren's proposal. Additionally, this does not take into consideration Ameren's need to mitigate losses in net generating capacity due to operation of new air pollution control equipment or the financial losses in revenue.

Conditions

The Agency suggests that if relief is granted to Ameren, conditions should include requirements that Ameren demonstrate that the relief will not result in violations of other water quality standards. In particular, the Agency cites to 35 Ill. Adm. Code 302.211(j)(1), requiring that overflows from Coffeen Lake must comply with 302.211(b)-(e). The Agency reports that Ameren has not been required to monitor discharges from Coffeen Lake. Ag. Br. at 7-8.

In response to the Agency's suggestion, Ameren indicated it would not object to a condition consistent with 35 Ill. Adm. Code 106.200(a)(2)(C)(i) as part of the requested relief. Pet. Reply Br. at 8. Although the Agency appears to suggest that Ameren should be subject to monitoring, Ameren replies that discharges from Coffeen Lake to the East Fork Shoal Creek are so rare that Ameren has had almost no opportunity to collect such data. Pet. Reply Br. at 7. In its original petition, Ameren states, "[s]everal months often lapse without a discharge over the spillway. Prior to an overflow on April 11, 2008, the lake had not discharged to the East Fork of Shoal Creek since May 2005." Pet. at 8.

The Board agrees with Ameren that the regulations at 35 Ill. Adm. Code 106.200(a)(2)(C)(i) do not specifically require monitoring to make its modification demonstration. As for 35 Ill. Adm. Code 106.200(a)(2)(C)(ii) (which has parallel language at 35 Ill. Adm. Code 302.211(j)(2)), Ameren states "Ameren will ensure that such discharges comply with all other water quality criteria, except the provisions of Section 302.211(b)-(e), by relying on the results of monitoring required by its NPDES permit." Pet. at 35. Therefore, the conditions set forth by the Board in the following Order include those as stated in 35 Ill. Adm. Code 106.200(a)(2)(C)(i) – (ii).

The Board notes Ameren has also made a commitment for additional fish kills studies, and provided a draft MOU with IDNR. Ameren stated if the requested relief is granted, Ameren and IDNR have agreed to a draft MOU to conduct additional studies on Coffeen Lake and the fishery. Resp. to Hearing at 5. Ameren states, "If investigation shows that a fish kill has resulted from the requested relief, Ameren agrees to replenish or replace the impacted resource pursuant to the terms and conditions of a Fish Stocking Plan to be developed in consultation with IDNR." Pet. Resp. to Hearing at 6, Exh. C.

Paragraph 2 in the Board's Order below reflects Ameren's commitment. But, as IDNR is not a party to this proceeding, IDNR is not named as a party to be bound by the Board's order.

Public Comments

The Board wishes to acknowledge the thoughtful public comments it has received in this proceeding, and to address a couple of them briefly. The Board does not now have authority or ability to address any potential subsidence or other effects on Lake Coffeen from any proposed longwall mining at Deer Run Mine. The Board echoes Ameren's comments to the effect that Ameren must take all steps necessary to ensure that its discharges into Coffeen Lake meet the conditions of the modification granted today, no matter what conditions may result at Coffeen Lake due to actions of others.

Ameren's experts have adequately addressed the issues of phosphorus and mercury loading, and habitat erosion. Ameren's current, and promised future, use of solar-powered aerators, to some extent addresses the query about use of aeration to improve oxygen demand. The Board does not discount the concern that major corporations should be asked to "do better", but reminds that Ameren is also being required to expend resources to meet stricter air pollution control standards, and that ratepayers typically must shoulder some of these costs.

CONCLUSION

Based on the record before it, the Board finds that Ameren has provided adequate proof that the Coffeen Lake artificial cooling lake receiving the heated effluent from Coffeen Power Station will be environmentally acceptable and within the intent of the Act, including: (A) provision of conditions capable of supporting shellfish, fish and wildlife, and recreational uses consistent with good management practices; and (B) control of the thermal component of the discharger's effluent by a technologically feasible and economically reasonable method. 35 Ill. Adm. Code 106.202(b)(1), 302.211(j)(3). The Board grants Ameren's requested relief subject to conditions outlined in this order, effective today.

This opinion constitutes the Board's findings of fact and conclusions of law.

ORDER

1. The thermal discharge to Coffeen Lake from Ameren Energy Generating Company's Coffeen Power Station, located in Montgomery County, shall not result in a temperature, measured at the outside edge of the mixing zone in Coffeen Lake, which:

    A. Exceeds 105 degrees Fahrenheit as a monthly average, from June through September, and a 112 degrees Fahrenheit as a maximum for more than three percent of the hours during that same period.

    B. Exceeds 89 degrees Fahrenheit as a monthly average, from November through April, and 94 degrees Fahrenheit as a maximum for more than two percent of the hours during that same period.

C. Exceeds 96 degrees Fahrenheit as a monthly average, in each of the months of May and October, and 102 degrees Fahrenheit as a maximum for more than two percent of the hours in each of those same months.

2. Ameren must monitor Coffeen Lake during the period May through October for fish mortality. In the event excessive fish mortality occurs during these months, Ameren shall implement appropriate mitigation measures including the following:

A.. Notify the Illinois Department of Natural Resources (IDNR) immediately;

B. Maximize operation of the cooling basin and existing cooling towers to reduce thermal temperatures;

C. Make operation revisions to the station's typical dispatch order (*e.g.* "last on and first off");

D. Reduce nighttime capacity factors;

E. Monitor intake and discharge temperatures and visually inspect intake and discharge areas; and

R. No later than November 15 of each year, document mitigation measures employed during periods of excessive fish mortality.

3. Pursuant to 35 Ill. Adm. Code 302.211(j)(1), all discharges from Coffeen Lake to other waters of the State must comply with the applicable provisions of 35 Ill. Adm. Code 302.211(b) through (e).

4. Pursuant to 35 Ill. Adm. Code 302.211(j)(2), the heated effluent discharged to Lake Coffeen must comply with all applicable provisions of 35 Ill. Adm. Code Subtitle C, Chapter I, except 35 Ill. Adm. Code 302.211(b) through (e).

5. The Agency must expeditiously modify Ameren's NPDES permit consistent with the foregoing opinion and order.

IT IS SO ORDERED.

Member C.K. Zalewski abstained.

Section 41(a) of the Environmental Protection Act provides that final Board orders may be appealed directly to the Illinois Appellate Court within 35 days after the Board serves the order. 415 ILCS 5/41(a) (2008); *see also* 35 Ill. Adm. Code 101.300(d)(2), 101.906, 102.706. Illinois Supreme Court Rule 335 establishes filing requirements that apply when the Illinois Appellate Court, by statute, directly reviews administrative orders. 172 Ill. 2d R. 335. The Board's procedural rules provide that motions for the Board to reconsider or modify its final orders may be filed with the Board within 35 days after the order is received. 35 Ill. Adm. Code 101.520; *see also* 35 Ill. Adm. Code 101.902, 102.700, 102.702.

I, John T. Therriault, Assistant Clerk of the Illinois Pollution Control Board, certify that the Board adopted the above opinion and order on March 18, 2010, by a vote of 4-0, Member Zalewski abstained.

John T. Therriault

John T. Therriault, Assistant Clerk
Illinois Pollution Control Board

IEPA EXHIBIT
No. 3

Sanjay
Al
Connie
Roger
Bob Mosher

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

OCT 06 2011

REPLY TO THE ATTENTION OF:
WN-16J

Marcia T. Willhite
Chief, Bureau of Water
Illinois Environmental Protection Agency
Post Office Box 19276
Springfield, Illinois 62794-9276

RECEIVED
OCT 13 2011
BUREAU OF WATER
BUREAU CHIEF'S OFF

Re: Ameren Coffeen Power Station NPDES Permit No. IL0000108

Dear Ms. Willhite:

We have reviewed the information submitted to the U.S. Environmental Protection Agency pursuant to 40 C.F.R. §123.44(d)(2) for the proposed permit modification for the Coffeen Power Station. The studies available for Coffeen Lake provide a comprehensive analysis of the biological community and the impacts from the Coffeen Power Station. However, we have significant concerns regarding the process for granting thermal relief by the Illinois Pollution Control Board (IPCB) and Illinois Environmental Protection Agency (Illinois EPA). An enclosure to this letter provides specific details and recommends actions to resolve our concerns. The current permit expires in January 2013 and we encourage Illinois EPA, the IPCB and Ameren to address these issues prior to the reissuance of the permit. We do not, however, believe it is necessary to object to the permit modification at this time. If any clarification from EPA is necessary, do not hesitate to contact us for assistance.

Based on our review of the available information, EPA will not object to the permit modification as drafted.

If you have any questions, please contact Sean Ramach at (312) 886-5284.

Sincerely,

Tinka G. Hyde

Tinka G. Hyde
Director, Water Division

cc: Mr. G. Tanner Girard
Acting Chairman, Illinois Pollution Control Board

Mr. John Pozzo
Supervising Engineer, Ameren Energy

Summary of EPA's Review of the Ameren Coffeen Power Station Thermal Relief Demonstration

EPA has identified the following issues that should be clarified prior to the permit's expiration date in January 2013 in order to ensure that when the permit is reissued, it is consistent with the Clean Water Act (CWA).

1) CWA § 316(a) allows for alternative effluent limitations to effluent limitations based on water quality standards developed for the permit when it is demonstrated that the protection and propagation of shellfish, fish and wildlife in and on the waterbody is assured. The Illinois Administrative Code (IAC) at 35 IAC § 304.141(c) authorizes the implementation of CWA § 316(a) alternative effluent limitations in National Pollutant Discharge Elimination System (NPDES) permits. Illinois Environmental Protection Agency (IEPA) has indicated that the relief granted by the Illinois Pollution Control Board (IPCB) to the Ameren Coffeen Power Station is a CWA § 316(a) alternative limitation. However, the IAC provision referenced in granting the relief is 35 IAC § 302.211(j), which provides for alternate thermal standards for artificial cooling lakes. In its March 18, 2010 opinion and order, the IPCB indicates that this regulation is consistent with CWA § 316(a), but as discussed below, this regulation does not appear to authorize thermal relief consistent with CWA § 316(a).

   a) 35 IAC § 302.211(j) was established in 1975. Rulemaking development by the IPCB is described in Water Quality and Effluent Standards Amendments, Cooling Lakes, R75-2, (Sept. 29, 1975). A number of excerpts from that document, as provided below, indicate that 35 IAC § 302.211(j) was not meant to be an authorizing regulation for a CWA § 316(a) variance. As stated by the IPCB:

      > the word "alternate" was changed to reflect the difference between the specific thermal standards to be set under this Regulation, and an alternate thermal standard to be set pursuant to §316(a) of the FWPCA. *Slip op. at 42.*
      >
      > (On July 31, 1975, the Board did grant a two year Variance of "specific standards" for Lake Clinton.) While this was intended by the Agency to eliminate unnecessary duplication of effort by Illinois Power, the Board felt that the statutory requirements for Variances and those for regulatory amendments were not sufficiently similar to allow this as a "grandfather" vehicle. It was questionable whether, 1) the public hearing requirements for a Regulation could properly be fulfilled by the Variance hearings, and 2) because a Variance is designed to grant temporary relief from the general rules, and is conditioned on efforts to achieve compliance with those general rules, it was not clear that temporary approval of a thermal effluent under those conditions would be legally sufficient to justify the permanent imposition of the same standard. *Slip op. at 42*

b) Additionally, in the variance proceeding Illinois Power Company v. EPA, PCB 75-31, the Board stated:

> First, Illinois Power shall, and has, participated in a pending regulatory proceeding before the Board which would, if successful, provide a means by which it could obtain the equivalent of a permanent variance, which is presently unobtainable. In the Matter of Cooling Lakes, R75-2. Should that Regulatory Proposal, or the alternatives suggested by IEPA, be adopted by the Board, Illinois Power could be granted a specific thermal effluent limitation; such a specific limitation would provide permanent relief (subject, of course, to future Board actions, such as those provided for under Ch. 3, Rule 203(i) (5)), by granting a thermal standard exceeding the generally applicable one of Rule 203 (i). Second, the Board would hope that federal approval of the Board's NPDES regulations is imminent. Such approval would cause Rule 410(c) of the Water Pollution Regulations to provide for just such specific, long-term relief as Illinois Power would require. Rule 410(c), by adopting the federal standard under Sec. 316(a) of the FWPCA, provides for the adoption by the Board of an alternate thermal standard such as is requested by Illinois Power." *Slip op. at 14.*

A 316(a) alternate thermal limitation is a variance and not a permanent limitation. The alternate limitation is renewed with the reissuance of each NPDES permit based upon additional studies reflecting actual operating experience as required by the permitting authority. These excerpts clearly indicate that the IPCB did not consider 35 IAC § 302.211(j) to be the equivalent of 316(a). Relief granted under 35 IAC § 302.211(j) is intended to be permanent, consistent with an adjustment to water quality standards. It is also clear that the thermal standard under 35 IAC § 302.211(j) is applicable to the artificial cooling lake, not the specific discharger into that artificial cooling lake. Even presuming that an artificial cooling lake would typically only have one authorized discharger, it is clear that the standards are intended to be set for the artificial cooling lake, not the discharger specifically (See discussion of standards for Lake Clinton and Sangchris in R75-2, slip op. at pp25-35).

c) In its March 18, 2010 opinion and order, the IPCB indicates that Ameren asserts as a basis for seeking relief that compliance with the existing standards is technically infeasible or unreasonably cost-prohibitive. While the petition and order also address the environmental impacts of the discharge, the federal statute and regulation do not allow consideration of technical or economic factors in making a Clean Water Act § 316(a) determination. While there is nothing to preclude the state from requiring such a demonstration in addition to the Clean Water Act § 316(a) demonstration, it should be made clear that economic and technical considerations are not relevant to the Clean Water Act 316(a) determination, which is limited to the factors set out in the CWA and its implementing regulations.

d) The March 18, 2010 order on page 7 in foot note 9 states:

> Section 316(a) of the CWA and 40 CFR 125 Subpart H address alternate thermal limitations in terms of effluent standards. Although the Board's rule for ACL demonstrations provides for the use of a Section 316(a) showing, *the demonstration required under the Board's Section 302.211(j)(3) is for water quality standards that apply at the outside edge of the mixing zone in the artificial cooling lake and not as effluent limits* (emphasis added).

This footnote indicates that the demonstration under 35 IAC § 302.211(j) is for water quality standards, not effluent limitations. This raises uncertainty as to whether the relief provided under this provision is granted under § 316(a). Additionally, if the water quality standard is what is being modified, then the variance or site specific criterion must be submitted to EPA for approval before effluent limitations may be included in a permit based upon the variance or criterion.

Based on this information, EPA recommends that IEPA and the IPCB determine whether 35 IAC § 302.211(j) does in fact authorize Clean Water Act § 316(a) alternate effluent limitations, in addition to 35 IAC § 304.141(c), or if it is instead a procedure to modify water quality standards for a receiving water body. If it is the latter, changes to water quality standards require approval by EPA before effluent limitations based on the variance or site specific criterion can be included in NPDES permits. EPA is aware that there are numerous artificial cooling lakes in Illinois, and understands that any decision will have impacts beyond this specific permit issuance.

2) In reviewing the biological studies submitted to support the request for alternative limitations, EPA has concerns regarding potential adverse impacts to lower trophic levels due to the proposed alternate limitations. The current Representative and Important Species (RIS) list only addresses higher trophic level organisms. While the biological reports did a sufficient job in demonstrating that past thermal discharges did not appear to have an adverse impact on the entire community, EPA remains concerned that the increase in temperature may cause impacts to the forage species due to 1) potential change in spawning behavior due to change in the thermal regime and 2) increased predation at significant life stages due to earlier spawning and increased growth by the top predators and forage species due to the change in temperature regime. The biological reports indicate a potential trend of decreasing biomass in the RIS species. However, the demonstration submitted with the permit modification request did not provide any information or prediction regarding impact to the lower trophic levels. The demonstration only indicated that the RIS species would not be harmed from the temperature changes <u>in May</u> and <u>October</u>.

Ameren did
RIS
3 species

EPA believes that such analysis is necessary to demonstrate that a balanced and indigenous community, not just those species that are important from a recreational use aspect, is being protected and propagated in compliance with the CWA.

Find out what the analyis is

3) When a discharger submits a permit application for the reissuance of its NPDES permit, 40 C.F. R. §122.21(m) requires that a request for a CWA § 316(a) variance must be filed as well. 40 C.F.R. §125.72 states that only such information as the Director requests must be submitted with that request, but that the permittee should be prepared with studies to support the continuation of the variance. We have expressed reservations that the thermal relief granted under 35 IAC § 302.211(j) is in accordance with CWA § 316(a). It is also not clear that the Board has reviewed and approved the 316(a) variance at each permit reissuance as would be required by federal regulations, if the relief is indeed authorized under Section 316(a). This obligation is applicable to any 316(a) alternate limitation included in any NPDES permit.

4) Additionally, we note that a "provisional variance" was granted to the permittee on October 24, 2007 by IEPA for a 45 day period. Based on our review of the statutes authorizing this relief, as well as the rationale set out in support of the relief, we believe that the "provisional variance" was a change to water quality standards. We have no record of this "provisional variance" being submitted to EPA for review nor are we aware of any public notice or modification of the NPDES permit to allow implementation of this relief. We ask that you clarify this process and under what authorities the relief is granted in order to ensure that this practice is consistent with the Clean Water Act, and that appropriate EPA approval and public notice is conducted.

Ameren

IEPA EXHIBIT
No. 4

Ameren Services

July 27, 2012

CERTIFIED MAIL: 7011 3500 0001 1068 0728

RECEIVED
JUL 31 2012
ILLINOIS ENVIRONMENTAL PROTECTION AGENCY
BOW/WPC/PERMIT SECTION

Mr. Darin LeCrone
Industrial Unit Manager
Division of Water Pollution Control
Illinois Environmental Protection Agency
1021 North Grand Avenue East
P.O. Box 19276
Springfield, Illinois 62794-9276

Dear Mr. LeCrone:

RE: Ameren Energy Generating Company – Coffeen Power Station
NPDES Permit Renewal Application
NPDES Permit IL0000108

In accordance with State and Federal regulations, enclosed is a renewal application with original signatures and a copy of the same for the Ameren Energy Generating Company – Coffeen Power Station, NPDES Permit IL0000108. We believe that this timely application is complete, with all required forms, signatures, and drawings.

This renewal application also includes a set of Attachments that provide additional details regarding information required in the application forms and specific permit revision requests.

Please contact me at 314-554-4581 if there are any questions regarding this permit renewal application.

Sincerely,

Michael J. Smallwood
Consulting Environmental Engineer

Enclosures

Please print or type in the unshaded areas only.

Form Approved. OMB No. 2040-0086

KEYSTONE FILE / 3-9-15 / 9-16-16

FORM 1 GENERAL

EPA

U.S. ENVIRONMENTAL PROTECTION AGENCY
GENERAL INFORMATION
Consolidated Permits Program
(Read the "General Instructions" before starting.)

I. EPA I.D. NUMBER

S		T/A	C
F	IL0000108		D
1	2 13	14	15

LABEL ITEMS	
I. EPA I.D. NUMBER	IL0000108
III. FACILITY NAME	Ameren Energy Resources Company, LLC Coffeen Power Station
V. FACILITY MAILING ADDRESS	134 CIPS Lane Coffeen IL 62017
VI. FACILITY LOCATION	Montgomery County

GENERAL INSTRUCTIONS
If a preprinted label has been provided, affix it in the designated space. Review the information carefully; if any of it is incorrect, cross through it and enter the correct data in the appropriate fill-in area below. Also, if any of the preprinted data is absent *(the area to the left of the label space lists the information that should appear)*, please provide it in the proper fill-in area(s) below. If the label is complete and correct, you need not complete Items I, III, V, and VI *(except VI-B which must be completed regardless)*. Complete all items if no label has been provided. Refer to the instructions for detailed item descriptions and for the legal authorizations under which this data is collected.

II. POLLUTANT CHARACTERISTICS

INSTRUCTIONS: Complete A through J to determine whether you need to submit any permit application forms to the EPA. If you answer "yes" to any questions, you must submit this form and the supplemental form listed in the parenthesis following the question. Mark "X" in the box in the third column if the supplemental form is attached. If you answer "no" to each question, you need not submit any of these forms. You may answer "no" if your activity is excluded from permit requirements; see Section C of the instructions. See also, Section D of the instructions for definitions of **bold-faced terms.**

SPECIFIC QUESTIONS	YES	NO	FORM ATTACHED	SPECIFIC QUESTIONS	YES	NO	FORM ATTACHED
A. Is this facility a **publicly owned treatment works** which results in a **discharge** to **waters of the U.S.**? (FORM 2A)	16	X 17	18	B. Does or will this facility *(either existing or proposed)* include a **concentrated animal feeding operation** or **aquatic animal production facility** which results in a **discharge** to **waters of the U.S.**? (FORM 2B)	19	X 20	21
C. Is this a facility which currently results in **discharges** to **waters of the U.S.** other than those described in A or B above? (FORM 2C)	X 22	23	24	D. Is this a proposed facility *(other than those described in A or B above)* which will result in a **discharge** to **waters of the U.S.**? (FORM 2D)	25	X 26	27
E. Does or will this facility treat, store, or dispose of **hazardous wastes**? (FORM 3)	28	X 29	30	F. Do you or will you inject at this facility industrial or municipal effluent below the lowermost stratum containing, within one quarter mile of the well bore, underground sources of drinking water? (FORM 4)	31	X 32	33
G. Do you or will you inject at this facility any produced water or other fluids which are brought to the surface in connection with conventional oil or natural gas production, inject fluids used for enhanced recovery of oil or natural gas, or inject fluids for storage of liquid hydrocarbons? (FORM 4)	34	X 35	36	H. Do you or will you inject at this facility fluids for special processes such as mining of sulfur by the Frasch process, solution mining of minerals, in situ combustion of fossil fuel, or recovery of geothermal energy? (FORM 4)	37	X 38	39
I. Is this facility a proposed **stationary source** which is one of the 28 industrial categories listed in the instructions and which will potentially emit 100 tons per year of any air pollutant regulated under the Clean Air Act and may affect or be located in an attainment area? (FORM 5)	40	X 41	42	J. Is this facility a proposed **stationary source** which is NOT one of the 28 industrial categories listed in the instructions and which will potentially emit 250 tons per year of any air pollutant regulated under the Clean Air Act and may affect or be located in an **attainment area**? (FORM 5)	43	X 44	45

III. NAME OF FACILITY

C	SKIP	
1		Ameren Energy Resources Company, LLC - Coffeen Power Station
15	16 - 29	30 69

IV. FACILITY CONTACT

C	A. NAME & TITLE *(last, first, & title)*	B. PHONE *(area code & no.)*
2	Pozzo, John C. - Managing Supervising Engineer	314-554-2280
15	16 45	46 48 49 51 52- 55

V. FACILTY MAILING ADDRESS

C	A. STREET OR P.O. BOX
3	PO Box 66149, MC-602, 1901 Chouteau Avenue
15	16 45

C	B. CITY OR TOWN	C. STATE	D. ZIP CODE
4	St. Louis	MO	63166
15	16 40	41 42	47 51

VI. FACILITY LOCATION

C	A. STREET, ROUTE NO. OR OTHER SPECIFIC IDENTIFIER
5	134 CIPS Lane
15	16 45

B. COUNTY NAME
Montgomery
46 70

C	C. CITY OR TOWN	D. STATE	E. ZIP CODE	F. COUNTY CODE *(if known)*
6	Coffeen	IL	62017	
15	16 40	41 42	47 51	52 -54

CONTINUED FROM THE FRONT

VII. SIC CODES (4-digit, in order of priority)

		(specify)
A. FIRST	7 4911	Electric Services
B. SECOND	7	
C. THIRD	7	
D. FOURTH	7	

VIII. OPERATOR INFORMATION

A. NAME: 8 Ameren Energy Resources Company, LLC

B. Is the name listed in Item VIII-A also the owner? ☑ YES ☐ NO

C. STATUS OF OPERATOR (Enter the appropriate letter into the answer box: if "Other," specify.)

F = FEDERAL
S = STATE
P = PRIVATE
M = PUBLIC (other than federal or state)
O = OTHER (specify)

P (specify)

D. PHONE (area code & no.): A

E. STREET OR P.O. BOX: PO Box 66149, MC-602, 1901 Chouteau Avenue

F. CITY OR TOWN: B St. Louis

G. STATE: MO

H. ZIP CODE: 63166

IX. INDIAN LAND

Is the facility located on Indian lands? ☐ YES ☑ NO

X. EXISTING ENVIRONMENTAL PERMITS

	C	T		(specify)
A. NPDES (Discharges to Surface Water)	9	N	IL0000108	
B. UIC (Underground Injection of Fluids)	9	U		
C. RCRA (Hazardous Wastes)	9	R		
D. PSD (Air Emissions from Proposed Sources)	9	P		
E. OTHER (specify)	9		2008-EA-4661-3	IEPA Water Pollution Control (Gypsum Management Facility)
E. OTHER (specify)	9		135803AAA	Facility Air Permit ID

XI. MAP

Attach to this application a topographic map of the area extending to at least one mile beyond property boundaries. The map must show the outline of the facility, the location of each of its existing and proposed intake and discharge structures, each of its hazardous waste treatment, storage, or disposal facilities, and each well where it injects fluids underground. Include all springs, rivers, and other surface water bodies in the map area. See instructions for precise requirements.

XII. NATURE OF BUSINESS (provide a brief description)

Electrical Generation (steam electric).

XIII. CERTIFICATION (see instructions)

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this application and all attachments and that, based on my inquiry of those persons immediately responsible for obtaining the information contained in the application, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

A. NAME & OFFICIAL TITLE (type or print)	B. SIGNATURE	C. DATE SIGNED
Michael L. Menne, Vice President-Environmental Svcs	Michael L. Menne	07/25/12

COMMENTS FOR OFFICIAL USE ONLY

C

Please print or type in the unshaded areas only.

EPA I.D. NUMBER (*copy from Item 1 of Form 1*) IL0000108

Form Approved.
OMB No. 2040-0086.
Approval expires 3-31-98.

FORM **2C** NPDES

U.S. ENVIRONMENTAL PROTECTION AGENCY
APPLICATION FOR PERMIT TO DISCHARGE WASTEWATER
EXISTING MANUFACTURING, COMMERCIAL, MINING AND SILVICULTURE OPERATIONS
Consolidated Permits Program

I. OUTFALL LOCATION

For each outfall, list the latitude and longitude of its location to the nearest 15 seconds and the name of the receiving water.

A. OUTFALL NUMBER (*list*)	B. LATITUDE 1. DEG.	2. MIN.	3. SEC.	C. LONGITUDE 1. DEG.	2. MIN.	3. SEC.	D. RECEIVING WATER (*name*)
001	39	03	36	89	23	28	Coffeen Lake
020	39	03	34	89	23	28	Coffeen Lake
021	39	03	37	89	23	25	Coffeen Lake
022	39	03	31	89	23	23	Coffeen Lake

II. FLOWS, SOURCES OF POLLUTION, AND TREATMENT TECHNOLOGIES

A. Attach a line drawing showing the water flow through the facility. Indicate sources of intake water, operations contributing wastewater to the effluent, and treatment units labeled to correspond to the more detailed descriptions in Item B. Construct a water balance on the line drawing by showing average flows between intakes, operations, treatment units, and outfalls. If a water balance cannot be determined (*e.g., for certain mining activities*), provide a pictorial description of the nature and amount of any sources of water and any collection or treatment measures.

B. For each outfall, provide a description of: (1) All operations contributing wastewater to the effluent, including process wastewater, sanitary wastewater, cooling water, and storm water runoff; (2) The average flow contributed by each operation; and (3) The treatment received by the wastewater. Continue on additional sheets if necessary.

1. OUT-FALL NO. (*list*)	2. OPERATION(S) CONTRIBUTING FLOW a. OPERATION (*list*)	b. AVERAGE FLOW (*include units*)	3. TREATMENT a. DESCRIPTION	b. LIST CODES FROM TABLE 2C-1	
001	Condenser Cooling Water Discharge	0.13 MGD	Discharge to Surface Water	4-A	
	Flume				
020	Condenser Cooling Water Diversion	359.83 MGD	Discharge to Surface Water	4-A	
	Channel Overflow				
021	Supplemental Cooling Pond Discharge	68.85 MGD	Discharge to Surface Water	4-A	
022	Supplemental Cooling Tower Discharge	66.17 MGD	Discharge to Surface Water	4-A	
	CONTRIBUTING FLOWS:				
	Condenser Cooling Water Discharge		None (non=contact cooling)		
	Boiler Draining Wastewater	0.075 MGD	None		
	Misc. Heat Exchanger Cooling Water	48.0 MGD	None (non-contact cooling)		
	Raw Water Treatment and	0.390 MGD	Mixing	1-O	
	Demineralizer Regenerant Waste				
	Unit 1 Floor & Equipment Drains	Intermittent	Mixing, separation	1-O	
	Sewage Treatment Plant Effluent	0.0085 MGD	Activated sludge, Sand filtration	3-A	1-V
	Unit 2 Floor & Equipment Drains	Intermittent	Mixing, separation	1-O	
	Equalization Tank Bypass Discharge	Intermittent			
	Maintenance Shop Oil/Water Separato	Intermittent			
	Closed Ash Pond SW Corner SWR	Intermittent			
	Closed Ash Pond SE Corner SWR	Intermittent			
	Storm Water Runoff (SWR)	Intermittent			
	Chemical Containment Area Drains	Intermittent			
	Emergency Recycle Pond Overflow	Intermittent			

OFFICIAL USE ONLY (*effluent guidelines sub-categories*)

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Approval expires 3-31-98.

FORM 2C NPDES

EPA

U.S. ENVIRONMENTAL PROTECTION AGENCY
APPLICATION FOR PERMIT TO DISCHARGE WASTEWATER
EXISTING MANUFACTURING, COMMERCIAL, MINING AND SILVICULTURE OPERATIONS
Consolidated Permits Program

I. OUTFALL LOCATION

For each outfall, list the latitude and longitude of its location to the nearest 15 seconds and the name of the receiving water.

A. OUTFALL NUMBER (*list*)	B. LATITUDE 1. DEG.	B. LATITUDE 2. MIN.	B. LATITUDE 3. SEC.	C. LONGITUDE 1. DEG.	C. LONGITUDE 2. MIN.	C. LONGITUDE 3. SEC.	D. RECEIVING WATER (*name*)
A01	39	03	34	89	23	28	Coffeen Lake
B01	39	03	34	89	23	28	Coffeen Lake
C01	39	03	34	89	23	28	Coffeen Lake
D01	39	03	34	89	23	28	Coffeen Lake
E01	39	03	34	89	23	28	Coffeen Lake

II. FLOWS, SOURCES OF POLLUTION, AND TREATMENT TECHNOLOGIES

A. Attach a line drawing showing the water flow through the facility. Indicate sources of intake water, operations contributing wastewater to the effluent, and treatment units labeled to correspond to the more detailed descriptions in Item B. Construct a water balance on the line drawing by showing average flows between intakes, operations, treatment units, and outfalls. If a water balance cannot be determined (*e.g., for certain mining activities*), provide a pictorial description of the nature and amount of any sources of water and any collection or treatment measures.

B. For each outfall, provide a description of: (1) All operations contributing wastewater to the effluent, including process wastewater, sanitary wastewater, cooling water, and storm water runoff; (2) The average flow contributed by each operation; and (3) The treatment received by the wastewater. Continue on additional sheets if necessary.

1. OUT-FALL NO. (*list*)	2. OPERATION(S) CONTRIBUTING FLOW: a. OPERATION (*list*)	b. AVERAGE FLOW (*include units*)	3. TREATMENT: a. DESCRIPTION	b. LIST CODES FROM TABLE 2C-1	
A01	Boiler Draining Wastewater	0.036 MGD	None.		
B01	Raw Water Treatment and	0.0018 MGD	Mixing.	1-O	
	Demineralizer Regenerant Wastes				
	Chemical Containment Area Drains	Intermittent			
C01	Unit 1 Floor Drains & Sumps	Intermittent	Mixing, Separation	1-O	
	Floor drains & sump discharges	Intermittent			
	Storm water runoff	Intermittent			
D01	Sewage Treatment Plant Effluent	0.0168 MGD	Activated Sludge, Sand Filtration	3-A	1-V
E01	Unit 2 Floor Drains & Sumps	Intermittent	Mixing, Separation	1-O	
	Floor drains & sump discharges	Intermittent			
	Storm water runoff	Intermittent			

OFFICIAL USE ONLY (*effluent guidelines sub-categories*)

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EPA I.D. NUMBER (*copy from Item 1 of Form 1*) IL0000108

Form Approved.
OMB No. 2040-0086.
Approval expires 3-31-98.

FORM 2C NPDES EPA

U.S. ENVIRONMENTAL PROTECTION AGENCY
APPLICATION FOR PERMIT TO DISCHARGE WASTEWATER
EXISTING MANUFACTURING, COMMERCIAL, MINING AND SILVICULTURE OPERATIONS
Consolidated Permits Program

I. OUTFALL LOCATION

For each outfall, list the latitude and longitude of its location to the nearest 15 seconds and the name of the receiving water.

A. OUTFALL NUMBER (*list*)	B. LATITUDE 1. DEG.	2. MIN.	3. SEC.	C. LONGITUDE 1. DEG.	2. MIN.	3. SEC.	D. RECEIVING WATER (*name*)
F01	39	03	34	89	23	28	Coffeen Lake
G01	39	03	34	89	23	28	Coffeen Lake
H01	39	03	34	89	23	28	Coffeen Lake
I01	39	03	34	89	23	28	Coffeen Lake

II. FLOWS, SOURCES OF POLLUTION, AND TREATMENT TECHNOLOGIES

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B. For each outfall, provide a description of: (1) All operations contributing wastewater to the effluent, including process wastewater, sanitary wastewater, cooling water, and storm water runoff; (2) The average flow contributed by each operation; and (3) The treatment received by the wastewater. Continue on additional sheets if necessary.

1. OUT-FALL NO. (*list*)	2. OPERATION(S) CONTRIBUTING FLOW a. OPERATION (*list*)	b. AVERAGE FLOW (*include units*)	3. TREATMENT a. DESCRIPTION	b. LIST CODES FROM TABLE 2C-1	
F01	Maintenance Shop Oil/Water Separator	Intermittent	Separation		
G01	Equalization Tank Bypass Discharge	Intermittent			
	Chemical containment drains	Intermittent			
H01	Closed Ash Pond SW Corner Storm	Intermittent			
	Water Runoff				
I01	Closed Ash Pond SE Corner Storm	Intermittent			
	Water Runoff				

OFFICIAL USE ONLY (*effluent guidelines sub-categories*)

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FORM 2C NPDES

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U.S. ENVIRONMENTAL PROTECTION AGENCY
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Consolidated Permits Program

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A. OUTFALL NUMBER (*list*)	B. LATITUDE 1. DEG.	2. MIN.	3. SEC.	C. LONGITUDE 1. DEG.	2. MIN.	3. SEC.	D. RECEIVING WATER (*name*)
002	39	03	16	89	24	19	Coffeen Lake
003	39	03	36	89	24	18	Coffeen Lake
008	39	03	16	89	23	56	Coffeen Lake

II. FLOWS, SOURCES OF POLLUTION, AND TREATMENT TECHNOLOGIES

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1. OUT-FALL NO. (*list*)	2. OPERATION(S) CONTRIBUTING FLOW a. OPERATION (*list*)	b. AVERAGE FLOW (*include units*)	3. TREATMENT a. DESCRIPTION	b. LIST CODES FROM TABLE 2C-1	
002	Coal Yard Settling Pond Discharge	0.63 MGD	Discharge to surface water,Mixing, Sedimentation	4-A	1-O
	Storm water runoff	Intermittent		1-U	
	Raw water treatment wastewater	0.06 MGD			
	Coal crusher house sump discharge	0.42 MGD			
	Ash dewatering bin overflows	Intermittent			
	Tractor shed oil/water separator	0.005 MGD			
	Coal recovery pond effluent	Intermittent			
	Recycle Pond level control	Intermittent			
	Ultrasonic resin cleaner backwash	0.01 MGD			
	Coal unloading septic system	0.0002 MGD			
	Fuel unloading oil/water separator	Intermittent			
	Tripper room floor drains	0.0003 MGD			
	Limestone runoff pond emergency	Intermittent			
	overflow				
	Warehouse/maintenance shop	Intermittent			
	oil/water separator				
003	Intake screen backwash	0.07 MGD			
008	Storm Water Runoff from Rail Spur	Intermittent			

OFFICIAL USE ONLY (*effluent guidelines sub-categories*)

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EPA I.D. NUMBER (*copy from Item 1 of Form 1*): IL0000108

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OMB No. 2040-0086.
Approval expires 3-31-98.

FORM **2C** NPDES

EPA

U.S. ENVIRONMENTAL PROTECTION AGENCY
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I. OUTFALL LOCATION

For each outfall, list the latitude and longitude of its location to the nearest 15 seconds and the name of the receiving water.

A. OUTFALL NUMBER (*list*)	B. LATITUDE			C. LONGITUDE			D. RECEIVING WATER (*name*)
	1. DEG.	2. MIN.	3. SEC.	1. DEG.	2. MIN.	3. SEC.	
009	39	03	14	89	23	57	Coffeen Lake
010	39	03	12	89	23	57	Coffeen Lake
011	39	03	01	89	24	01	Coffeen Lake
012	39	02	57	89	23	54	Coffeen Lake
013	39	02	39	89	23	41	Coffeen Lake

II. FLOWS, SOURCES OF POLLUTION, AND TREATMENT TECHNOLOGIES

A. Attach a line drawing showing the water flow through the facility. Indicate sources of intake water, operations contributing wastewater to the effluent, and treatment units labeled to correspond to the more detailed descriptions in Item B. Construct a water balance on the line drawing by showing average flows between intakes, operations, treatment units, and outfalls. If a water balance cannot be determined (*e.g., for certain mining activities*), provide a pictorial description of the nature and amount of any sources of water and any collection or treatment measures.

B. For each outfall, provide a description of: (1) All operations contributing wastewater to the effluent, including process wastewater, sanitary wastewater, cooling water, and storm water runoff; (2) The average flow contributed by each operation; and (3) The treatment received by the wastewater. Continue on additional sheets if necessary.

1. OUT-FALL NO. (*list*)	2. OPERATION(S) CONTRIBUTING FLOW		3. TREATMENT		
	a. OPERATION (*list*)	b. AVERAGE FLOW (*include units*)	a. DESCRIPTION	b. LIST CODES FROM TABLE 2C-1	
009	Storm Water Runoff from Rail Spur	Intermittent	Discharge to surface water	4-A	
010	Storm Water Runoff from Rail Spur	Intermittent	Discharge to surface water	4-A	
011	Storm Water Runoff from Rail Spur	Intermittent	Discharge to surface water	4-A	
012	Storm Water Runoff from Rail Spur	Intermittent	Discharge to surface water	4-A	
013	Storm Water Runoff from Rail Spur	Intermittent	Discharge to surface water	4-A	

OFFICIAL USE ONLY (*effluent guidelines sub-categories*)

Please print or type in the unshaded areas only.

EPA I.D. NUMBER (*copy from Item 1 of Form 1*) IL0000108

Form Approved.
OMB No. 2040-0086.
Approval expires 3-31-98.

FORM **2C** NPDES

U.S. ENVIRONMENTAL PROTECTION AGENCY
APPLICATION FOR PERMIT TO DISCHARGE WASTEWATER
EXISTING MANUFACTURING, COMMERCIAL, MINING AND SILVICULTURE OPERATIONS
Consolidated Permits Program

I. OUTFALL LOCATION

For each outfall, list the latitude and longitude of its location to the nearest 15 seconds and the name of the receiving water.

A. OUTFALL NUMBER (*list*)	B. LATITUDE			C. LONGITUDE			D. RECEIVING WATER (*name*)
	1. DEG.	2. MIN.	3. SEC.	1. DEG.	2. MIN.	3. SEC.	
014	39	02	36	89	23	38	Coffeen Lake
015	39	03	19	89	24	02	Coffeen Lake
016	39	03	39	89	24	18	Coffeen Lake
018	39	03	55	89	24	12	Coffeen Lake

II. FLOWS, SOURCES OF POLLUTION, AND TREATMENT TECHNOLOGIES

A. Attach a line drawing showing the water flow through the facility. Indicate sources of intake water, operations contributing wastewater to the effluent, and treatment units labeled to correspond to the more detailed descriptions in Item B. Construct a water balance on the line drawing by showing average flows between intakes, operations, treatment units, and outfalls. If a water balance cannot be determined (*e.g., for certain mining activities*), provide a pictorial description of the nature and amount of any sources of water and any collection or treatment measures.

B. For each outfall, provide a description of: (1) All operations contributing wastewater to the effluent, including process wastewater, sanitary wastewater, cooling water, and storm water runoff; (2) The average flow contributed by each operation; and (3) The treatment received by the wastewater. Continue on additional sheets if necessary.

1. OUT-FALL NO. (*list*)	2. OPERATION(S) CONTRIBUTING FLOW		3. TREATMENT		
	a. OPERATION (*list*)	b. AVERAGE FLOW (*include units*)	a. DESCRIPTION	b. LIST CODES FROM TABLE 2C-1	
014	Storm Water Runoff from Rail Spur	Intermittent	Discharge to surface water	4-A	
015	Storm Water Runoff from Rail Spur	Intermittent	Discharge to surface water	4-A	
016	Storm Water Runoff from Rail Spur	Intermittent	Discharge to surface water	4-A	
018	Storm Water Runoff from Coal	Intermittent	Discharge to surface water, sedimentation	4-A	1-U
	Combustion Byproduct Landfill				

OFFICIAL USE ONLY (*effluent guidelines sub-categories*)

CONTINUED FROM THE FRONT

C. Except for storm runoff, leaks, or spills, are any of the discharges described in Items II-A or B intermittent or seasonal?

☑ YES (*complete the following table*) ☐ NO (*go to Section III*)

1. OUTFALL NUMBER (*list*)	2. OPERATION(s) CONTRIBUTING FLOW (*list*)	3. FREQUENCY a. DAYS PER WEEK (*specify average*)	3. FREQUENCY b. MONTHS PER YEAR (*specify average*)	4. FLOW a. FLOW RATE (*in mgd*) 1. LONG TERM AVERAGE	4. FLOW a. FLOW RATE (*in mgd*) 2. MAXIMUM DAILY	4. FLOW B. TOTAL VOLUME (*specify with units*) 1. LONG TERM AVERAGE	4. FLOW B. TOTAL VOLUME (*specify with units*) 2. MAXIMUM DAILY	C. DURATION (*in days*)
C01 E01	Unit 1 Floor & Equipment Drains Unit 2 Floor & Equipment Drains	These flows (Outfalls C01 and E01) are typically routed to the Recycle Pond						
021	Supplemental Cooling Pond	7	6	37.97	265.25			1
022	Supplemental Cooling Towers	7	6	85.35	265.25			1
001/020 021/022	Emergency Recycle Pond Overflow	Normal overflow is to the coal yard settling pond (Outfall 002).						

III. PRODUCTION

A. Does an effluent guideline limitation promulgated by EPA under Section 304 of the Clean Water Act apply to your facility?

☑ YES (*complete Item III-B*) ☐ NO (*go to Section IV*)

B. Are the limitations in the applicable effluent guideline expressed in terms of production (*or other measure of operation*)?

☐ YES (*complete Item III-C*) ☑ NO (*go to Section IV*)

C. If you answered "yes" to Item III-B, list the quantity which represents an actual measurement of your level of production, expressed in the terms and units used in the applicable effluent guideline, and indicate the affected outfalls.

1. AVERAGE DAILY PRODUCTION a. QUANTITY PER DAY	b. UNITS OF MEASURE	c. OPERATION, PRODUCT, MATERIAL, ETC. (*specify*)	2. AFFECTED OUTFALLS (*list outfall numbers*)

IV. IMPROVEMENTS

A. Are you now required by any Federal, State or local authority to meet any implementation schedule for the construction, upgrading or operations of wastewater treatment equipment or practices or any other environmental programs which may affect the discharges described in this application? This includes, but is not limited to, permit conditions, administrative or enforcement orders, enforcement compliance schedule letters, stipulations, court orders, and grant or loan conditions.

☐ YES (*complete the following table*) ☑ NO (*go to Item IV-B*)

1. IDENTIFICATION OF CONDITION, AGREEMENT, ETC.	2. AFFECTED OUTFALLS a. NO.	b. SOURCE OF DISCHARGE	3. BRIEF DESCRIPTION OF PROJECT	4. FINAL COMPLIANCE DATE a. REQUIRED	b. PROJECTED

B. OPTIONAL: You may attach additional sheets describing any additional water pollution control programs (*or other environmental projects which may affect your discharges*) you now have underway or which you plan. Indicate whether each program is now underway or planned, and indicate your actual or planned schedules for construction.

☒ MARK "X" IF DESCRIPTION OF ADDITIONAL CONTROL PROGRAMS IS ATTACHED (Please see "Attachment H - Environmental Projects" for description).

 CONTINUE ON PAGE 3

CONTINUED FROM PAGE 2

EPA I.D. NUMBER (*copy from Item 1 of Form 1*)
IL0000108

V. INTAKE AND EFFLUENT CHARACTERISTICS

A, B, & C: See instructions before proceeding – Complete one set of tables for each outfall – Annotate the outfall number in the space provided.
NOTE: Tables V-A, V-B, and V-C are included on separate sheets numbered V-1 through V-9.

D. Use the space below to list any of the pollutants listed in Table 2c-3 of the instructions, which you know or have reason to believe is discharged or may be discharged from any outfall. For every pollutant you list, briefly describe the reasons you believe it to be present and report any analytical data in your possession.

1. POLLUTANT	2. SOURCE	1. POLLUTANT	2. SOURCE

Various metals including strontium, uranium, and vanadium may be present in coal ash in trace amounts.

Asbestos is present in insulating material at the Station. Note that all asbestos removal and disposal activities are conducted in accordance with 40CFR61, Subpart M (National Emission Standard for Hazardous Air Pollutants) and OSHA Standard 29CFR1910.1001 and 1926.1101.

The Station intake water, Coffeen Lake, may also contain pollutants listed in Table B. Therefore any pollutants in the intake water would also be present in non-contact cooling water (via Outfalls 001/020/021/022) and intake screen backwash water (Outfall 003).

With respect to chemicals used in the Station laboratory, see Attachment D (Chemical Usage). Note that the discharge point for any laboratory chemicals would be the Sewage Treatment Plant (Outfall D01).

VI. POTENTIAL DISCHARGES NOT COVERED BY ANALYSIS

Is any pollutant listed in Item V-C a substance or a component of a substance which you currently use or manufacture as an intermediate or final product or byproduct?

☐ YES (*list all such pollutants below*) ☑ NO (*go to Item VI-B*)

CONTINUED FROM THE FRONT

VII. BIOLOGICAL TOXICITY TESTING DATA

Do you have any knowledge or reason to believe that any biological test for acute or chronic toxicity has been made on any of your discharges or on a receiving water in relation to your discharge within the last 3 years?

☐ YES (*identify the test(s) and describe their purposes below*) ☑ NO (*go to Section VIII*)

VIII. CONTRACT ANALYSIS INFORMATION

Were any of the analyses reported in Item V performed by a contract laboratory or consulting firm?

☑ YES (*list the name, address, and telephone number of, and pollutants analyzed by, each such laboratory or firm below*) ☐ NO (*go to Section IX*)

A. NAME	B. ADDRESS	C. TELEPHONE (*area code & no.*)	D. POLLUTANTS ANALYZED (*list*)
PDC Laboratories, Inc.	PO Box 9071 Peoria IL 61612-9071	309-692-9688	All except Mercury, pH, Total Residual Chlorine, and Fecal Coliform.
Microbac Laboraties, Inc.	250 West 84th Drive Merrillville IN 46410	219-769-8378	Mercury.
Prairie Analytical Systems, Inc.	1210 Capital Airport Drive Springfield IL 62707	217-753-1148	Fecal Coliform.

IX. CERTIFICATION

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

A. NAME & OFFICIAL TITLE (*type or print*)	B. PHONE NO. (*area code & no.*)
Michael L. Menne, Vice President - Environmental Services	314-554-2816
C. SIGNATURE	D. DATE SIGNED 07-25-12

Please print or type in the unshaded areas only.

EPA ID Number (*copy from Item 1 of Form 1*)
IL0000108

Form Approved. OMB No. 2040-0086
Approval expires 5-31-92

FORM **2F** NPDES

EPA

U.S. Environmental Protection Agency
Washington, DC 20460

Application for Permit to Discharge Storm Water Discharges Associated with Industrial Activity

Paperwork Reduction Act Notice

Public reporting burden for this application is estimated to average 28.6 hours per application, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate, any other aspect of this collection of information, or suggestions for improving this form, including suggestions which may increase or reduce this burden to: Chief, Information Policy Branch, PM-223, U.S. Environmental Protection Agency, 1200 Pennsylvania Avenue, NW, Washington, DC 20460, or Director, Office of Information and Regulatory Affairs, Office of Management and Budget, Washington, DC 20503.

I. Outfall Location

For each outfall, list the latitude and longitude of its location to the nearest 15 seconds and the name of the receiving water.

A. Outfall Number (*list*)	B. Latitude			C. Longitude			D. Receiving Water (*name*)
001	39	03	36	89	23	28	Coffeen Lake
020	39	03	34	89	23	28	Coffeen Lake
021	39	03	37	89	23	25	Coffeen Lake
022	39	03	31	89	23	23	Coffeen Lake
C01	39	03	34	89	23	28	Coffeen Lake via Outfalls 001/020/021/022
E01	39	03	34	89	23	28	Coffeen Lake via Outfalls 001/020/021/022
H01	39	03	34	89	23	28	Coffeen Lake via Outfalls 001/020/021/022
I01	39	03	34	89	23	28	Coffeen Lake via Outfalls 001/020/021/022
002	39	03	16	89	24	19	Coffeen Lake
008	39	03	16	89	23	56	Coffeen Lake

II. Improvements

A. Are you now required by any Federal, State, or local authority to meet any implementation schedule for the construction, upgrading or operation of wastewater treatment equipment or practices or any other environmental programs which may affect the discharges described in this application? This includes, but is not limited to, permit conditions, administrative or enforcement orders, enforcement compliance schedule letters, stipulations, court orders, and grant or loan conditions.

1. Identification of Conditions, Agreements, Etc.	2. Affected Outfalls		3. Brief Description of Project	4. Final Compliance Date	
	number	source of discharge		a. req.	b. proj.
None.					

B: You may attach additional sheets describing any additional water pollution (or other environmental projects which may affect your discharges) you now have under way or which you plan. Indicate whether each program is now under way or planned, and indicate your actual or planned schedules for construction.

III. Site Drainage Map

Attach a site map showing topography (or indicating the outline of drainage areas served by the outfalls(s) covered in the application if a topographic map is unavailable) depicting the facility including: each of its intake and discharge structures; the drainage area of each storm water outfall; paved areas and buildings within the drainage area of each storm water outfall, each known past or present areas used for outdoor storage of disposal of significant materials, each existing structural control measure to reduce pollutants in storm water runoff, materials loading and access areas, areas where pesticides, herbicides, soil conditioners and fertilizers are applied; each of its hazardous waste treatment, storage or disposal units (including each area not required to have a RCRA permit which is used for accumulating hazardous waste under 40 CFR 262.34); each well where fluids from the facility are injected underground; springs, and other surface water bodies which received storm water discharges from the facility.

 Continue on Page 2a

Please print or type in the unshaded areas only.

EPA ID Number (*copy from Item 1 of Form 1*)
IL0000108

Form Approved. OMB No. 2040-0086
Approval expires 5-31-92

FORM **2F** NPDES

EPA

U.S. Environmental Protection Agency
Washington, DC 20460

Application for Permit to Discharge Storm Water Discharges Associated with Industrial Activity

Paperwork Reduction Act Notice

Public reporting burden for this application is estimated to average 28.6 hours per application, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate, any other aspect of this collection of information, or suggestions for improving this form, including suggestions which may increase or reduce this burden to: Chief, Information Policy Branch, PM-223, U.S. Environmental Protection Agency, 1200 Pennsylvania Avenue, NW, Washington, DC 20460, or Director, Office of Information and Regulatory Affairs, Office of Management and Budget, Washington, DC 20503.

I. Outfall Location

For each outfall, list the latitude and longitude of its location to the nearest 15 seconds and the name of the receiving water.

A. Outfall Number (*list*)	B. Latitude			C. Longitude			D. Receiving Water (*name*)
009	39	03	14	89	23	57	Coffeen Lake
010	39	03	12	89	23	57	Coffeen Lake
011	39	03	01	89	24	01	Coffeen Lake
012	39	02	57	89	23	54	Coffeen Lake
013	39	02	39	89	23	41	Coffeen Lake
014	39	02	36	89	02	38	Coffeen Lake
015	39	03	19	89	24	02	Coffeen Lake
016	39	03	39	89	24	18	Coffeen Lake
018	39	03	55	89	24	12	Coffeen Lake

II. Improvements

A. Are you now required by any Federal, State, or local authority to meet any implementation schedule for the construction, upgrading or operation of wastewater treatment equipment or practices or any other environmental programs which may affect the discharges described in this application? This includes, but is not limited to, permit conditions, administrative or enforcement orders, enforcement compliance schedule letters, stipulations, court orders, and grant or loan conditions.

1. Identification of Conditions, Agreements, Etc.	2. Affected Outfalls		3. Brief Description of Project	4. Final Compliance Date	
	number	source of discharge		a. req.	b. proj.
None.					

B: You may attach additional sheets describing any additional water pollution (or other environmental projects which may affect your discharges) you now have under way or which you plan. Indicate whether each program is now under way or planned, and indicate your actual or planned schedules for construction.

III. Site Drainage Map

Attach a site map showing topography (or indicating the outline of drainage areas served by the outfalls(s) covered in the application if a topographic map is unavailable) depicting the facility including: each of its intake and discharge structures; the drainage area of each storm water outfall; paved areas and buildings within the drainage area of each storm water outfall, each known past or present areas used for outdoor storage of disposal of significant materials, each existing structural control measure to reduce pollutants in storm water runoff, materials loading and access areas, areas where pesticides, herbicides, soil conditioners and fertilizers are applied; each of its hazardous waste treatment, storage or disposal units (including each area not required to have a RCRA permit which is used for accumulating hazardous waste under 40 CFR 262.34); each well where fluids from the facility are injected underground; springs, and other surface water bodies which received storm water discharges from the facility.

Continue on Page 2b

Continued from the Front

IV. Narrative Description of Pollutant Sources

A. For each outfall, provide an estimate of the area (include units) of imperious surfaces (including paved areas and building roofs) drained to the outfall, and an estimate of the total surface area drained by the outfall.

Outfall Number	Area of Impervious Surface *(provide units)*	Total Area Drained *(provide units)*	Outfall Number	Area of Impervious Surface *(provide units)*	Total Area Drained *(provide units)*
001	5.3 acres	15.8 acres	E01	1.1 acres	1.1 acres
020	5.3 acres	15.8 acres	H01	0.0 acres	28.5 acres (approx)
021	84 acres	95 acres	I01	0.0 acres	28.5 acres (approx)
022	5.3 acres	15.8 acres	002	13.0 acres	18.0 acres
C01	1.1 acres	1.1 acres	008	0.0 acres	14.1 acres

B. Provide a narrative description of significant materials that are currently or in the past three years have been treated, stored or disposed in a manner to allow exposure to storm water; method of treatment, storage, or disposal; past and present materials management practices employed to minimize contact by these materials with storm water runoff; materials loading and access areas, and the location, manner, and frequency in which pesticides, herbicides, soil conditioners, and fertilizers are applied.

All outfalls have contact with or potential exposure to coal and coal combustion byproducts. Rail spur and exposed electrical components (switchyard/transformers) have additional exposure to herbicides that are applied for vegetative control. Hazardous wastes are stored in sheltered areas or in sealed containers. Coal storage and handling areas have diversion dikes that are contributory to the Coal Yard Settling Pond (Outfall 002). SPCC plans are in place. Periodic documented inspections and preventive maintenance are used to minimize contact with raw materials, byproducts, or chemicals with storm water.

C. For each outfall, provide the location and a description of existing structural and nonstructural control measures to reduce pollutants in storm water runoff; and a description of the treatment the storm water receives, including the schedule and type of maintenance for control and treatment measures and the ultimate disposal of any solid or fluid wastes other than by discharge.

Outfall Number	Treatment	List Codes from Table 2F-1
001,020 021,022 C01,E01 H01,I01 002,008	All outfalls except as noted below: SPCC & SWPPP, preventive maintenance, vegetative cover. Outfalls C01 & E01: SPCC & SWPPP, preventative maintenance. 002: SPCC & SWPPP, preventive maintenance, vegetative cover, settling basin.	1-U

V. Nonstormwater Discharges

A. I certify under penalty of law hat the outfall(s) covered by this application have been tested or evaluated for the presence of nonstormwater discharges, and that all nonstormwater discharged from these outfall(s) are identified in either an accompanying Form 2C or From 2E application for the outfall.

Name and Official Title *(type or print)*	Signature	Date Signed
Michael L. Menne, Vice President - Environmental Services	Michael L. Menne	07-25-12

B. Provide a description of the method used, the date of any testing, and the onsite drainage points that were directly observed during a test.

Topographic maps, interviews with site employees, design drawings, and visual observations were utilized for storm water runoff areas, as appropriate.

VI. Significant Leaks or Spills

Provide existing information regarding the history of significant leaks or spills of toxic or hazardous pollutants at the facility in the last three years, including the approximate date and location of the spill or leak, and the type and amount of material released.

None.

 Continue on Page 3

Continued from the Front

IV. Narrative Description of Pollutant Sources

A. For each outfall, provide an estimate of the area (include units) of imperious surfaces (including paved areas and building roofs) drained to the outfall, and an estimate of the total surface area drained by the outfall.

Outfall Number	Area of Impervious Surface *(provide units)*	Total Area Drained *(provide units)*	Outfall Number	Area of Impervious Surface *(provide units)*	Total Area Drained *(provide units)*
009	0 acres	0.2 acres	014	0 acres	2.4 acres
010	0 acres	<0.1 acres	015	<0.1 acres	1.6 acres
011	0 acres	<0.1 acres	016	0 acres	3.7 acres
012	0 acres	0.3 acres	018	0-91 acres (dependent on extent of landfill cell development)	91 acres
013	0 acres	2.0 acres			

B. Provide a narrative description of significant materials that are currently or in the past three years have been treated, stored or disposed in a manner to allow exposure to storm water; method of treatment, storage, or disposal; past and present materials management practices employed to minimize contact by these materials with storm water runoff; materials loading and access areas, and the location, manner, and frequency in which pesticides, herbicides, soil conditioners, and fertilizers are applied.

All outfalls have contact with or potential exposure to coal and coal combustion byproducts. Rail spur and exposed electrical components (switchyard/transformers) have additional exposure to herbicides that are applied for vegetative control. Hazardous wastes are stored in sheltered areas or in sealed containers. Coal storage and handling areas have diversion dikes that are contributory to the Coal Yard Settling Pond (Outfall 002). SPCC plans are in place. Periodic documented inspections and preventive maintenance are used to minimize contact with raw materials, byproducts, or chemicals with storm water.

C. For each outfall, provide the location and a description of existing structural and nonstructural control measures to reduce pollutants in storm water runoff; and a description of the treatment the storm water receives, including the schedule and type of maintenance for control and treatment measures and the ultimate disposal of any solid or fluid wastes other than by discharge.

Outfall Number	Treatment	List Codes from Table 2F-1
009,010 011,012 013,014 015,016 018	All outfalls except as noted below: SPCC & SWPPP, preventive maintenance, vegetative cover. Outfall 018: same as above plus settling basin	 1-U

V. Nonstormwater Discharges

A. I certify under penalty of law hat the outfall(s) covered by this application have been tested or evaluated for the presence of nonstormwater discharges, and that all nonstormwater discharged from these outfall(s) are identified in either an accompanying Form 2C or From 2E application for the outfall.

Name and Official Title (*type or print*)	Signature	Date Signed
See Page 2a of 3.		

B. Provide a description of the method used, the date of any testing, and the onsite drainage points that were directly observed during a test.

See Page 2a of 3.

VI. Significant Leaks or Spills

Provide existing information regarding the history of significant leaks or spills of toxic or hazardous pollutants at the facility in the last three years, including the approximate date and location of the spill or leak, and the type and amount of material released.

None.

 Continue on Page 3

Continued from Page 2

EPA ID Number (*copy from Item 1 of Form 1*)
IL0000108

VII. Discharge Information

A, B, C, & D: See instructions before proceeding. Complete one set of tables for each outfall. Annotate the outfall number in the space provided.
Table VII-A, VII-B, VII-C are included on separate sheets numbers VII-1 and VII-2.

E. Potential discharges not covered by analysis – is any toxic pollutant listed in table 2F-2, 2F-3, or 2F-4, a substance or a component of a substance which you currently use or manufacture as an intermediate or final product or byproduct?

☐ Yes (*list all such pollutants below*) ☑ No (*go to Section IX*)

VIII. Biological Toxicity Testing Data

Do you have any knowledge or reason to believe that any biological test for acute or chronic toxicity has been made on any of your discharges or on a receiving water in relation to your discharge within the last 3 years?

☐ Yes (*list all such pollutants below*) ☑ No (*go to Section IX*)

IX. Contract Analysis Information

Were any of the analyses reported in Item VII performed by a contract laboratory or consulting firm?

☑ Yes (*list the name, address, and telephone number of, and pollutants analyzed by, each such laboratory or firm below*) ☐ No (*go to Section X*)

A. Name	B. Address	C. Area Code & Phone No.	D. Pollutants Analyzed
PDC Laboratories, Inc.	2231 West Altorfer Road Peoria IL 61615	309-692-9688	All except pH, flow, and temperature.

X. Certification

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

A. Name & Official Title (*Type Or Print*)	B. Area Code and Phone No.
Michael L. Menne, Vice President - Environmental Services	314-554-2816
C. Signature Mike L. Menne	D. Date Signed 07-25-12

R 071

PLEASE PRINT OR TYPE IN THE UNSHADED AREAS ONLY. You may report some or all of this information on separate sheets (*use the same format*) instead of completing these pages.
SEE INSTRUCTIONS.

EPA I.D. NUMBER (*copy from Item 1 of Form 1*)
IL0000108

V. INTAKE AND EFFLUENT CHARACTERISTICS (*continued from page 3 of Form 2-C*)

OUTFALL NO.
001

PART A –You must provide the results of at least one analysis for every pollutant in this table. Complete one table for each outfall. See instructions for additional details.

1. POLLUTANT	2. EFFLUENT							3. UNITS (*specify if blank*)		4. INTAKE (*optional*)		
	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCEN-TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
a. Biochemical Oxygen Demand (*BOD*)	<1	<1					1	mg/L	lb/dy	4.4	4	1
b. Chemical Oxygen Demand (*COD*)	16	16					1	mg/L	lb/dy	14	14	1
c. Total Organic Carbon (*TOC*)	6.0	6					1	mg/L	lb/dy	6.2	6	1
d. Total Suspended Solids (*TSS*)	6.8	7					1	mg/L	lb/dy	12	12	1
e. Ammonia (*as N*)	<0.10	<0.1					1	mg/L	lb/dy	<0.10	<0.1	1
f. Flow	VALUE 0.12		VALUE 0.20		VALUE 0..13		1,31,366	MGD	---	VALUE		
g. Temperature (*winter*)	VALUE 15.8		VALUE 31.0		VALUE 23.6		cont	°C		VALUE		
h. Temperature (*summer*)	VALUE		VALUE 40.3		VALUE 33.8		cont	°C		VALUE		
i. pH	MINIMUM 7.45	MAXIMUM 8.23	MINIMUM 6.9	MAXIMUM 7.6			1,24	STANDARD UNITS				

PART B – Mark "X" in column 2-a for each pollutant you know or have reason to believe is present. Mark "X" in column 2-b for each pollutant you believe to be absent. If you mark column 2a for any pollutant which is limited either directly, or indirectly but expressly, in an effluent limitations guideline, you must provide the results of at least one analysis for that pollutant. For other pollutants for which you mark column 2a, you must provide quantitative data or an explanation of their presence in your discharge. Complete one table for each outfall. See the instructions for additional details and requirements.

1. POLLUTANT AND CAS NO. (*if available*)	2. MARK "X"		3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. BELIEVED PRESENT	b. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCEN-TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
			(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
a. Bromide (24959-67-9)		X	<1.0	<1.0					1	mg/L	lb/dy	<1.0	<1.0	1
b. Chlorine, Total Residual	X		0.14	0.1	0.20	0.3	0.10	0.1	1,24	mg/L	lb/dy	<0.05	<0.1	1
c. Color		X							0	---	---			0
d. Fecal Coliform	X								0	CFU/0.1L	---	3	---	1
e. Fluoride (16984-48-8)	X		0.33	0.3					1	mg/L	lb/dy	0.31	0.3	1
f. Nitrate-Nitrite (*as N*)	X		0.73	0.7					1	mg/L	lb/dy	0.81	0.8	1

Notes: Temperature obtained at edge of the regulatory mixing zone.
Total Residual Chlorine obtained during regulated condenser chlorination period at a point representative of the cooling water discharge flume.

Outfall 001

1. POLLUTANT AND CAS NO. (*if available*)	2. MARK "X"		3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. BELIEVED PRESENT	b. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCEN-TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
			(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
g. Nitrogen, Total Organic (*as N*)	X		<1.1	<1.1					1	mg/L	lb/dy	1.1	1.1	1
h. Oil and Grease		X	<5	<5.0					1	mg/L	lb/dy	<5	<5.0	1
i. Phosphorus (as P), Total (7723-14-0)	X		<0.10	<0.1					1	mg/L	lb/dy	<0.10	<0.1	1
j. Radioactivity														
(1) Alpha, Total									0					0
(2) Beta, Total									0					0
(3) Radium, Total									0					0
(4) Radium 226, Total									0					0
k. Sulfate (*as SO_4*) (14808-79-8)	X		62	62					1	mg/L	lb/dy	55	55	1
l. Sulfide (*as S*)		X	<2.0	<2.0					1	mg/L	lb/dy	<2.0	<2.0	1
m. Sulfite (*as SO_3*) (14265-45-3)		X	<2.0	<2.0					1	mg/L	lb/dy	<2.0	<2.0	1
n. Surfactants		X	<0.10	<0.1					1	mg/L	lb/dy	0.19	0.2	1
o. Aluminum, Total (7429-90-5)	X		0.096	<0.1					1	mg/L	lb/dy	<0.050	<0.1	1
p. Barium, Total (7440-39-3)	X		0.07	<0.1					1	mg/L	lb/dy	0.06	<0.1	1
q. Boron, Total (7440-42-8)	X		0.26	0.3					1	mg/L	lb/dy	0.35	0.3	1
r. Cobalt, Total (7440-48-4)		X	<0.005	<0.1					1	mg/L	lb/dy	<0.005	<0.1	1
s. Iron, Total (7439-89-6)	X		0.28	0.3					1	mg/L	lb/dy	0.08	<0.1	1
t. Magnesium, Total (7439-95-4)	X		15	15					1	mg/L	lb/dy	14	14	1
u. Molybdenum, Total (7439-98-7)		X	<0.010	<0.1					1	mg/L	lb/dy	<0.010	<0.1	1
v. Manganese, Total (7439-96-5)	X		0.035	<0.1					1	mg/L	lb/dy	0.024	<0.1	1
w. Tin, Total (7440-31-5)	X		<0.060	<0.1					1	mg/L	lb/dy	<0.060	<0.1	1
x. Titanium, Total (7440-32-6)	X		<0.005	<0.1					1	mg/L	lb/dy	<0.005	<0.1	1

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CONTINUED FROM PAGE 3 OF FORM 2-C

EPA I.D. NUMBER (*copy from Item 1 of Form 1*)	OUTFALL NUMBER
IL0000108	001

PART C - If you are a primary industry and this outfall contains process wastewater, refer to Table 2c-2 in the instructions to determine which of the GC/MS fractions you must test for. Mark "X" in column 2-a for all such GC/MS fractions that apply to your industry and for ALL toxic metals, cyanides, and total phenols. If you are not required to mark column 2-a (*secondary industries, nonprocess wastewater outfalls, and nonrequired GC/MS fractions*), mark "X" in column 2-b for each pollutant you know or have reason to believe is present. Mark "X" in column 2-c for each pollutant you believe is absent. If you mark column 2a for any pollutant, you must provide the results of at least one analysis for that pollutant. If you mark column 2b for any pollutant, you must provide the results of at least one analysis for that pollutant if you know or have reason to believe it will be discharged in concentrations of 10 ppb or greater. If you mark column 2b for acrolein, acrylonitrile, 2,4 dinitrophenol, or 2-methyl-4, 6 dinitrophenol, you must provide the results of at least one analysis for each of these pollutants which you know or have reason to believe that you discharge in concentrations of 100 ppb or greater. Otherwise, for pollutants for which you mark column 2b, you must either submit at least one analysis or briefly describe the reasons the pollutant is expected to be discharged. Note that there are 7 pages to this part; please review each carefully. Complete one table (*all 7 pages*) for each outfall. See instructions for additional details and requirements.

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCEN-TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
METALS, CYANIDE, AND TOTAL PHENOLS															
1M. Antimony, Total (7440-36-0)	X		X	<20	<0.02					1	ug/L	lb/dy	<20	<0.02	1
2M. Arsenic, Total (7440-38-2)	X		X	<20	<0.02					1	ug/L	lb/dy	<20	<0.02	1
3M. Beryllium, Total (7440-41-7)	X		X	<5	<0.01					1	ug/L	lb/dy	<5	<0.01	1
4M. Cadmium, Total (7440-43-9)	X		X	<2	<0.01					1	ug/L	lb/dy	<2	<0.01	1
5M. Chromium, Total (7440-47-3)	X		X	<4	<0.01					1	ug/L	lb/dy	<4	<0.01	1
6M. Copper, Total (7440-50-8)	X		X	16	0.02					1	ug/L	lb/dy	13	0.01	1
7M. Lead, Total (7439-92-1)	X		X	<10	<0.01					1	ug/L	lb/dy	<10	<0.01	1
8M. Mercury, Total (7439-97-6)	X		X	<1	<0.01					1	ng/L	lb/dy	<1	<0.01	1
9M. Nickel, Total (7440-02-0)	X		X	<10	<0.01					1	ug/L	lb/dy	<10	<0.01	1
10M. Selenium, Total (7782-49-2)	X		X	<10	<0.01					1	ug/L	lb/dy	12	0.01	1
11M. Silver, Total (7440-22-4)	X		X	<10	<0.01					1	ug/L	lb/dy	<10	<0.01	1
12M. Thallium, Total (7440-28-0)	X		X	<10	<0.01					1	ug/L	lb/dy	<10	<0.01	1
13M. Zinc, Total (7440-66-6)	X		X	<10	<0.01					1	ug/L	lb/dy	<10	<0.01	1
14M. Cyanide, Total (57-12-5)	X		X	<5	<0.01					1	ug/L	lb/dy	<5	<0.01	1
15M. Phenols, Total	X		X	<10	<0.01					1	ug/L	lb/dy	<5	<0.01	1
DIOXIN															
2,3,7,8-Tetra-chlorodibenzo-P-Dioxin (1764-01-6)			X	DESCRIBE RESULTS											

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Outfall 001

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCEN-TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION – VOLATILE COMPOUNDS															
1V. Accrolein (107-02-8)	X		X	<50						1	ug/L		<50		1
2V. Acrylonitrile (107-13-1)	X		X	<50						1	ug/L		<50		1
3V. Benzene (71-43-2)	X		X	<5						1	ug/L		<5		1
4V. Bis (*Chloro-methyl*) Ether (542-88-1)				Note 1									Note 1		
5V. Bromoform (75-25-2)	X		X	<5						1	ug/L		<5		1
6V. Carbon Tetrachloride (56-23-5)	X		X	<5						1	ug/L		<5		1
7V. Chlorobenzene (108-90-7)	X		X	<5						1	ug/L		<5		1
8V. Chlorodi-bromomethane (124-48-1)	X		X	<5						1	ug/L		<5		1
9V. Chloroethane (75-00-3)	X		X	<5						1	ug/L		<5		1
10V. 2-Chloro-ethylvinyl Ether (110-75-8)	X		X	<5						1	ug/L		<5		1
11V. Chloroform (67-66-3)	X		X	Note 2									Note 2		
12V. Dichloro-bromomethane (75-27-4)	X		X	<5						1	ug/L		<5		1
13V. Dichloro-difluoromethane (75-71-8)				Note 1									Note 1		
14V. 1,1-Dichloro-ethane (75-34-3)	X		X	<5						1	ug/L		<5		1
15V. 1,2-Dichloro-ethane (107-06-2)	X		X	<5						1	ug/L		<5		1
16V. 1,1-Dichloro-ethylene (75-35-4)	X		X	<5						1	ug/L		<5		1
17V. 1,2-Dichloro-propane (78-87-5)	X		X	<5						1	ug/L		<5		1
18V. 1,3-Dichloro-propylene (542-75-6) **	X		X	<5						1	ug/L		<5		1
19V. Ethylbenzene (100-41-4)	X		X	<5						1	ug/L		<5		1
20V. Methyl Bromide (74-83-9)	X		X	<5						1	ug/L		<5		1
21V. Methyl Chloride (74-87-3)	X		X	<5						1	ug/L		<5		1

 CONTINUE ON PAGE V-5

Note 1 - These parameters deleted per 40CFR122, Appendix D.

Note 2 - Analysis suspect therefore no data provided for this constituent.

** This parameter is 1,3-Dichloropropylene per 40CFR122, Appendix D.

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Outfall 001

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCEN-TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION – VOLATILE COMPOUNDS (*continued*)															
22V. Methylene Chloride (75-09-2)	X		X	<5						1	ug/L		<5		1
23V. 1,1,2,2-Tetrachloroethane (79-34-5)	X		X	<5						1	ug/L		<5		1
24V. Tetrachloro-ethylene (127-18-4)	X		X	<5						1	ug/L		<5		1
25V. Toluene (108-88-3)	X		X	<5						1	ug/L		<5		1
26V. 1,2-Trans-Dichloroethylene (156-60-5)	X		X	<20						1	ug/L		<20		1
27V. 1,1,1-Trichloro-ethane (71-55-6)	X		X	<5						1	ug/L		<5		1
28V. 1,1,2-Trichloro-ethane (79-00-5)	X		X	<5						1	ug/L		<5		1
29V Trichloro-ethylene (79-01-6)	X		X	<5						1	ug/L		<5		1
30V. Trichloro-fluoromethane (75-69-4)				Note 1									Note 1		
31V. Vinyl Chloride (75-01-4)	X		X	<5						1	ug/L		<5		1
GC/MS FRACTION – ACID COMPOUNDS															
1A. 2-Chlorophenol (95-57-8)	X		X	<10						1	ug/L		<10		1
2A. 2,4-Dichloro-phenol (120-83-2)	X		X	<10						1	ug/L		<10		1
3A. 2,4-Dimethyl-phenol (105-67-9)	X		X	<10						1	ug/L		<10		1
4A. 4,6-Dinitro-O-Cresol (534-52-1)	X		X	<50						1	ug/L		<50		1
5A. 2,4-Dinitro-phenol (51-28-5)	X		X	<50						1	ug/L		<50		1
6A. 2-Nitrophenol (88-75-5)	X		X	<10						1	ug/L		<10		1
7A. 4-Nitrophenol (100-02-7)	X		X	<50						1	ug/L		<50		1
8A. P-Chloro-M-Cresol (59-50-7)	X		X	<10						1	ug/L		<10		1
9A. Pentachloro-phenol (87-86-5)	X		X	<50						1	ug/L		<50		1
10A. Phenol (108-95-2)	X		X	<10						1	ug/L		<10		1
11A. 2,4,6-Trichloro-phenol (88-05-2)	X		X	<50						1	ug/L		<50		1

Note 1 - This parameter deleted per 40CFR122, Appendix D.

Outfall 001

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCEN-TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION – BASE/NEUTRAL COMPOUNDS															
1B. Acenaphthene (83-32-9)	X		X	<10						1	ug/L		<10		1
2B. Acenaphtylene (208-96-8)	X		X	<10						1	ug/L		<10		1
3B. Anthracene (120-12-7)	X		X	<10						1	ug/L		<10		1
4B. Benzidine (92-87-5)	X		X	<80						1	ug/L		<80		1
5B. Benzo (*a*) Anthracene (56-55-3)	X		X	<10						1	ug/L		<10		1
6B. Benzo (*a*) Pyrene (50-32-8)	X		X	<10						1	ug/L		<10		1
7B. 3,4-Benzo-fluoranthene (205-99-2)	X		X	<10						1	ug/L		<10		1
8B. Benzo (*ghi*) Perylene (191-24-2)	X		X	<10						1	ug/L		<10		1
9B. Benzo (*k*) Fluoranthene (207-08-9)	X		X	<10						1	ug/L		<10		1
10B. Bis (*2-Chloro-ethoxy*) Methane (111-91-1)	X		X	<10						1	ug/L		<10		1
11B. Bis (*2-Chloro-ethyl*) Ether (111-44-4)	X		X	<10						1	ug/L		<10		1
12B. Bis (*2-Chloroisopropyl*) Ether (102-80-1)	X		X	<10						1	ug/L		<10		1
13B. Bis (*2-Ethyl-hexyl*) Phthalate (117-81-7)	X		X	<10						1	ug/L		<10		1
14B. 4-Bromophenyl Phenyl Ether (101-55-3)	X		X	<10						1	ug/L		<10		1
15B. Butyl Benzyl Phthalate (85-68-7)	X		X	<10						1	ug/L		<10		1
16B. 2-Chloro-naphthalene (91-58-7)	X		X	<10						1	ug/L		<10		1
17B. 4-Chloro-phenyl Phenyl Ether (7005-72-3)	X		X	<10						1	ug/L		<10		1
18B. Chrysene (218-01-9)	X		X	<10						1	ug/L		<10		1
19B. Dibenzo (*a,h*) Anthracene (53-70-3)	X		X	<10						1	ug/L		<10		1
20B. 1,2-Dichloro-benzene (95-50-1)	X		X	<10						1	ug/L		<10		1
21B. 1,3-Di-chloro-benzene (541-73-1)	X		X	<10						1	ug/L		<10		1

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Outfall 001

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCEN-TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION – BASE/NEUTRAL COMPOUNDS (*continued*)															
22B. 1,4-Dichloro-benzene (106-46-7)	X		X	<10						1	ug/L		<10		1
23B. 3,3-Dichloro-benzidine (91-94-1)	X		X	<20						1	ug/L		<20		1
24B. Diethyl Phthalate (84-66-2)	X		X	<10						1	ug/L		<10		1
25B. Dimethyl Phthalate (131 -11-3)	X		X	<10						1	ug/L		<10		1
26B. Di-N-Butyl Phthalate (84-74-2)	X		X	<10						1	ug/L		<10		1
27B. 2,4-Dinitro-toluene (121-14-2)	X		X	<10						1	ug/L		<10		1
28B. 2,6-Dinitro-toluene (606-20-2)	X		X	<10						1	ug/L		<10		1
29B. Di-N-Octyl Phthalate (117-84-0)	X		X	<10						1	ug/L		<10		1
30B. 1,2-Diphenyl-hydrazine (*as Azo-benzene*) (122-66-7)	X		X	<10						1	ug/L		<10		1
31B. Fluoranthene (206-44-0)	X		X	<10						1	ug/L		<10		1
32B. Fluorene (86-73-7)	X		X	<10						1	ug/L		<10		1
33B. Hexachloro-benzene (118-74-1)	X		X	<10						1	ug/L		<10		1
34B. Hexachloro-butadiene (87-68-3)	X		X	<10						1	ug/L		<10		1
35B. Hexachloro-cyclopentadiene (77-47-4)	X		X	<50						1	ug/L		<50		1
36B Hexachloro-ethane (67-72-1)	X		X	<10						1	ug/L		<10		1
37B. Indeno (*1,2,3-cd*) Pyrene (193-39-5)	X		X	<10						1	ug/L		<10		1
38B. Isophorone (78-59-1)	X		X	<10						1	ug/L		<10		1
39B. Naphthalene (91-20-3)	X		X	<10						1	ug/L		<10		1
40B. Nitrobenzene (98-95-3)	X		X	<10						1	ug/L		<10		1
41B. N-Nitro-sodimethylamine (62-75-9)	X		X	<10						1	ug/L		<10		1
42B. N-Nitrosodi-N-Propylamine (621-64-7)	X		X	<10						1	ug/L		<10		1

CONTINUE ON REVERSE

CONTINUED FROM THE FRONT

Outfall 001

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X" a. TESTING REQUIRED	2. MARK "X" b. BELIEVED PRESENT	2. MARK "X" c. BELIEVED ABSENT	3. EFFLUENT a. MAXIMUM DAILY VALUE (1) CONCENTRATION	3. EFFLUENT a. MAXIMUM DAILY VALUE (2) MASS	3. EFFLUENT b. MAXIMUM 30 DAY VALUE (*if available*) (1) CONCENTRATION	3. EFFLUENT b. MAXIMUM 30 DAY VALUE (*if available*) (2) MASS	3. EFFLUENT c. LONG TERM AVRG. VALUE (*if available*) (1) CONCENTRATION	3. EFFLUENT c. LONG TERM AVRG. VALUE (*if available*) (2) MASS	3. EFFLUENT d. NO. OF ANALYSES	4. UNITS a. CONCEN-TRATION	4. UNITS b. MASS	5. INTAKE (*optional*) a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	5. INTAKE (*optional*) a. LONG TERM AVERAGE VALUE (2) MASS	5. INTAKE (*optional*) b. NO. OF ANALYSES
GC/MS FRACTION – BASE/NEUTRAL COMPOUNDS (*continued*)															
43B. N-Nitro-sodiphenylamine (86-30-6)	X		X	<10						1	ug/L		<10		1
44B. Phenanthrene (85-01-8)	X		X	<10						1	ug/L		<10		1
45B. Pyrene (129-00-0)	X		X	<10						1	ug/L		<10		1
46B. 1,2,4-Tri-chlorobenzene (120-82-1)	X		X	<10						1	ug/L		<10		1
GC/MS FRACTION – PESTICIDES															
1P. Aldrin (309-00-2)			X												
2P. α-BHC (319-84-6)			X												
3P. β-BHC (319-85-7)			X												
4P. γ-BHC (58-89-9)			X												
5P. δ-BHC (319-86-8)			X												
6P. Chlordane (57-74-9)			X												
7P. 4,4'-DDT (50-29-3)			X												
8P. 4,4'-DDE (72-55-9)			X												
9P. 4,4'-DDD (72-54-8)			X												
10P. Dieldrin (60-57-1)			X												
11P. α-Enosulfan (115-29-7)			X												
12P. β-Endosulfan (115-29-7)			X												
13P. Endosulfan Sulfate (1031-07-8)			X												
14P. Endrin (72-20-8)			X												
15P. Endrin Aldehyde (7421-93-4)			X												
16P. Heptachlor (76-44-8)			X												

CONTINUE ON PAGE V-9

EPA I.D. NUMBER (*copy from Item 1 of Form 1*)	OUTFALL NUMBER
IL0000108	001

CONTINUED FROM PAGE V-8

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCEN-TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION – PESTICIDES (*continued*)															
17P. Heptachlor Epoxide (1024-57-3)			X												
18P. PCB-1242 (53469-21-9)			X	<0.5						1	ug/L		<0.5		1
19P. PCB-1254 (11097-69-1)			X	<1.0						1	ug/L		<1.0		1
20P. PCB-1221 (11104-28-2)			X	<1.0						1	ug/L		<1.0		1
21P. PCB-1232 (11141-16-5)			X	<0.5						1	ug/L		<0.5		1
22P. PCB-1248 (12672-29-6)			X	<0.5						1	ug/L		<0.5		1
23P. PCB-1260 (11096-82-5)			X	<1.0						1	ug/L		<1.0		1
24P. PCB-1016 (12674-11-2)			X	<0.5						1	ug/L		<0.5		1
25P. Toxaphene (8001-35-2)			X												

PLEASE PRINT OR TYPE IN THE UNSHADED AREAS ONLY. You may report some or all of this information on separate sheets (*use the same format*) instead of completing these pages.
SEE INSTRUCTIONS.

EPA I.D. NUMBER (*copy from Item 1 of Form 1*)
IL0000108

V. INTAKE AND EFFLUENT CHARACTERISTICS *(continued from page 3 of Form 2-C)*

OUTFALL NO.
020

PART A –You must provide the results of at least one analysis for every pollutant in this table. Complete one table for each outfall. See instructions for additional details.

1. POLLUTANT	2. EFFLUENT							3. UNITS (*specify if blank*)		4. INTAKE (*optional*)		
	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCEN-TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
a. Biochemical Oxygen Demand (*BOD*)	<1	<3,000					1	mg/L	lb/dy	4.4	15,000	1
b. Chemical Oxygen Demand (*COD*)	16	54,000					1	mg/L	lb/dy	14	47,000	1
c. Total Organic Carbon (*TOC*)	6.0	20,000					1	mg/L	lb/dy	6.2	21,000	1
d. Total Suspended Solids (*TSS*)	6.8	23,000					1	mg/L	lb/dy	12	40,000	1
e. Ammonia (*as N*)	<0.10	<300					1	mg/L	lb/dy	<0.10	<300	1
f. Flow	VALUE 402.5		VALUE 659.0		VALUE 359.8		cont	MGD	---	VALUE		
g. Temperature (*winter*)	VALUE 15.8		VALUE 31.0		VALUE 23.6		cont	°C		VALUE		
h. Temperature (*summer*)	VALUE		VALUE 40.3		VALUE 33.8		cont	°C		VALUE		
i. pH	MINIMUM 7.45	MAXIMUM 8.23	MINIMUM 6.9	MAXIMUM 7.6			1,24	STANDARD UNITS				

PART B – Mark "X" in column 2-a for each pollutant you know or have reason to believe is present. Mark "X" in column 2-b for each pollutant you believe to be absent. If you mark column 2a for any pollutant which is limited either directly, or indirectly but expressly, in an effluent limitations guideline, you must provide the results of at least one analysis for that pollutant. For other pollutants for which you mark column 2a, you must provide quantitative data or an explanation of their presence in your discharge. Complete one table for each outfall. See the instructions for additional details and requirements.

1. POLLUTANT AND CAS NO. (*if available*)	2. MARK "X"		3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. BELIEVED PRESENT	b. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCEN-TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
			(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
a. Bromide (24959-67-9)		X	<1.0	<300					1	mg/L	lb/dy	<1.0	<300	1
b. Chlorine, Total Residual	X		0.14	470	0.20	1,100	0.10	310	1,24	mg/L	lb/dy	<0.05	<170	1
c. Color		X							0	---	---			0
d. Fecal Coliform	X								0	CFU/0.1L	---	3	---	1
e. Fluoride (16984-48-8)	X		0.33	1,100					1	mg/L	lb/dy	0.31	1,000	1
f. Nitrate-Nitrite (*as N*)	X		0.73	2,400					1	mg/L	lb/dy	0.81	2,700	1

CONTINUE ON REVERSE

Notes: Temperature obtained at edge of the regulatory mixing zone.
Total Residual Chlorine obtained during regulated condenser chlorination period at a point representative of the cooling water discharge flume.

ITEM V-B CONTINUED FROM FRONT

Outfall 020

1. POLLUTANT AND CAS NO. (*if available*)	2. MARK "X" a. BELIEVED PRESENT	2. MARK "X" b. BELIEVED ABSENT	3. EFFLUENT a. MAXIMUM DAILY VALUE (1) CONCENTRATION	3. EFFLUENT a. MAXIMUM DAILY VALUE (2) MASS	3. EFFLUENT b. MAXIMUM 30 DAY VALUE (*if available*) (1) CONCENTRATION	3. EFFLUENT b. MAXIMUM 30 DAY VALUE (*if available*) (2) MASS	3. EFFLUENT c. LONG TERM AVRG. VALUE (*if available*) (1) CONCENTRATION	3. EFFLUENT c. LONG TERM AVRG. VALUE (*if available*) (2) MASS	3. EFFLUENT d. NO. OF ANALYSES	4. UNITS a. CONCEN-TRATION	4. UNITS b. MASS	5. INTAKE (*optional*) a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	5. INTAKE (*optional*) a. LONG TERM AVERAGE VALUE (2) MASS	5. INTAKE (*optional*) b. NO. OF ANALYSES
g. Nitrogen, Total Organic (*as N*)	X		<1.1	<3,700					1	mg/L	lb/dy	1.1	3700	1
h. Oil and Grease		X	<5	<17,000					1	mg/L	lb/dy	<5		1
i. Phosphorus (as P), Total (7723-14-0)	X		<0.10	<300					1	mg/L	lb/dy	<0.10	<300	1
j. Radioactivity														
(1) Alpha, Total									0					0
(2) Beta, Total									0					0
(3) Radium, Total									0					0
(4) Radium 226, Total									0					0
k. Sulfate (*as SO_4*) (14808-79-8)	X		62	21,000					1	mg/L	lb/dy	55	18000	1
l. Sulfide (*as S*)		X	<2.0	<6,000					1	mg/L	lb/dy	<2.0	<6000	1
m. Sulfite (*as SO_3*) (14265-45-3)		X	<2.0	<6,000					1	mg/L	lb/dy	<2.0	<6000	1
n. Surfactants		X	<0.10	<300					1	mg/L	lb/dy	0.19	640	1
o. Aluminum, Total (7429-90-5)	X		0.096	320					1	mg/L	lb/dy	<0.050	<200	1
p. Barium, Total (7440-39-3)	X		0.07	200					1	mg/L	lb/dy	0.06	200	1
q. Boron, Total (7440-42-8)	X		0.26	870					1	mg/L	lb/dy	0.35	1200	1
r. Cobalt, Total (7440-48-4)		X	<0.005	<20					1	mg/L	lb/dy	<0.005	<20	1
s. Iron, Total (7439-89-6)	X		0.28	940					1	mg/L	lb/dy	0.08	300	1
t. Magnesium, Total (7439-95-4)	X		15	50,000					1	mg/L	lb/dy	14	50000	1
u. Molybdenum, Total (7439-98-7)		X	<0.010	<30					1	mg/L	lb/dy	<0.010	<30	1
v. Manganese, Total (7439-96-5)	X		0.035	120					1	mg/L	lb/dy	0.024	81	1
w. Tin, Total (7440-31-5)	X		<0.060	<200					1	mg/L	lb/dy	<0.060	<200	1
x. Titanium, Total (7440-32-6)	X		<0.005	<20					1	mg/L	lb/dy	<0.005	<20	1

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EPA I.D. NUMBER (*copy from Item 1 of Form 1*)	OUTFALL NUMBER
IL0000108	020

CONTINUED FROM PAGE 3 OF FORM 2-C

PART C - If you are a primary industry and this outfall contains process wastewater, refer to Table 2c-2 in the instructions to determine which of the GC/MS fractions you must test for. Mark "X" in column 2-a for all such GC/MS fractions that apply to your industry and for ALL toxic metals, cyanides, and total phenols. If you are not required to mark column 2-a (*secondary industries, nonprocess wastewater outfalls, and nonrequired GC/MS fractions*), mark "X" in column 2-b for each pollutant you know or have reason to believe is present. Mark "X" in column 2-c for each pollutant you believe is absent. If you mark column 2a for any pollutant, you must provide the results of at least one analysis for that pollutant. If you mark column 2b for any pollutant, you must provide the results of at least one analysis for that pollutant if you know or have reason to believe it will be discharged in concentrations of 10 ppb or greater. If you mark column 2b for acrolein, acrylonitrile, 2,4 dinitrophenol, or 2-methyl-4, 6 dinitrophenol, you must provide the results of at least one analysis for each of these pollutants which you know or have reason to believe that you discharge in concentrations of 100 ppb or greater. Otherwise, for pollutants for which you mark column 2b, you must either submit at least one analysis or briefly describe the reasons the pollutant is expected to be discharged. Note that there are 7 pages to this part; please review each carefully. Complete one table (*all 7 pages*) for each outfall. See instructions for additional details and requirements.

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCEN-TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
METALS, CYANIDE, AND TOTAL PHENOLS															
1M. Antimony, Total (7440-36-0)	X		X	<20	<70					1	ug/L	lb/dy	<20	<70	1
2M. Arsenic, Total (7440-38-2)	X		X	<20	<70					1	ug/L	lb/dy	<20	<70	1
3M. Beryllium, Total (7440-41-7)	X		X	<5	<20					1	ug/L	lb/dy	<5	<20	1
4M. Cadmium, Total (7440-43-9)	X		X	<2	<7					1	ug/L	lb/dy	<2	<7	1
5M. Chromium, Total (7440-47-3)	X		X	<4	<10					1	ug/L	lb/dy	<4	<10	1
6M. Copper, Total (7440-50-8)	X		X	16	54					1	ug/L	lb/dy	13	44	1
7M. Lead, Total (7439-92-1)	X		X	<10	<30					1	ug/L	lb/dy	<10	<30	1
8M. Mercury, Total (7439-97-6)	X		X	<1	<0.1					1	ng/L	lb/dy	<1	<0.1	1
9M. Nickel, Total (7440-02-0)	X		X	<10	<30					1	ug/L	lb/dy	<10	<30	1
10M. Selenium, Total (7782-49-2)	X		X	<10	<30					1	ug/L	lb/dy	12	40	1
11M. Silver, Total (7440-22-4)	X		X	<10	<30					1	ug/L	lb/dy	<10	<30	1
12M. Thallium, Total (7440-28-0)	X		X	<10	<30					1	ug/L	lb/dy	<10	<30	1
13M. Zinc, Total (7440-66-6)	X		X	<10	<30					1	ug/L	lb/dy	<10	<30	1
14M. Cyanide, Total (57-12-5)	X		X	<5	<20					1	ug/L	lb/dy	<5	<20	1
15M. Phenols, Total	X		X	<10	<30					1	ug/L	lb/dy	<5	<30	1
DIOXIN															
2,3,7,8-Tetra-chlorodibenzo-P-Dioxin (1764-01-6)			X	DESCRIBE RESULTS											

CONTINUED FROM THE FRONT

Outfall 020

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCEN-TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION – VOLATILE COMPOUNDS															
1V. Accrolein (107-02-8)	X		X	<50						1	ug/L		<50		1
2V. Acrylonitrile (107-13-1)	X		X	<50						1	ug/L		<50		1
3V. Benzene (71-43-2)	X		X	<5						1	ug/L		<5		1
4V. Bis (*Chloro-methyl*) Ether (542-88-1)				Note 1									Note 1		
5V. Bromoform (75-25-2)	X		X	<5						1	ug/L		<5		1
6V. Carbon Tetrachloride (56-23-5)	X		X	<5						1	ug/L		<5		1
7V. Chlorobenzene (108-90-7)	X		X	<5						1	ug/L		<5		1
8V. Chlorodi-bromomethane (124-48-1)	X		X	<5						1	ug/L		<5		1
9V. Chloroethane (75-00-3)	X		X	<5						1	ug/L		<5		1
10V. 2-Chloro-ethylvinyl Ether (110-75-8)	X		X	<5						1	ug/L		<5		1
11V. Chloroform (67-66-3)	X		X	Note 2									Note 2		
12V. Dichloro-bromomethane (75-27-4)	X		X	<5						1	ug/L		<5		1
13V. Dichloro-difluoromethane (75-71-8)				Note 1									Note 1		
14V. 1,1-Dichloro-ethane (75-34-3)	X		X	<5						1	ug/L		<5		1
15V. 1,2-Dichloro-ethane (107-06-2)	X		X	<5						1	ug/L		<5		1
16V. 1,1-Dichloro-ethylene (75-35-4)	X		X	<5						1	ug/L		<5		1
17V. 1,2-Dichloro-propane (78-87-5)	X		X	<5						1	ug/L		<5		1
18V. 1,3-Dichloro-propylene ** (542-75-6)	X		X	<5						1	ug/L		<5		1
19V. Ethylbenzene (100-41-4)	X		X	<5						1	ug/L		<5		1
20V. Methyl Bromide (74-83-9)	X		X	<5						1	ug/L		<5		1
21V. Methyl Chloride (74-87-3)	X		X	<5						1	ug/L		<5		1

 CONTINUE ON PAGE V-5

Note 1 - These parameters deleted per 40CFR122, Appendix D.

Note 2 - Analysis suspect therefore no data provided for this constituent.

** This parameter is 1,3-Dichloropropylene per 40CFR122, Appendix D.

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Outfall 020

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCEN-TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION – VOLATILE COMPOUNDS (*continued*)															
22V. Methylene Chloride (75-09-2)	X		X	<5						1	ug/L		<5		1
23V. 1,1,2,2-Tetrachloroethane (79-34-5)	X		X	<5						1	ug/L		<5		1
24V. Tetrachloro-ethylene (127-18-4)	X		X	<5						1	ug/L		<5		1
25V. Toluene (108-88-3)	X		X	<5						1	ug/L		<5		1
26V. 1,2-Trans-Dichloroethylene (156-60-5)	X		X	<20						1	ug/L		<20		1
27V. 1,1,1-Trichloro-ethane (71-55-6)	X		X	<5						1	ug/L		<5		1
28V. 1,1,2-Trichloro-ethane (79-00-5)	X		X	<5						1	ug/L		<5		1
29V Trichloro-ethylene (79-01-6)	X		X	<5						1	ug/L		<5		1
30V. Trichloro-fluoromethane (75-69-4)				Note 1									Note 1		
31V. Vinyl Chloride (75-01-4)	X		X	<5						1	ug/L		<5		1
GC/MS FRACTION – ACID COMPOUNDS															
1A. 2-Chlorophenol (95-57-8)	X		X	<10						1	ug/L		<10		1
2A. 2,4-Dichloro-phenol (120-83-2)	X		X	<10						1	ug/L		<10		1
3A. 2,4-Dimethyl-phenol (105-67-9)	X		X	<10						1	ug/L		<10		1
4A. 4,6-Dinitro-O-Cresol (534-52-1)	X		X	<50						1	ug/L		<50		1
5A. 2,4-Dinitro-phenol (51-28-5)	X		X	<50						1	ug/L		<50		1
6A. 2-Nitrophenol (88-75-5)	X		X	<10						1	ug/L		<10		1
7A. 4-Nitrophenol (100-02-7)	X		X	<50						1	ug/L		<50		1
8A. P-Chloro-M-Cresol (59-50-7)	X		X	<10						1	ug/L		<10		1
9A. Pentachloro-phenol (87-86-5)	X		X	<50						1	ug/L		<50		1
10A. Phenol (108-95-2)	X		X	<10						1	ug/L		<10		1
11A. 2,4,6-Trichloro-phenol (88-05-2)	X		X	<50						1	ug/L		<50		1

Note 1 - This parameter deleted per 40CFR122, Appendix D.

CONTINUED FROM THE FRONT

Outfall 020

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X" a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	3. EFFLUENT a. MAXIMUM DAILY VALUE (1) CONCENTRATION	(2) MASS	b. MAXIMUM 30 DAY VALUE (*if available*) (1) CONCENTRATION	(2) MASS	c. LONG TERM AVRG. VALUE (*if available*) (1) CONCENTRATION	(2) MASS	d. NO. OF ANALYSES	4. UNITS a. CONCEN-TRATION	b. MASS	5. INTAKE (*optional*) a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	(2) MASS	b. NO. OF ANALYSES
GC/MS FRACTION – BASE/NEUTRAL COMPOUNDS															
1B. Acenaphthene (83-32-9)	X		X	<10						1	ug/L		<10		1
2B. Acenaphtylene (208-96-8)	X		X	<10						1	ug/L		<10		1
3B. Anthracene (120-12-7)	X		X	<10						1	ug/L		<10		1
4B. Benzidine (92-87-5)	X		X	<80						1	ug/L		<80		1
5B. Benzo (*a*) Anthracene (56-55-3)	X		X	<10						1	ug/L		<10		1
6B. Benzo (*a*) Pyrene (50-32-8)	X		X	<10						1	ug/L		<10		1
7B. 3,4-Benzo-fluoranthene (205-99-2)	X		X	<10						1	ug/L		<10		1
8B. Benzo (*ghi*) Perylene (191-24-2)	X		X	<10						1	ug/L		<10		1
9B. Benzo (*k*) Fluoranthene (207-08-9)	X		X	<10						1	ug/L		<10		1
10B. Bis (*2-Chloro-ethoxy*) Methane (111-91-1)	X		X	<10						1	ug/L		<10		1
11B. Bis (*2-Chloro-ethyl*) Ether (111-44-4)	X		X	<10						1	ug/L		<10		1
12B. Bis (*2-Chloroisopropyl*) Ether (102-80-1)	X		X	<10						1	ug/L		<10		1
13B. Bis (*2-Ethyl-hexyl*) Phthalate (117-81-7)	X		X	<10						1	ug/L		<10		1
14B. 4-Bromophenyl Phenyl Ether (101-55-3)	X		X	<10						1	ug/L		<10		1
15B. Butyl Benzyl Phthalate (85-68-7)	X		X	<10						1	ug/L		<10		1
16B. 2-Chloro-naphthalene (91-58-7)	X		X	<10						1	ug/L		<10		1
17B. 4-Chloro-phenyl Phenyl Ether (7005-72-3)	X		X	<10						1	ug/L		<10		1
18B. Chrysene (218-01-9)	X		X	<10						1	ug/L		<10		1
19B. Dibenzo (*a,h*) Anthracene (53-70-3)	X		X	<10						1	ug/L		<10		1
20B. 1,2-Dichloro-benzene (95-50-1)	X		X	<10						1	ug/L		<10		1
21B. 1,3-Di-chloro-benzene (541-73-1)	X		X	<10						1	ug/L		<10		1

CONTINUE ON PAGE V-7

CONTINUED FROM PAGE V-6

Outfall 020

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCEN-TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION – BASE/NEUTRAL COMPOUNDS (*continued*)															
22B. 1,4-Dichloro-benzene (106-46-7)	X		X	<10						1	ug/L		<10		1
23B. 3,3-Dichloro-benzidine (91-94-1)	X		X	<20						1	ug/L		<20		1
24B. Diethyl Phthalate (84-66-2)	X		X	<10						1	ug/L		<10		1
25B. Dimethyl Phthalate (131 -11-3)	X		X	<10						1	ug/L		<10		1
26B. Di-N-Butyl Phthalate (84-74-2)	X		X	<10						1	ug/L		<10		1
27B. 2,4-Dinitro-toluene (121-14-2)	X		X	<10						1	ug/L		<10		1
28B. 2,6-Dinitro-toluene (606-20-2)	X		X	<10						1	ug/L		<10		1
29B. Di-N-Octyl Phthalate (117-84-0)	X		X	<10						1	ug/L		<10		1
30B. 1,2-Diphenyl-hydrazine (*as Azo-benzene*) (122-66-7)	X		X	<10						1	ug/L		<10		1
31B. Fluoranthene (206-44-0)	X		X	<10						1	ug/L		<10		1
32B. Fluorene (86-73-7)	X		X	<10						1	ug/L		<10		1
33B. Hexachloro-benzene (118-74-1)	X		X	<10						1	ug/L		<10		1
34B. Hexachloro-butadiene (87-68-3)	X		X	<10						1	ug/L		<10		1
35B. Hexachloro-cyclopentadiene (77-47-4)	X		X	<50						1	ug/L		<50		1
36B Hexachloro-ethane (67-72-1)	X		X	<10						1	ug/L		<10		1
37B. Indeno (*1,2,3-cd*) Pyrene (193-39-5)	X		X	<10						1	ug/L		<10		1
38B. Isophorone (78-59-1)	X		X	<10						1	ug/L		<10		1
39B. Naphthalene (91-20-3)	X		X	<10						1	ug/L		<10		1
40B. Nitrobenzene (98-95-3)	X		X	<10						1	ug/L		<10		1
41B. N-Nitro-sodimethylamine (62-75-9)	X		X	<10						1	ug/L		<10		1
42B. N-Nitrosodi-N-Propylamine (621-64-7)	X		X	<10						1	ug/L		<10		1

CONTINUED FROM THE FRONT

Outfall 020

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE (1) CONCENTRATION	(2) MASS	b. MAXIMUM 30 DAY VALUE (*if available*) (1) CONCENTRATION	(2) MASS	c. LONG TERM AVRG. VALUE (*if available*) (1) CONCENTRATION	(2) MASS	d. NO. OF ANALYSES	a. CONCEN-TRATION	b. MASS	a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	(2) MASS	b. NO. OF ANALYSES
GC/MS FRACTION – BASE/NEUTRAL COMPOUNDS (*continued*)															
43B. N-Nitro-sodiphenylamine (86-30-6)	X		X	<10						1	ug/L		<10		1
44B. Phenanthrene (85-01-8)	X		X	<10						1	ug/L		<10		1
45B. Pyrene (129-00-0)	X		X	<10						1	ug/L		<10		1
46B. 1,2,4-Tri-chlorobenzene (120-82-1)	X		X	<10						1	ug/L		<10		1
GC/MS FRACTION – PESTICIDES															
1P. Aldrin (309-00-2)			X												
2P. α-BHC (319-84-6)			X												
3P. β-BHC (319-85-7)			X												
4P. γ-BHC (58-89-9)			X												
5P. δ-BHC (319-86-8)			X												
6P. Chlordane (57-74-9)			X												
7P. 4,4'-DDT (50-29-3)			X												
8P. 4,4'-DDE (72-55-9)			X												
9P. 4,4'-DDD (72-54-8)			X												
10P. Dieldrin (60-57-1)			X												
11P. α-Enosulfan (115-29-7)			X												
12P. β-Endosulfan (115-29-7)			X												
13P. Endosulfan Sulfate (1031-07-8)			X												
14P. Endrin (72-20-8)			X												
15P. Endrin Aldehyde (7421-93-4)			X												
16P. Heptachlor (76-44-8)			X												

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EPA I.D. NUMBER (*copy from Item 1 of Form 1*)	OUTFALL NUMBER
IL0000108	020

CONTINUED FROM PAGE V-8

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCEN-TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION – PESTICIDES (*continued*)															
17P. Heptachlor Epoxide (1024-57-3)			X												
18P. PCB-1242 (53469-21-9)			X	<0.5						1	ug/L		<0.5		1
19P. PCB-1254 (11097-69-1)			X	<1.0						1	ug/L		<1.0		1
20P. PCB-1221 (11104-28-2)			X	<1.0						1	ug/L		<1.0		1
21P. PCB-1232 (11141-16-5)			X	<0.5						1	ug/L		<0.5		1
22P. PCB-1248 (12672-29-6)			X	<0.5						1	ug/L		<0.5		1
23P. PCB-1260 (11096-82-5)			X	<1.0						1	ug/L		<1.0		1
24P. PCB-1016 (12674-11-2)			X	<0.5						1	ug/L		<0.5		1
25P. Toxaphene (8001-35-2)			X												

PLEASE PRINT OR TYPE IN THE UNSHADED AREAS ONLY. You may report some or all of this information on separate sheets (*use the same format*) instead of completing these pages.
SEE INSTRUCTIONS.

EPA I.D. NUMBER (*copy from Item 1 of Form 1*)
IL0000108

V. INTAKE AND EFFLUENT CHARACTERISTICS (*continued from page 3 of Form 2-C*)

OUTFALL NO.
021

PART A –You must provide the results of at least one analysis for every pollutant in this table. Complete one table for each outfall. See instructions for additional details.

1. POLLUTANT	2. EFFLUENT a. MAXIMUM DAILY VALUE (1) CONCENTRATION	2. EFFLUENT a. MAXIMUM DAILY VALUE (2) MASS	b. MAXIMUM 30 DAY VALUE (*if available*) (1) CONCENTRATION	b. (2) MASS	c. LONG TERM AVRG. VALUE (*if available*) (1) CONCENTRATION	c. (2) MASS	d. NO. OF ANALYSES	3. UNITS (*specify if blank*) a. CONCEN-TRATION	3. UNITS b. MASS	4. INTAKE (*optional*) a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	4. a. (2) MASS	4. b. NO. OF ANALYSES
a. Biochemical Oxygen Demand (*BOD*)	<1						1	mg/L	lb/dy	4.4		1
b. Chemical Oxygen Demand (*COD*)	16						1	mg/L	lb/dy	14		1
c. Total Organic Carbon (*TOC*)	6.0						1	mg/L	lb/dy	6.2		1
d. Total Suspended Solids (*TSS*)	6.8						1	mg/L	lb/dy	12		1
e. Ammonia (*as N*)	<0.10						1	mg/L	lb/dy	<0.10		1
f. Flow	VALUE 0.0		VALUE 265.25		VALUE 68.85		cont	MGD	---	VALUE		
g. Temperature (*winter*)	VALUE 15.8		VALUE 31.0		VALUE 23.6		cont	°C		VALUE		
h. Temperature (*summer*)	VALUE		VALUE 40.3		VALUE 33.8		cont	°C		VALUE		
i. pH	MINIMUM 7.45	MAXIMUM 8.23	MINIMUM 7.1	MAXIMUM 8.9			1,12	STANDARD UNITS				

PART B – Mark "X" in column 2-a for each pollutant you know or have reason to believe is present. Mark "X" in column 2-b for each pollutant you believe to be absent. If you mark column 2a for any pollutant which is limited either directly, or indirectly but expressly, in an effluent limitations guideline, you must provide the results of at least one analysis for that pollutant. For other pollutants for which you mark column 2a, you must provide quantitative data or an explanation of their presence in your discharge. Complete one table for each outfall. See the instructions for additional details and requirements.

1. POLLUTANT AND CAS NO. (*if available*)	2. MARK "X" a. BELIEVED PRESENT	2. MARK "X" b. BELIEVED ABSENT	3. EFFLUENT a. MAXIMUM DAILY VALUE (1) CONCENTRATION	a. (2) MASS	b. MAXIMUM 30 DAY VALUE (*if available*) (1) CONCENTRATION	b. (2) MASS	c. LONG TERM AVRG. VALUE (*if available*) (1) CONCENTRATION	c. (2) MASS	d. NO. OF ANALYSES	4. UNITS a. CONCEN-TRATION	4. UNITS b. MASS	5. INTAKE (*optional*) a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	5. a. (2) MASS	5. b. NO. OF ANALYSES
a. Bromide (24959-67-9)		X	<1.0						1	mg/L	lb/dy	<1.0		1
b. Chlorine, Total Residual	X		0.14		0.20		0.10		1,24	mg/L	lb/dy	<0.05		1
c. Color		X							0	---	---			0
d. Fecal Coliform	X								0	CFU/0.1L	---	3	---	1
e. Fluoride (16984-48-8)	X		0.33						1	mg/L	lb/dy	0.31		1
f. Nitrate-Nitrite (*as N*)	X		0.73						1	mg/L	lb/dy	0.81		1

CONTINUE ON REVERSE

Notes: Temperature obtained at edge of the regulatory mixing zone.
Total Residual Chlorine obtained during regulated condenser chlorination period at a point representative of the cooling water discharge flume.

1. POLLUTANT AND CAS NO. (*if available*)	2. MARK "X"		3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. BELIEVED PRESENT	b. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCEN-TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
			(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
g. Nitrogen, Total Organic (*as N*)	X		<1.1						1	mg/L	lb/dy	1.1		1
h. Oil and Grease		X	<5						1	mg/L	lb/dy	<5		1
i. Phosphorus (as P), Total (7723-14-0)	X		<0.10						1	mg/L	lb/dy	<0.10		1
j. Radioactivity														
(1) Alpha, Total									0					0
(2) Beta, Total									0					0
(3) Radium, Total									0					0
(4) Radium 226, Total									0					0
k. Sulfate (*as SO_4*) (14808-79-8)	X		62						1	mg/L	lb/dy	55		1
l. Sulfide (*as S*)		X	<2.0						1	mg/L	lb/dy	<2.0		1
m. Sulfite (*as SO_3*) (14265-45-3)		X	<2.0						1	mg/L	lb/dy	<2.0		1
n. Surfactants		X	<0.10						1	mg/L	lb/dy	0.19		1
o. Aluminum, Total (7429-90-5)	X		0.096						1	mg/L	lb/dy	<0.050		1
p. Barium, Total (7440-39-3)	X		0.07						1	mg/L	lb/dy	0.06		1
q. Boron, Total (7440-42-8)	X		0.26						1	mg/L	lb/dy	0.35		1
r. Cobalt, Total (7440-48-4)		X	<0.005						1	mg/L	lb/dy	<0.005		1
s. Iron, Total (7439-89-6)	X		0.28						1	mg/L	lb/dy	0.08		1
t. Magnesium, Total (7439-95-4)	X		15						1	mg/L	lb/dy	14		1
u. Molybdenum, Total (7439-98-7)		X	<0.010						1	mg/L	lb/dy	<0.010		1
v. Manganese, Total (7439-96-5)	X		0.035						1	mg/L	lb/dy	0.024		1
w. Tin, Total (7440-31-5)	X		<0.060						1	mg/L	lb/dy	<0.060		1
x. Titanium, Total (7440-32-6)	X		<0.005						1	mg/L	lb/dy	<0.005		1

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CONTINUED FROM PAGE 3 OF FORM 2-C

EPA I.D. NUMBER (*copy from Item 1 of Form 1*)	OUTFALL NUMBER
IL0000108	021

PART C - If you are a primary industry and this outfall contains process wastewater, refer to Table 2c-2 in the instructions to determine which of the GC/MS fractions you must test for. Mark "X" in column 2-a for all such GC/MS fractions that apply to your industry and for ALL toxic metals, cyanides, and total phenols. If you are not required to mark column 2-a (*secondary industries, nonprocess wastewater outfalls, and nonrequired GC/MS fractions*), mark "X" in column 2-b for each pollutant you know or have reason to believe is present. Mark "X" in column 2-c for each pollutant you believe is absent. If you mark column 2a for any pollutant, you must provide the results of at least one analysis for that pollutant. If you mark column 2b for any pollutant, you must provide the results of at least one analysis for that pollutant if you know or have reason to believe it will be discharged in concentrations of 10 ppb or greater. If you mark column 2b for acrolein, acrylonitrile, 2,4 dinitrophenol, or 2-methyl-4, 6 dinitrophenol, you must provide the results of at least one analysis for each of these pollutants which you know or have reason to believe that you discharge in concentrations of 100 ppb or greater. Otherwise, for pollutants for which you mark column 2b, you must either submit at least one analysis or briefly describe the reasons the pollutant is expected to be discharged. Note that there are 7 pages to this part; please review each carefully. Complete one table (*all 7 pages*) for each outfall. See instructions for additional details and requirements.

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCEN-TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
METALS, CYANIDE, AND TOTAL PHENOLS															
1M. Antimony, Total (7440-36-0)	X		X	<20						1	ug/L	lb/dy	<20		1
2M. Arsenic, Total (7440-38-2)	X		X	<20						1	ug/L	lb/dy	<20		1
3M. Beryllium, Total (7440-41-7)	X		X	<5						1	ug/L	lb/dy	<5		1
4M. Cadmium, Total (7440-43-9)	X		X	<2						1	ug/L	lb/dy	<2		1
5M. Chromium, Total (7440-47-3)	X		X	<4						1	ug/L	lb/dy	<4		1
6M. Copper, Total (7440-50-8)	X		X	16						1	ug/L	lb/dy	13		1
7M. Lead, Total (7439-92-1)	X		X	<10						1	ug/L	lb/dy	<10		1
8M. Mercury, Total (7439-97-6)	X		X	<1						1	ng/L	lb/dy	<1		1
9M. Nickel, Total (7440-02-0)	X		X	<10						1	ug/L	lb/dy	<10		1
10M. Selenium, Total (7782-49-2)	X		X	<10						1	ug/L	lb/dy	12		1
11M. Silver, Total (7440-22-4)	X		X	<10						1	ug/L	lb/dy	<10		1
12M. Thallium, Total (7440-28-0)	X		X	<10						1	ug/L	lb/dy	<10		1
13M. Zinc, Total (7440-66-6)	X		X	<10						1	ug/L	lb/dy	<10		1
14M. Cyanide, Total (57-12-5)	X		X	<5						1	ug/L	lb/dy	<5		1
15M. Phenols, Total	X		X	<10						1	ug/L	lb/dy	<5		1
DIOXIN															
2,3,7,8-Tetra-chlorodibenzo-P-Dioxin (1764-01-6)			X	DESCRIBE RESULTS											

CONTINUE ON REVERSE

CONTINUED FROM THE FRONT

Outfall 021

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCEN-TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION – VOLATILE COMPOUNDS															
1V. Accrolein (107-02-8)	X		X	<50						1	ug/L		<50		1
2V. Acrylonitrile (107-13-1)	X		X	<50						1	ug/L		<50		1
3V. Benzene (71-43-2)	X		X	<5						1	ug/L		<5		1
4V. Bis (*Chloro-methyl*) Ether (542-88-1)				Note 1									Note 1		
5V. Bromoform (75-25-2)	X		X	<5						1	ug/L		<5		1
6V. Carbon Tetrachloride (56-23-5)	X		X	<5						1	ug/L		<5		1
7V. Chlorobenzene (108-90-7)	X		X	<5						1	ug/L		<5		1
8V. Chlorodi-bromomethane (124-48-1)	X		X	<5						1	ug/L		<5		1
9V. Chloroethane (75-00-3)	X		X	<5						1	ug/L		<5		1
10V. 2-Chloro-ethylvinyl Ether (110-75-8)	X		X	<5						1	ug/L		<5		1
11V. Chloroform (67-66-3)	X		X	Note 2									Note 2		
12V. Dichloro-bromomethane (75-27-4)	X		X	<5						1	ug/L		<5		1
13V. Dichloro-difluoromethane (75-71-8)				Note 1									Note 1		
14V. 1,1-Dichloro-ethane (75-34-3)	X		X	<5						1	ug/L		<5		1
15V. 1,2-Dichloro-ethane (107-06-2)	X		X	<5						1	ug/L		<5		1
16V. 1,1-Dichloro-ethylene (75-35-4)	X		X	<5						1	ug/L		<5		1
17V. 1,2-Dichloro-propane (78-87-5)	X		X	<5						1	ug/L		<5		1
18V. 1,3-Dichloro-propylene ** (542-75-6)	X		X	<5						1	ug/L		<5		1
19V. Ethylbenzene (100-41-4)	X		X	<5						1	ug/L		<5		1
20V. Methyl Bromide (74-83-9)	X		X	<5						1	ug/L		<5		1
21V. Methyl Chloride (74-87-3)	X		X	<5						1	ug/L		<5		1

 CONTINUE ON PAGE V-5

Note 1 - These parameters deleted per 40CFR122, Appendix D.

Note 2 - Analysis suspect therefore no data provided for this constituent.

** This parameter is 1,3-Dichloropropylene per 40CFR122, Appendix D.

CONTINUED FROM PAGE V-4

Outfall 021

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X" a. TESTING REQUIRED	2. MARK "X" b. BELIEVED PRESENT	2. MARK "X" c. BELIEVED ABSENT	3. EFFLUENT a. MAXIMUM DAILY VALUE (1) CONCENTRATION	3. EFFLUENT a. MAXIMUM DAILY VALUE (2) MASS	3. EFFLUENT b. MAXIMUM 30 DAY VALUE (*if available*) (1) CONCENTRATION	3. EFFLUENT b. MAXIMUM 30 DAY VALUE (*if available*) (2) MASS	3. EFFLUENT c. LONG TERM AVRG. VALUE (*if available*) (1) CONCENTRATION	3. EFFLUENT c. LONG TERM AVRG. VALUE (*if available*) (2) MASS	3. EFFLUENT d. NO. OF ANALYSES	4. UNITS a. CONCEN-TRATION	4. UNITS b. MASS	5. INTAKE (*optional*) a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	5. INTAKE (*optional*) a. LONG TERM AVERAGE VALUE (2) MASS	5. INTAKE (*optional*) b. NO. OF ANALYSES
GC/MS FRACTION – VOLATILE COMPOUNDS (*continued*)															
22V. Methylene Chloride (75-09-2)	X		X	<5						1	ug/L		<5		1
23V. 1,1,2,2-Tetrachloroethane (79-34-5)	X		X	<5						1	ug/L		<5		1
24V. Tetrachloro-ethylene (127-18-4)	X		X	<5						1	ug/L		<5		1
25V. Toluene (108-88-3)	X		X	<5						1	ug/L		<5		1
26V. 1,2-Trans-Dichloroethylene (156-60-5)	X		X	<20						1	ug/L		<20		1
27V. 1,1,1-Trichloro-ethane (71-55-6)	X		X	<5						1	ug/L		<5		1
28V. 1,1,2-Trichloro-ethane (79-00-5)	X		X	<5						1	ug/L		<5		1
29V Trichloro-ethylene (79-01-6)	X		X	<5						1	ug/L		<5		1
30V. Trichloro-fluoromethane (75-69-4)				Note 1									Note 1		
31V. Vinyl Chloride (75-01-4)	X		X	<5						1	ug/L		<5		1
GC/MS FRACTION – ACID COMPOUNDS															
1A. 2-Chlorophenol (95-57-8)	X		X	<10						1	ug/L		<10		1
2A. 2,4-Dichloro-phenol (120-83-2)	X		X	<10						1	ug/L		<10		1
3A. 2,4-Dimethyl-phenol (105-67-9)	X		X	<10						1	ug/L		<10		1
4A. 4,6-Dinitro-O-Cresol (534-52-1)	X		X	<50						1	ug/L		<50		1
5A. 2,4-Dinitro-phenol (51-28-5)	X		X	<50						1	ug/L		<50		1
6A. 2-Nitrophenol (88-75-5)	X		X	<10						1	ug/L		<10		1
7A. 4-Nitrophenol (100-02-7)	X		X	<50						1	ug/L		<50		1
8A. P-Chloro-M-Cresol (59-50-7)	X		X	<10						1	ug/L		<10		1
9A. Pentachloro-phenol (87-86-5)	X		X	<50						1	ug/L		<50		1
10A. Phenol (108-95-2)	X		X	<10						1	ug/L		<10		1
11A. 2,4,6-Trichloro-phenol (88-05-2)	X		X	<50						1	ug/L		<50		1

CONTINUE ON REVERSE

Note 1 - This parameter deleted per 40CFR122, Appendix D.

CONTINUED FROM THE FRONT

Outfall 021

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X" a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	3. EFFLUENT a. MAXIMUM DAILY VALUE (1) CONCENTRATION	(2) MASS	b. MAXIMUM 30 DAY VALUE (*if available*) (1) CONCENTRATION	(2) MASS	c. LONG TERM AVRG. VALUE (*if available*) (1) CONCENTRATION	(2) MASS	d. NO. OF ANALYSES	4. UNITS a. CONCEN-TRATION	b. MASS	5. INTAKE (*optional*) a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	(2) MASS	b. NO. OF ANALYSES
GC/MS FRACTION – BASE/NEUTRAL COMPOUNDS															
1B. Acenaphthene (83-32-9)	X		X	<10						1	ug/L		<10		1
2B. Acenaphtylene (208-96-8)	X		X	<10						1	ug/L		<10		1
3B. Anthracene (120-12-7)	X		X	<10						1	ug/L		<10		1
4B. Benzidine (92-87-5)	X		X	<80						1	ug/L		<80		1
5B. Benzo (*a*) Anthracene (56-55-3)	X		X	<10						1	ug/L		<10		1
6B. Benzo (*a*) Pyrene (50-32-8)	X		X	<10						1	ug/L		<10		1
7B. 3,4-Benzo-fluoranthene (205-99-2)	X		X	<10						1	ug/L		<10		1
8B. Benzo (*ghi*) Perylene (191-24-2)	X		X	<10						1	ug/L		<10		1
9B. Benzo (*k*) Fluoranthene (207-08-9)	X		X	<10						1	ug/L		<10		1
10B. Bis (*2-Chloro-ethoxy*) Methane (111-91-1)	X		X	<10						1	ug/L		<10		1
11B. Bis (*2-Chloro-ethyl*) Ether (111-44-4)	X		X	<10						1	ug/L		<10		1
12B. Bis (*2-Chloroisopropyl*) Ether (102-80-1)	X		X	<10						1	ug/L		<10		1
13B. Bis (*2-Ethyl-hexyl*) Phthalate (117-81-7)	X		X	<10						1	ug/L		<10		1
14B. 4-Bromophenyl Phenyl Ether (101-55-3)	X		X	<10						1	ug/L		<10		1
15B. Butyl Benzyl Phthalate (85-68-7)	X		X	<10						1	ug/L		<10		1
16B. 2-Chloro-naphthalene (91-58-7)	X		X	<10						1	ug/L		<10		1
17B. 4-Chloro-phenyl Phenyl Ether (7005-72-3)	X		X	<10						1	ug/L		<10		1
18B. Chrysene (218-01-9)	X		X	<10						1	ug/L		<10		1
19B. Dibenzo (*a,h*) Anthracene (53-70-3)	X		X	<10						1	ug/L		<10		1
20B. 1,2-Dichloro-benzene (95-50-1)	X		X	<10						1	ug/L		<10		1
21B. 1,3-Di-chloro-benzene (541-73-1)	X		X	<10						1	ug/L		<10		1

CONTINUE ON PAGE V-7

CONTINUED FROM PAGE V-6

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCEN-TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION – BASE/NEUTRAL COMPOUNDS (*continued*)															
22B. 1,4-Dichloro-benzene (106-46-7)	X		X	<10						1	ug/L		<10		1
23B. 3,3-Dichloro-benzidine (91-94-1)	X		X	<20						1	ug/L		<20		1
24B. Diethyl Phthalate (84-66-2)	X		X	<10						1	ug/L		<10		1
25B. Dimethyl Phthalate (131 -11-3)	X		X	<10						1	ug/L		<10		1
26B. Di-N-Butyl Phthalate (84-74-2)	X		X	<10						1	ug/L		<10		1
27B. 2,4-Dinitro-toluene (121-14-2)	X		X	<10						1	ug/L		<10		1
28B. 2,6-Dinitro-toluene (606-20-2)	X		X	<10						1	ug/L		<10		1
29B. Di-N-Octyl Phthalate (117-84-0)	X		X	<10						1	ug/L		<10		1
30B. 1,2-Diphenyl-hydrazine (*as Azo-benzene*) (122-66-7)	X		X	<10						1	ug/L		<10		1
31B. Fluoranthene (206-44-0)	X		X	<10						1	ug/L		<10		1
32B. Fluorene (86-73-7)	X		X	<10						1	ug/L		<10		1
33B. Hexachloro-benzene (118-74-1)	X		X	<10						1	ug/L		<10		1
34B. Hexachloro-butadiene (87-68-3)	X		X	<10						1	ug/L		<10		1
35B. Hexachloro-cyclopentadiene (77-47-4)	X		X	<50						1	ug/L		<50		1
36B Hexachloro-ethane (67-72-1)	X		X	<10						1	ug/L		<10		1
37B. Indeno (*1,2,3-cd*) Pyrene (193-39-5)	X		X	<10						1	ug/L		<10		1
38B. Isophorone (78-59-1)	X		X	<10						1	ug/L		<10		1
39B. Naphthalene (91-20-3)	X		X	<10						1	ug/L		<10		1
40B. Nitrobenzene (98-95-3)	X		X	<10						1	ug/L		<10		1
41B. N-Nitro-sodimethylamine (62-75-9)	X		X	<10						1	ug/L		<10		1
42B. N-Nitrosodi-N-Propylamine (621-64-7)	X		X	<10						1	ug/L		<10		1

CONTINUE ON REVERSE

CONTINUED FROM THE FRONT

Outfall 021

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCEN-TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION – BASE/NEUTRAL COMPOUNDS (*continued*)															
43B. N-Nitro-sodiphenylamine (86-30-6)	X		X	<10						1	ug/L		<10		1
44B. Phenanthrene (85-01-8)	X		X	<10						1	ug/L		<10		1
45B. Pyrene (129-00-0)	X		X	<10						1	ug/L		<10		1
46B. 1,2,4-Tri-chlorobenzene (120-82-1)	X		X	<10						1	ug/L		<10		1
GC/MS FRACTION – PESTICIDES															
1P. Aldrin (309-00-2)			X												
2P. α-BHC (319-84-6)			X												
3P. β-BHC (319-85-7)			X												
4P. γ-BHC (58-89-9)			X												
5P. δ-BHC (319-86-8)			X												
6P. Chlordane (57-74-9)			X												
7P. 4,4'-DDT (50-29-3)			X												
8P. 4,4'-DDE (72-55-9)			X												
9P. 4,4'-DDD (72-54-8)			X												
10P. Dieldrin (60-57-1)			X												
11P. α-Enosulfan (115-29-7)			X												
12P. β-Endosulfan (115-29-7)			X												
13P. Endosulfan Sulfate (1031-07-8)			X												
14P. Endrin (72-20-8)			X												
15P. Endrin Aldehyde (7421-93-4)			X												
16P. Heptachlor (76-44-8)			X												

CONTINUE ON PAGE V-9

EPA I.D. NUMBER (*copy from Item 1 of Form 1*)	OUTFALL NUMBER
IL0000108	021

CONTINUED FROM PAGE V-8

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X" a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	3. EFFLUENT a. MAXIMUM DAILY VALUE (1) CONCENTRATION	(2) MASS	b. MAXIMUM 30 DAY VALUE (*if available*) (1) CONCENTRATION	(2) MASS	c. LONG TERM AVRG. VALUE (*if available*) (1) CONCENTRATION	(2) MASS	d. NO. OF ANALYSES	4. UNITS a. CONCEN-TRATION	b. MASS	5. INTAKE (*optional*) a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	(2) MASS	b. NO. OF ANALYSES
GC/MS FRACTION – PESTICIDES (*continued*)															
17P. Heptachlor Epoxide (1024-57-3)			X												
18P. PCB-1242 (53469-21-9)			X	<0.5						1	ug/L		<0.5		1
19P. PCB-1254 (11097-69-1)			X	<1.0						1	ug/L		<1.0		1
20P. PCB-1221 (11104-28-2)			X	<1.0						1	ug/L		<1.0		1
21P. PCB-1232 (11141-16-5)			X	<0.5						1	ug/L		<0.5		1
22P. PCB-1248 (12672-29-6)			X	<0.5						1	ug/L		<0.5		1
23P. PCB-1260 (11096-82-5)			X	<1.0						1	ug/L		<1.0		1
24P. PCB-1016 (12674-11-2)			X	<0.5						1	ug/L		<0.5		1
25P. Toxaphene (8001-35-2)			X												

PLEASE PRINT OR TYPE IN THE UNSHADED AREAS ONLY. You may report some or all of this information on separate sheets (*use the same format*) instead of completing these pages.
SEE INSTRUCTIONS.

EPA I.D. NUMBER (*copy from Item 1 of Form 1*)
IL0000108

V. INTAKE AND EFFLUENT CHARACTERISTICS *(continued from page 3 of Form 2-C)*

OUTFALL NO.
022

PART A –You must provide the results of at least one analysis for every pollutant in this table. Complete one table for each outfall. See instructions for additional details.

1. POLLUTANT	2. EFFLUENT							3. UNITS (*specify if blank*)		4. INTAKE (*optional*)		
	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCEN-TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
a. Biochemical Oxygen Demand (*BOD*)	<1						1	mg/L	lb/dy	4.4		1
b. Chemical Oxygen Demand (*COD*)	16						1	mg/L	lb/dy	14		1
c. Total Organic Carbon (*TOC*)	6.0						1	mg/L	lb/dy	6.2		1
d. Total Suspended Solids (*TSS*)	6.8						1	mg/L	lb/dy	12		1
e. Ammonia (*as N*)	<0.10						1	mg/L	lb/dy	<0.10		1
f. Flow	VALUE 0.0		VALUE 265.25		VALUE 66.17		cont	MGD	---	VALUE		
g. Temperature (*winter*)	VALUE 15.8		VALUE 31.0		VALUE 23.6		cont	°C		VALUE		
h. Temperature (*summer*)	VALUE		VALUE 40.3		VALUE 33.8		cont	°C		VALUE		
i. pH	MINIMUM 7.45	MAXIMUM 8.23	MINIMUM 6.9	MAXIMUM 7.6			1,24	STANDARD UNITS				

PART B – Mark "X" in column 2-a for each pollutant you know or have reason to believe is present. Mark "X" in column 2-b for each pollutant you believe to be absent. If you mark column 2a for any pollutant which is limited either directly, or indirectly but expressly, in an effluent limitations guideline, you must provide the results of at least one analysis for that pollutant. For other pollutants for which you mark column 2a, you must provide quantitative data or an explanation of their presence in your discharge. Complete one table for each outfall. See the instructions for additional details and requirements.

1. POLLUTANT AND CAS NO. (*if available*)	2. MARK "X"		3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. BELIEVED PRESENT	b. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCEN-TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
			(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
a. Bromide (24959-67-9)		X	<1.0						1	mg/L	lb/dy	<1.0		1
b. Chlorine, Total Residual	X		0.14		0.20		0.10		1,24	mg/L	lb/dy	<0.05		1
c. Color		X							0	---	---			0
d. Fecal Coliform	X								0	CFU/0.1L	---	3	---	1
e. Fluoride (16984-48-8)	X		0.33						1	mg/L	lb/dy	0.31		1
f. Nitrate-Nitrite (*as N*)	X		0.73						1	mg/L	lb/dy	0.81		1

Notes: Temperature obtained at edge of the regulatory mixing zone.
Total Residual Chlorine obtained during regulated condenser chlorination period at a point representative of the cooling water discharge flume.

Outfall 022

1. POLLUTANT AND CAS NO. (*if available*)	2. MARK "X" a. BELIEVED PRESENT	2. MARK "X" b. BELIEVED ABSENT	3. EFFLUENT a. MAXIMUM DAILY VALUE (1) CONCENTRATION	3. EFFLUENT a. MAXIMUM DAILY VALUE (2) MASS	3. EFFLUENT b. MAXIMUM 30 DAY VALUE (*if available*) (1) CONCENTRATION	3. EFFLUENT b. MAXIMUM 30 DAY VALUE (*if available*) (2) MASS	3. EFFLUENT c. LONG TERM AVRG. VALUE (*if available*) (1) CONCENTRATION	3. EFFLUENT c. LONG TERM AVRG. VALUE (*if available*) (2) MASS	3. EFFLUENT d. NO. OF ANALYSES	4. UNITS a. CONCEN-TRATION	4. UNITS b. MASS	5. INTAKE (*optional*) a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	5. INTAKE (*optional*) a. LONG TERM AVERAGE VALUE (2) MASS	5. INTAKE (*optional*) b. NO. OF ANALYSES
g. Nitrogen, Total Organic (*as N*)	X		<1.1						1	mg/L	lb/dy	1.1		1
h. Oil and Grease		X	<5						1	mg/L	lb/dy	<5		1
i. Phosphorus (as P), Total (7723-14-0)	X		<0.10						1	mg/L	lb/dy	<0.10		1
j. Radioactivity														
(1) Alpha, Total									0					0
(2) Beta, Total									0					0
(3) Radium, Total									0					0
(4) Radium 226, Total									0					0
k. Sulfate (*as SO_4*) (14808-79-8)	X		62						1	mg/L	lb/dy	55		1
l. Sulfide (*as S*)		X	<2.0						1	mg/L	lb/dy	<2.0		1
m. Sulfite (*as SO_3*) (14265-45-3)		X	<2.0						1	mg/L	lb/dy	<2.0		1
n. Surfactants		X	<0.10						1	mg/L	lb/dy	0.19		1
o. Aluminum, Total (7429-90-5)	X		0.096						1	mg/L	lb/dy	<0.050		1
p. Barium, Total (7440-39-3)	X		0.07						1	mg/L	lb/dy	0.06		1
q. Boron, Total (7440-42-8)	X		0.26						1	mg/L	lb/dy	0.35		1
r. Cobalt, Total (7440-48-4)		X	<0.005						1	mg/L	lb/dy	<0.005		1
s. Iron, Total (7439-89-6)	X		0.28						1	mg/L	lb/dy	0.08		1
t. Magnesium, Total (7439-95-4)	X		15						1	mg/L	lb/dy	14		1
u. Molybdenum, Total (7439-98-7)		X	<0.010						1	mg/L	lb/dy	<0.010		1
v. Manganese, Total (7439-96-5)	X		0.035						1	mg/L	lb/dy	0.024		1
w. Tin, Total (7440-31-5)	X		<0.060						1	mg/L	lb/dy	<0.060		1
x. Titanium, Total (7440-32-6)	X		<0.005						1	mg/L	lb/dy	<0.005		1

CONTINUE ON PAGE V-3

CONTINUED FROM PAGE 3 OF FORM 2-C

EPA I.D. NUMBER (*copy from Item 1 of Form 1*)	OUTFALL NUMBER
IL0000108	022

PART C - If you are a primary industry and this outfall contains process wastewater, refer to Table 2c-2 in the instructions to determine which of the GC/MS fractions you must test for. Mark "X" in column 2-a for all such GC/MS fractions that apply to your industry and for ALL toxic metals, cyanides, and total phenols. If you are not required to mark column 2-a (*secondary industries, nonprocess wastewater outfalls, and nonrequired GC/MS fractions*), mark "X" in column 2-b for each pollutant you know or have reason to believe is present. Mark "X" in column 2-c for each pollutant you believe is absent. If you mark column 2a for any pollutant, you must provide the results of at least one analysis for that pollutant. If you mark column 2b for any pollutant, you must provide the results of at least one analysis for that pollutant if you know or have reason to believe it will be discharged in concentrations of 10 ppb or greater. If you mark column 2b for acrolein, acrylonitrile, 2,4 dinitrophenol, or 2-methyl-4, 6 dinitrophenol, you must provide the results of at least one analysis for each of these pollutants which you know or have reason to believe that you discharge in concentrations of 100 ppb or greater. Otherwise, for pollutants for which you mark column 2b, you must either submit at least one analysis or briefly describe the reasons the pollutant is expected to be discharged. Note that there are 7 pages to this part; please review each carefully. Complete one table (*all 7 pages*) for each outfall. See instructions for additional details and requirements.

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE (1) CONCENTRATION	a. MAXIMUM DAILY VALUE (2) MASS	b. MAXIMUM 30 DAY VALUE (*if available*) (1) CONCENTRATION	b. (2) MASS	c. LONG TERM AVRG. VALUE (*if available*) (1) CONCENTRATION	c. (2) MASS	d. NO. OF ANALYSES	a. CONCEN-TRATION	b. MASS	a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	a. (2) MASS	b. NO. OF ANALYSES
METALS, CYANIDE, AND TOTAL PHENOLS															
1M. Antimony, Total (7440-36-0)	X		X	<20						1	ug/L	lb/dy	<20		1
2M. Arsenic, Total (7440-38-2)	X		X	<20						1	ug/L	lb/dy	<20		1
3M. Beryllium, Total (7440-41-7)	X		X	<5						1	ug/L	lb/dy	<5		1
4M. Cadmium, Total (7440-43-9)	X		X	<2						1	ug/L	lb/dy	<2		1
5M. Chromium, Total (7440-47-3)	X		X	<4						1	ug/L	lb/dy	<4		1
6M. Copper, Total (7440-50-8)	X		X	16						1	ug/L	lb/dy	13		1
7M. Lead, Total (7439-92-1)	X		X	<10						1	ug/L	lb/dy	<10		1
8M. Mercury, Total (7439-97-6)	X		X	<1						1	ng/L	lb/dy	<1		1
9M. Nickel, Total (7440-02-0)	X		X	<10						1	ug/L	lb/dy	<10		1
10M. Selenium, Total (7782-49-2)	X		X	<10						1	ug/L	lb/dy	12		1
11M. Silver, Total (7440-22-4)	X		X	<10						1	ug/L	lb/dy	<10		1
12M. Thallium, Total (7440-28-0)	X		X	<10						1	ug/L	lb/dy	<10		1
13M. Zinc, Total (7440-66-6)	X		X	<10						1	ug/L	lb/dy	<10		1
14M. Cyanide, Total (57-12-5)	X		X	<5						1	ug/L	lb/dy	<5		1
15M. Phenols, Total	X		X	<10						1	ug/L	lb/dy	<5		1
DIOXIN															
2,3,7,8-Tetra-chlorodibenzo-P-Dioxin (1764-01-6)			X	DESCRIBE RESULTS											

CONTINUE ON REVERSE

CONTINUED FROM THE FRONT

Outfall 022

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCEN-TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION – VOLATILE COMPOUNDS															
1V. Accrolein (107-02-8)	X		X	<50						1	ug/L		<50		1
2V. Acrylonitrile (107-13-1)	X		X	<50						1	ug/L		<50		1
3V. Benzene (71-43-2)	X		X	<5						1	ug/L		<5		1
4V. Bis (*Chloro-methyl*) Ether (542-88-1)				Note 1									Note 1		
5V. Bromoform (75-25-2)	X		X	<5						1	ug/L		<5		1
6V. Carbon Tetrachloride (56-23-5)	X		X	<5						1	ug/L		<5		1
7V. Chlorobenzene (108-90-7)	X		X	<5						1	ug/L		<5		1
8V. Chlorodi-bromomethane (124-48-1)	X		X	<5						1	ug/L		<5		1
9V. Chloroethane (75-00-3)	X		X	<5						1	ug/L		<5		1
10V. 2-Chloro-ethylvinyl Ether (110-75-8)	X		X	<5						1	ug/L		<5		1
11V. Chloroform (67-66-3)	X		X	Note 2									Note 2		
12V. Dichloro-bromomethane (75-27-4)	X		X	<5						1	ug/L		<5		1
13V. Dichloro-difluoromethane (75-71-8)				Note 1									Note 1		
14V. 1,1-Dichloro-ethane (75-34-3)	X		X	<5						1	ug/L		<5		1
15V. 1,2-Dichloro-ethane (107-06-2)	X		X	<5						1	ug/L		<5		1
16V. 1,1-Dichloro-ethylene (75-35-4)	X		X	<5						1	ug/L		<5		1
17V. 1,2-Dichloro-propane (78-87-5)	X		X	<5						1	ug/L		<5		1
18V. 1,3-Dichloro-propylene (542-75-6) **	X		X	<5						1	ug/L		<5		1
19V. Ethylbenzene (100-41-4)	X		X	<5						1	ug/L		<5		1
20V. Methyl Bromide (74-83-9)	X		X	<5						1	ug/L		<5		1
21V. Methyl Chloride (74-87-3)	X		X	<5						1	ug/L		<5		1

 CONTINUE ON PAGE V-5

Note 1 - These parameters deleted per 40CFR122, Appendix D.

Note 2 - Analysis suspect therefore no data provided for this constituent.

** This parameter is 1,3-Dichloropropylene per 40CFR122, Appendix D.

CONTINUED FROM PAGE V-4

Outfall 022

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCEN-TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION – VOLATILE COMPOUNDS (*continued*)															
22V. Methylene Chloride (75-09-2)	X		X	<5						1	ug/L		<5		1
23V. 1,1,2,2-Tetrachloroethane (79-34-5)	X		X	<5						1	ug/L		<5		1
24V. Tetrachloro-ethylene (127-18-4)	X		X	<5						1	ug/L		<5		1
25V. Toluene (108-88-3)	X		X	<5						1	ug/L		<5		1
26V. 1,2-Trans-Dichloroethylene (156-60-5)	X		X	<20						1	ug/L		<20		1
27V. 1,1,1-Trichloro-ethane (71-55-6)	X		X	<5						1	ug/L		<5		1
28V. 1,1,2-Trichloro-ethane (79-00-5)	X		X	<5						1	ug/L		<5		1
29V Trichloro-ethylene (79-01-6)	X		X	<5						1	ug/L		<5		1
30V. Trichloro-fluoromethane (75-69-4)				Note 1									Note 1		
31V. Vinyl Chloride (75-01-4)	X		X	<5						1	ug/L		<5		1
GC/MS FRACTION – ACID COMPOUNDS															
1A. 2-Chlorophenol (95-57-8)	X		X	<10						1	ug/L		<10		1
2A. 2,4-Dichloro-phenol (120-83-2)	X		X	<10						1	ug/L		<10		1
3A. 2,4-Dimethyl-phenol (105-67-9)	X		X	<10						1	ug/L		<10		1
4A. 4,6-Dinitro-O-Cresol (534-52-1)	X		X	<50						1	ug/L		<50		1
5A. 2,4-Dinitro-phenol (51-28-5)	X		X	<50						1	ug/L		<50		1
6A. 2-Nitrophenol (88-75-5)	X		X	<10						1	ug/L		<10		1
7A. 4-Nitrophenol (100-02-7)	X		X	<50						1	ug/L		<50		1
8A. P-Chloro-M-Cresol (59-50-7)	X		X	<10						1	ug/L		<10		1
9A. Pentachloro-phenol (87-86-5)	X		X	<50						1	ug/L		<50		1
10A. Phenol (108-95-2)	X		X	<10						1	ug/L		<10		1
11A. 2,4,6-Trichloro-phenol (88-05-2)	X		X	<50						1	ug/L		<50		1

Note 1 - This parameter deleted per 40CFR122, Appendix D.

CONTINUED FROM THE FRONT

Outfall 022

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCEN-TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION – BASE/NEUTRAL COMPOUNDS															
1B. Acenaphthene (83-32-9)	X		X	<10						1	ug/L		<10		1
2B. Acenaphtylene (208-96-8)	X		X	<10						1	ug/L		<10		1
3B. Anthracene (120-12-7)	X		X	<10						1	ug/L		<10		1
4B. Benzidine (92-87-5)	X		X	<80						1	ug/L		<80		1
5B. Benzo (*a*) Anthracene (56-55-3)	X		X	<10						1	ug/L		<10		1
6B. Benzo (*a*) Pyrene (50-32-8)	X		X	<10						1	ug/L		<10		1
7B. 3,4-Benzo-fluoranthene (205-99-2)	X		X	<10						1	ug/L		<10		1
8B. Benzo (*ghi*) Perylene (191-24-2)	X		X	<10						1	ug/L		<10		1
9B. Benzo (*k*) Fluoranthene (207-08-9)	X		X	<10						1	ug/L		<10		1
10B. Bis (*2-Chloro-ethoxy*) Methane (111-91-1)	X		X	<10						1	ug/L		<10		1
11B. Bis (*2-Chloro-ethyl*) Ether (111-44-4)	X		X	<10						1	ug/L		<10		1
12B. Bis (*2-Chloroisopropyl*) Ether (102-80-1)	X		X	<10						1	ug/L		<10		1
13B. Bis (*2-Ethyl-hexyl*) Phthalate (117-81-7)	X		X	<10						1	ug/L		<10		1
14B. 4-Bromophenyl Phenyl Ether (101-55-3)	X		X	<10						1	ug/L		<10		1
15B. Butyl Benzyl Phthalate (85-68-7)	X		X	<10						1	ug/L		<10		1
16B. 2-Chloro-naphthalene (91-58-7)	X		X	<10						1	ug/L		<10		1
17B. 4-Chloro-phenyl Phenyl Ether (7005-72-3)	X		X	<10						1	ug/L		<10		1
18B. Chrysene (218-01-9)	X		X	<10						1	ug/L		<10		1
19B. Dibenzo (*a,h*) Anthracene (53-70-3)	X		X	<10						1	ug/L		<10		1
20B. 1,2-Dichloro-benzene (95-50-1)	X		X	<10						1	ug/L		<10		1
21B. 1,3-Di-chloro-benzene (541-73-1)	X		X	<10						1	ug/L		<10		1

CONTINUE ON PAGE V-7

CONTINUED FROM PAGE V-6

Outfall 022

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCEN-TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION – BASE/NEUTRAL COMPOUNDS (*continued*)															
22B. 1,4-Dichloro-benzene (106-46-7)	X		X	<10						1	ug/L		<10		1
23B. 3,3-Dichloro-benzidine (91-94-1)	X		X	<20						1	ug/L		<20		1
24B. Diethyl Phthalate (84-66-2)	X		X	<10						1	ug/L		<10		1
25B. Dimethyl Phthalate (131 -11-3)	X		X	<10						1	ug/L		<10		1
26B. Di-N-Butyl Phthalate (84-74-2)	X		X	<10						1	ug/L		<10		1
27B. 2,4-Dinitro-toluene (121-14-2)	X		X	<10						1	ug/L		<10		1
28B. 2,6-Dinitro-toluene (606-20-2)	X		X	<10						1	ug/L		<10		1
29B. Di-N-Octyl Phthalate (117-84-0)	X		X	<10						1	ug/L		<10		1
30B. 1,2-Diphenyl-hydrazine (*as Azo-benzene*) (122-66-7)	X		X	<10						1	ug/L		<10		1
31B. Fluoranthene (206-44-0)	X		X	<10						1	ug/L		<10		1
32B. Fluorene (86-73-7)	X		X	<10						1	ug/L		<10		1
33B. Hexachloro-benzene (118-74-1)	X		X	<10						1	ug/L		<10		1
34B. Hexachloro-butadiene (87-68-3)	X		X	<10						1	ug/L		<10		1
35B. Hexachloro-cyclopentadiene (77-47-4)	X		X	<50						1	ug/L		<50		1
36B Hexachloro-ethane (67-72-1)	X		X	<10						1	ug/L		<10		1
37B. Indeno (*1,2,3-cd*) Pyrene (193-39-5)	X		X	<10						1	ug/L		<10		1
38B. Isophorone (78-59-1)	X		X	<10						1	ug/L		<10		1
39B. Naphthalene (91-20-3)	X		X	<10						1	ug/L		<10		1
40B. Nitrobenzene (98-95-3)	X		X	<10						1	ug/L		<10		1
41B. N-Nitro-sodimethylamine (62-75-9)	X		X	<10						1	ug/L		<10		1
42B. N-Nitrosodi-N-Propylamine (621-64-7)	X		X	<10						1	ug/L		<10		1

CONTINUE ON REVERSE

CONTINUED FROM THE FRONT

Outfall 022

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCEN-TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION – BASE/NEUTRAL COMPOUNDS (*continued*)															
43B. N-Nitro-sodiphenylamine (86-30-6)	X		X	<10						1	ug/L		<10		1
44B. Phenanthrene (85-01-8)	X		X	<10						1	ug/L		<10		1
45B. Pyrene (129-00-0)	X		X	<10						1	ug/L		<10		1
46B. 1,2,4-Tri-chlorobenzene (120-82-1)	X		X	<10						1	ug/L		<10		1
GC/MS FRACTION – PESTICIDES															
1P. Aldrin (309-00-2)			X												
2P. α-BHC (319-84-6)			X												
3P. β-BHC (319-85-7)			X												
4P. γ-BHC (58-89-9)			X												
5P. δ-BHC (319-86-8)			X												
6P. Chlordane (57-74-9)			X												
7P. 4,4'-DDT (50-29-3)			X												
8P. 4,4'-DDE (72-55-9)			X												
9P. 4,4'-DDD (72-54-8)			X												
10P. Dieldrin (60-57-1)			X												
11P. α-Enosulfan (115-29-7)			X												
12P. β-Endosulfan (115-29-7)			X												
13P. Endosulfan Sulfate (1031-07-8)			X												
14P. Endrin (72-20-8)			X												
15P. Endrin Aldehyde (7421-93-4)			X												
16P. Heptachlor (76-44-8)			X												

CONTINUE ON PAGE V-9

	EPA I.D. NUMBER (*copy from Item 1 of Form 1*)	OUTFALL NUMBER
	IL0000108	022

CONTINUED FROM PAGE V-8

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCEN-TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION – PESTICIDES (*continued*)															
17P. Heptachlor Epoxide (1024-57-3)			X												
18P. PCB-1242 (53469-21-9)			X	<0.5						1	ug/L		<0.5		1
19P. PCB-1254 (11097-69-1)			X	<1.0						1	ug/L		<1.0		1
20P. PCB-1221 (11104-28-2)			X	<1.0						1	ug/L		<1.0		1
21P. PCB-1232 (11141-16-5)			X	<0.5						1	ug/L		<0.5		1
22P. PCB-1248 (12672-29-6)			X	<0.5						1	ug/L		<0.5		1
23P. PCB-1260 (11096-82-5)			X	<1.0						1	ug/L		<1.0		1
24P. PCB-1016 (12674-11-2)			X	<0.5						1	ug/L		<0.5		1
25P. Toxaphene (8001-35-2)			X												

PLEASE PRINT OR TYPE IN THE UNSHADED AREAS ONLY. You may report some or all of this information on separate sheets (*use the same format*) instead of completing these pages.
SEE INSTRUCTIONS.

EPA I.D. NUMBER (*copy from Item 1 of Form 1*) IL0000108

V. INTAKE AND EFFLUENT CHARACTERISTICS (*continued from page 3 of Form 2-C*)

OUTFALL NO. A01

PART A –You must provide the results of at least one analysis for every pollutant in this table. Complete one table for each outfall. See instructions for additional details.

1. POLLUTANT	2. EFFLUENT a. MAXIMUM DAILY VALUE (1) CONCENTRATION	(2) MASS	b. MAXIMUM 30 DAY VALUE (*if available*) (1) CONCENTRATION	(2) MASS	c. LONG TERM AVRG. VALUE (*if available*) (1) CONCENTRATION	(2) MASS	d. NO. OF ANALYSES	3. UNITS (*specify if blank*) a. CONCENTRATION	b. MASS	4. INTAKE (*optional*) a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	(2) MASS	b. NO. OF ANALYSES
a. Biochemical Oxygen Demand (*BOD*)	<4.0	<2					1	mg/L	lb/dy	4.4	2.5	1
b. Chemical Oxygen Demand (*COD*)	<6.0	<3					1	mg/L	lb/dy	14	8	1
c. Total Organic Carbon (*TOC*)	<0.50	<1					1	mg/L	lb/dy	6.2	4	1
d. Total Suspended Solids (*TSS*)	<4.0	<2					1	mg/L	lb/dy	12	7	1
e. Ammonia (*as N*)	0.51	<1					1	mg/L	lb/dy	<0.10	<1	1
f. Flow	VALUE 0.0685		VALUE 0.0360		VALUE 0.0360		1,5,17	MGD	---	VALUE		
g. Temperature (*winter*)	VALUE 28		VALUE		VALUE		1	°C		VALUE		
h. Temperature (*summer*)	VALUE		VALUE		VALUE		0	°C		VALUE		
i. pH	MINIMUM 6.94	MAXIMUM 7.12	MINIMUM	MAXIMUM			1	STANDARD UNITS				

PART B – Mark "X" in column 2-a for each pollutant you know or have reason to believe is present. Mark "X" in column 2-b for each pollutant you believe to be absent. If you mark column 2a for any pollutant which is limited either directly, or indirectly but expressly, in an effluent limitations guideline, you must provide the results of at least one analysis for that pollutant. For other pollutants for which you mark column 2a, you must provide quantitative data or an explanation of their presence in your discharge. Complete one table for each outfall. See the instructions for additional details and requirements.

1. POLLUTANT AND CAS NO. (*if available*)	2. MARK "X" a. BELIEVED PRESENT	b. BELIEVED ABSENT	3. EFFLUENT a. MAXIMUM DAILY VALUE (1) CONCENTRATION	(2) MASS	b. MAXIMUM 30 DAY VALUE (*if available*) (1) CONCENTRATION	(2) MASS	c. LONG TERM AVRG. VALUE (*if available*) (1) CONCENTRATION	(2) MASS	d. NO. OF ANALYSES	4. UNITS a. CONCENTRATION	b. MASS	5. INTAKE (*optional*) a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	(2) MASS	b. NO. OF ANALYSES
a. Bromide (24959-67-9)		X	<1.0	<0.6					1	mg/L	lb/dy	<1.0	<0.6	1
b. Chlorine, Total Residual		X							0			<0.05		1
c. Color		X							0	---	---			0
d. Fecal Coliform		X							0	CFU/0.1L	---	3	---	1
e. Fluoride (16984-48-8)		X	<0.25	<0.1					1	mg/L	lb/dy	0.31	0.2	1
f. Nitrate-Nitrite (*as N*)		X	0.68	0.4					1	mg/L	lb/dy	0.81	0.5	1

ITEM V-B CONTINUED FROM FRONT

Outfall A01

1. POLLUTANT AND CAS NO. *(if available)*	2. MARK "X"		3. EFFLUENT							4. UNITS		5. INTAKE *(optional)*		
	a. BELIEVED PRESENT	b. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE *(if available)*		c. LONG TERM AVRG. VALUE *(if available)*		d. NO. OF ANALYSES	a. CONCEN-TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
			(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
g. Nitrogen, Total Organic *(as N)*		X	<1.1	<0.6					1	mg/L	lb/dy	1.1	0.6	1
h. Oil and Grease		X	<5.3	<3			<6.5	<2	1,2	mg/L	lb/dy	<5	<2	1
i. Phosphorus (as P), Total (7723-14-0)		X	<0.10	<0.1					1	mg/L	lb/dy	<0.10	<0.1	1
j. Radioactivity														
(1) Alpha, Total									0					0
(2) Beta, Total									0					0
(3) Radium, Total									0					0
(4) Radium 226, Total									0					0
k. Sulfate *(as SO_4)* (14808-79-8)		X	<1.0	<0.6					1	mg/L	lb/dy	55	31	1
l. Sulfide *(as S)*		X	<2.0	<1					1	mg/L	lb/dy	<2.0	<1	1
m. Sulfite *(as SO_3)* (14265-45-3)		X	<2.0	<1					1	mg/L	lb/dy	<2.0	<1	1
n. Surfactants		X	<0.10	<0.1					1	mg/L	lb/dy	0.19	0.1	1
o. Aluminum, Total (7429-90-5)		X	<0.050	<0.1					1	mg/L	lb/dy	<0.050	<0.1	1
p. Barium, Total (7440-39-3)		X	<0.010	<0.1					1	mg/L	lb/dy	0.06	<0.1	1
q. Boron, Total (7440-42-8)		X	0.03	<0.1					1	mg/L	lb/dy	0.35	0.2	1
r. Cobalt, Total (7440-48-4)		X	<0.005	<0.1					1	mg/L	lb/dy	<0.005	<0.1	1
s. Iron, Total (7439-89-6)		X	0.08	<0.1					1	mg/L	lb/dy	0.08	<0.1	1
t. Magnesium, Total (7439-95-4)		X	<0.050	<0.1					1	mg/L	lb/dy	14	8	1
u. Molybdenum, Total (7439-98-7)		X	<0.010	<0.1					1	mg/L	lb/dy	<0.010	<0.1	1
v. Manganese, Total (7439-96-5)		X	<0.010	<0.1					1	mg/L	lb/dy	0.024	<0.1	1
w. Tin, Total (7440-31-5)		X	<0.060	<0.1					1	mg/L	lb/dy	<0.060	<0.1	1
x. Titanium, Total (7440-32-6)		X	<0.005	<0.1					1	mg/L	lb/dy	<0.005	<0.1	1

CONTINUE ON PAGE V-3

CONTINUED FROM PAGE 3 OF FORM 2-C

EPA I.D. NUMBER (*copy from Item 1 of Form 1*)	OUTFALL NUMBER
IL0000108	A01

PART C - If you are a primary industry and this outfall contains process wastewater, refer to Table 2c-2 in the instructions to determine which of the GC/MS fractions you must test for. Mark "X" in column 2-a for all such GC/MS fractions that apply to your industry and for ALL toxic metals, cyanides, and total phenols. If you are not required to mark column 2-a (*secondary industries, nonprocess wastewater outfalls, and nonrequired GC/MS fractions*), mark "X" in column 2-b for each pollutant you know or have reason to believe is present. Mark "X" in column 2-c for each pollutant you believe is absent. If you mark column 2a for any pollutant, you must provide the results of at least one analysis for that pollutant. If you mark column 2b for any pollutant, you must provide the results of at least one analysis for that pollutant if you know or have reason to believe it will be discharged in concentrations of 10 ppb or greater. If you mark column 2b for acrolein, acrylonitrile, 2,4 dinitrophenol, or 2-methyl-4, 6 dinitrophenol, you must provide the results of at least one analysis for each of these pollutants which you know or have reason to believe that you discharge in concentrations of 100 ppb or greater. Otherwise, for pollutants for which you mark column 2b, you must either submit at least one analysis or briefly describe the reasons the pollutant is expected to be discharged. Note that there are 7 pages to this part; please review each carefully. Complete one table (*all 7 pages*) for each outfall. See instructions for additional details and requirements.

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCEN-TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
METALS, CYANIDE, AND TOTAL PHENOLS															
1M. Antimony, Total (7440-36-0)	X		X	<20	<0.01					1	ug/L	lb/dy	<20	<0.01	1
2M. Arsenic, Total (7440-38-2)	X		X	<20	<0.01					1	ug/L	lb/dy	<20	<0.01	1
3M. Beryllium, Total (7440-41-7)	X		X	<5	<0.01					1	ug/L	lb/dy	<5	<0.01	1
4M. Cadmium, Total (7440-43-9)	X		X	<2	<0.01					1	ug/L	lb/dy	<2	<0.01	1
5M. Chromium, Total (7440-47-3)	X		X	<4	<0.01					1	ug/L	lb/dy	<4	<0.01	1
6M. Copper, Total (7440-50-8)	X		X	11	<0.01					1	ug/L	lb/dy	13	<0.01	1
7M. Lead, Total (7439-92-1)	X		X	<10	<0.01					1	ug/L	lb/dy	<10	<0.01	1
8M. Mercury, Total (7439-97-6)	X		X	3.2	<0.01					1	ng/L	lb/dy	<1	<0.01	1
9M. Nickel, Total (7440-02-0)	X		X	<10	<0.01					1	ug/L	lb/dy	<10	<0.01	1
10M. Selenium, Total (7782-49-2)	X		X	<10	<0.01					1	ug/L	lb/dy	12	<0.01	1
11M. Silver, Total (7440-22-4)	X		X	<10	<0.01					1	ug/L	lb/dy	<10	<0.01	1
12M. Thallium, Total (7440-28-0)	X		X	<10	<0.01					1	ug/L	lb/dy	<10	<0.01	1
13M. Zinc, Total (7440-66-6)	X		X	<10	<0.01					1	ug/L	lb/dy	<10	<0.01	1
14M. Cyanide, Total (57-12-5)	X		X	<5	<0.01					1	ug/L	lb/dy	<5	<0.01	1
15M. Phenols, Total	X		X	<10	<0.01					1	ug/L	lb/dy	<5	<0.01	1
DIOXIN															
2,3,7,8-Tetra-chlorodibenzo-P-Dioxin (1764-01-6)			X	DESCRIBE RESULTS											

CONTINUE ON REVERSE

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X" a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	3. EFFLUENT a. MAXIMUM DAILY VALUE (1) CONCENTRATION	(2) MASS	b. MAXIMUM 30 DAY VALUE (*if available*) (1) CONCENTRATION	(2) MASS	c. LONG TERM AVRG. VALUE (*if available*) (1) CONCENTRATION	(2) MASS	d. NO. OF ANALYSES	4. UNITS a. CONCEN-TRATION	b. MASS	5. INTAKE (*optional*) a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	(2) MASS	b. NO. OF ANALYSES
GC/MS FRACTION – VOLATILE COMPOUNDS															
1V. Accrolein (107-02-8)	X		X	<50						1	ug/L		<50		1
2V. Acrylonitrile (107-13-1)	X		X	<50						1	ug/L		<50		1
3V. Benzene (71-43-2)	X		X	<5						1	ug/L		<5		1
4V. Bis (*Chloro-methyl*) Ether (542-88-1)				Note 1									Note 1		
5V. Bromoform (75-25-2)	X		X	<5						1	ug/L		<5		1
6V. Carbon Tetrachloride (56-23-5)	X		X	<5						1	ug/L		<5		1
7V. Chlorobenzene (108-90-7)	X		X	<5						1	ug/L		<5		1
8V. Chlorodi-bromomethane (124-48-1)	X		X	<5						1	ug/L		<5		1
9V. Chloroethane (75-00-3)	X		X	<5						1	ug/L		<5		1
10V. 2-Chloro-ethylvinyl Ether (110-75-8)	X		X	<5						1	ug/L		<5		1
11V. Chloroform (67-66-3)	X		X	Note 2									Note 2		
12V. Dichloro-bromomethane (75-27-4)	X		X	<5						1	ug/L		<5		1
13V. Dichloro-difluoromethane (75-71-8)				Note 1									Note 1		
14V. 1,1-Dichloro-ethane (75-34-3)	X		X	<5						1	ug/L		<5		1
15V. 1,2-Dichloro-ethane (107-06-2)	X		X	<5						1	ug/L		<5		1
16V. 1,1-Dichloro-ethylene (75-35-4)	X		X	<5						1	ug/L		<5		1
17V. 1,2-Dichloro-propane (78-87-5)	X		X	<5						1	ug/L		<5		1
18V. 1,3-Dichloro-propylene ** (542-75-6)	X		X	<5						1	ug/L		<5		1
19V. Ethylbenzene (100-41-4)	X		X	<5						1	ug/L		<5		1
20V. Methyl Bromide (74-83-9)	X		X	<5						1	ug/L		<5		1
21V. Methyl Chloride (74-87-3)	X		X	<5						1	ug/L		<5		1

 CONTINUE ON PAGE V-5

Note 1 - These parameters deleted per 40CFR122, Appendix D.

Note 2 - Analysis suspect therefore no data provided for this constituent.

** This parameter is 1,3-Dichloropropylene per 40CFR122, Appendix D.

CONTINUED FROM PAGE V-4

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X" a. TESTING REQUIRED	2. MARK "X" b. BELIEVED PRESENT	2. MARK "X" c. BELIEVED ABSENT	3. EFFLUENT a. MAXIMUM DAILY VALUE (1) CONCENTRATION	3. EFFLUENT a. MAXIMUM DAILY VALUE (2) MASS	3. EFFLUENT b. MAXIMUM 30 DAY VALUE (*if available*) (1) CONCENTRATION	3. EFFLUENT b. MAXIMUM 30 DAY VALUE (*if available*) (2) MASS	3. EFFLUENT c. LONG TERM AVRG. VALUE (*if available*) (1) CONCENTRATION	3. EFFLUENT c. LONG TERM AVRG. VALUE (*if available*) (2) MASS	3. EFFLUENT d. NO. OF ANALYSES	4. UNITS a. CONCEN-TRATION	4. UNITS b. MASS	5. INTAKE (*optional*) a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	5. INTAKE (*optional*) a. LONG TERM AVERAGE VALUE (2) MASS	5. INTAKE (*optional*) b. NO. OF ANALYSES
GC/MS FRACTION – VOLATILE COMPOUNDS (*continued*)															
22V. Methylene Chloride (75-09-2)	X		X	<5						1	ug/L		<5		1
23V. 1,1,2,2-Tetrachloroethane (79-34-5)	X		X	<5						1	ug/L		<5		1
24V. Tetrachloro-ethylene (127-18-4)	X		X	<5						1	ug/L		<5		1
25V. Toluene (108-88-3)	X		X	<5						1	ug/L		<5		1
26V. 1,2-Trans-Dichloroethylene (156-60-5)	X		X	<20						1	ug/L		<20		1
27V. 1,1,1-Trichloro-ethane (71-55-6)	X		X	<5						1	ug/L		<5		1
28V. 1,1,2-Trichloro-ethane (79-00-5)	X		X	<5						1	ug/L		<5		1
29V Trichloro-ethylene (79-01-6)	X		X	<5						1	ug/L		<5		1
30V. Trichloro-fluoromethane (75-69-4)				Note 1									Note 1		
31V. Vinyl Chloride (75-01-4)	X		X	<5						1	ug/L		<5		1
GC/MS FRACTION – ACID COMPOUNDS															
1A. 2-Chlorophenol (95-57-8)	X		X	<10						1	ug/L		<10		1
2A. 2,4-Dichloro-phenol (120-83-2)	X		X	<10						1	ug/L		<10		1
3A. 2,4-Dimethyl-phenol (105-67-9)	X		X	<10						1	ug/L		<10		1
4A. 4,6-Dinitro-O-Cresol (534-52-1)	X		X	<50						1	ug/L		<50		1
5A. 2,4-Dinitro-phenol (51-28-5)	X		X	<50						1	ug/L		<50		1
6A. 2-Nitrophenol (88-75-5)	X		X	<10						1	ug/L		<10		1
7A. 4-Nitrophenol (100-02-7)	X		X	<50						1	ug/L		<50		1
8A. P-Chloro-M-Cresol (59-50-7)	X		X	<10						1	ug/L		<10		1
9A. Pentachloro-phenol (87-86-5)	X		X	<50						1	ug/L		<50		1
10A. Phenol (108-95-2)	X		X	<10						1	ug/L		<10		1
11A. 2,4,6-Trichloro-phenol (88-05-2)	X		X	<50						1	ug/L		<50		1

CONTINUE ON REVERSE

Note 1 - This parameter deleted per 40CFR122, Appendix D.

Outfall A01

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X" a. TESTING REQUIRED	2. b. BELIEVED PRESENT	2. c. BELIEVED ABSENT	3. EFFLUENT a. MAXIMUM DAILY VALUE (1) CONCENTRATION	3. a. (2) MASS	3. b. MAXIMUM 30 DAY VALUE (*if available*) (1) CONCENTRATION	3. b. (2) MASS	3. c. LONG TERM AVRG. VALUE (*if available*) (1) CONCENTRATION	3. c. (2) MASS	3. d. NO. OF ANALYSES	4. UNITS a. CONCEN-TRATION	4. b. MASS	5. INTAKE (*optional*) a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	5. a. (2) MASS	5. b. NO. OF ANALYSES
GC/MS FRACTION – BASE/NEUTRAL COMPOUNDS															
1B. Acenaphthene (83-32-9)	X		X	<10						1	ug/L		<10		1
2B. Acenaphtylene (208-96-8)	X		X	<10						1	ug/L		<10		1
3B. Anthracene (120-12-7)	X		X	<10						1	ug/L		<10		1
4B. Benzidine (92-87-5)	X		X	<80						1	ug/L		<80		1
5B. Benzo (*a*) Anthracene (56-55-3)	X		X	<10						1	ug/L		<10		1
6B. Benzo (*a*) Pyrene (50-32-8)	X		X	<10						1	ug/L		<10		1
7B. 3,4-Benzo-fluoranthene (205-99-2)	X		X	<10						1	ug/L		<10		1
8B. Benzo (*ghi*) Perylene (191-24-2)	X		X	<10						1	ug/L		<10		1
9B. Benzo (*k*) Fluoranthene (207-08-9)	X		X	<10						1	ug/L		<10		1
10B. Bis (*2-Chloro-ethoxy*) Methane (111-91-1)	X		X	<10						1	ug/L		<10		1
11B. Bis (*2-Chloro-ethyl*) Ether (111-44-4)	X		X	<10						1	ug/L		<10		1
12B. Bis (*2-Chloroisopropyl*) Ether (102-80-1)	X		X	<10						1	ug/L		<10		1
13B. Bis (*2-Ethyl-hexyl*) Phthalate (117-81-7)	X		X	<10						1	ug/L		<10		1
14B. 4-Bromophenyl Phenyl Ether (101-55-3)	X		X	<10						1	ug/L		<10		1
15B. Butyl Benzyl Phthalate (85-68-7)	X		X	<10						1	ug/L		<10		1
16B. 2-Chloro-naphthalene (91-58-7)	X		X	<10						1	ug/L		<10		1
17B. 4-Chloro-phenyl Phenyl Ether (7005-72-3)	X		X	<10						1	ug/L		<10		1
18B. Chrysene (218-01-9)	X		X	<10						1	ug/L		<10		1
19B. Dibenzo (*a,h*) Anthracene (53-70-3)	X		X	<10						1	ug/L		<10		1
20B. 1,2-Dichloro-benzene (95-50-1)	X		X	<10						1	ug/L		<10		1
21B. 1,3-Di-chloro-benzene (541-73-1)	X		X	<10						1	ug/L		<10		1

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Outfall A01

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X" a. TESTING REQUIRED	2. b. BELIEVED PRESENT	2. c. BELIEVED ABSENT	3. EFFLUENT a. MAXIMUM DAILY VALUE (1) CONCENTRATION	a. (2) MASS	b. MAXIMUM 30 DAY VALUE (*if available*) (1) CONCENTRATION	b. (2) MASS	c. LONG TERM AVRG. VALUE (*if available*) (1) CONCENTRATION	c. (2) MASS	d. NO. OF ANALYSES	4. UNITS a. CONCEN-TRATION	4. b. MASS	5. INTAKE (*optional*) a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	a. (2) MASS	b. NO. OF ANALYSES
GC/MS FRACTION – BASE/NEUTRAL COMPOUNDS (*continued*)															
22B. 1,4-Dichloro-benzene (106-46-7)	X		X	<10						1	ug/L		<10		1
23B. 3,3-Dichloro-benzidine (91-94-1)	X		X	<20						1	ug/L		<20		1
24B. Diethyl Phthalate (84-66-2)	X		X	<10						1	ug/L		<10		1
25B. Dimethyl Phthalate (131 -11-3)	X		X	<10						1	ug/L		<10		1
26B. Di-N-Butyl Phthalate (84-74-2)	X		X	<10						1	ug/L		<10		1
27B. 2,4-Dinitro-toluene (121-14-2)	X		X	<10						1	ug/L		<10		1
28B. 2,6-Dinitro-toluene (606-20-2)	X		X	<10						1	ug/L		<10		1
29B. Di-N-Octyl Phthalate (117-84-0)	X		X	<10						1	ug/L		<10		1
30B. 1,2-Diphenyl-hydrazine (*as Azo-benzene*) (122-66-7)	X		X	<10						1	ug/L		<10		1
31B. Fluoranthene (206-44-0)	X		X	<10						1	ug/L		<10		1
32B. Fluorene (86-73-7)	X		X	<10						1	ug/L		<10		1
33B. Hexachloro-benzene (118-74-1)	X		X	<10						1	ug/L		<10		1
34B. Hexachloro-butadiene (87-68-3)	X		X	<10						1	ug/L		<10		1
35B. Hexachloro-cyclopentadiene (77-47-4)	X		X	<50						1	ug/L		<50		1
36B Hexachloro-ethane (67-72-1)	X		X	<10						1	ug/L		<10		1
37B. Indeno (*1,2,3-cd*) Pyrene (193-39-5)	X		X	<10						1	ug/L		<10		1
38B. Isophorone (78-59-1)	X		X	<10						1	ug/L		<10		1
39B. Naphthalene (91-20-3)	X		X	<10						1	ug/L		<10		1
40B. Nitrobenzene (98-95-3)	X		X	<10						1	ug/L		<10		1
41B. N-Nitro-sodimethylamine (62-75-9)	X		X	<10						1	ug/L		<10		1
42B. N-Nitrosodi-N-Propylamine (621-64-7)	X		X	<10						1	ug/L		<10		1

CONTINUE ON REVERSE

CONTINUED FROM THE FRONT

Outfall A01

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE (1) CONCENTRATION	a. MAXIMUM DAILY VALUE (2) MASS	b. MAXIMUM 30 DAY VALUE (*if available*) (1) CONCENTRATION	b. MAXIMUM 30 DAY VALUE (*if available*) (2) MASS	c. LONG TERM AVRG. VALUE (*if available*) (1) CONCENTRATION	c. LONG TERM AVRG. VALUE (*if available*) (2) MASS	d. NO. OF ANALYSES	a. CONCEN-TRATION	b. MASS	a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	a. LONG TERM AVERAGE VALUE (2) MASS	b. NO. OF ANALYSES
GC/MS FRACTION – BASE/NEUTRAL COMPOUNDS (*continued*)															
43B. N-Nitro-sodiphenylamine (86-30-6)	X		X	<10						1	ug/L		<10		1
44B. Phenanthrene (85-01-8)	X		X	<10						1	ug/L		<10		1
45B. Pyrene (129-00-0)	X		X	<10						1	ug/L		<10		1
46B. 1,2,4-Tri-chlorobenzene (120-82-1)	X		X	<10						1	ug/L		<10		1
GC/MS FRACTION – PESTICIDES															
1P. Aldrin (309-00-2)			X												
2P. α-BHC (319-84-6)			X												
3P. β-BHC (319-85-7)			X												
4P. γ-BHC (58-89-9)			X												
5P. δ-BHC (319-86-8)			X												
6P. Chlordane (57-74-9)			X												
7P. 4,4′-DDT (50-29-3)			X												
8P. 4,4′-DDE (72-55-9)			X												
9P. 4,4′-DDD (72-54-8)			X												
10P. Dieldrin (60-57-1)			X												
11P. α-Enosulfan (115-29-7)			X												
12P. β-Endosulfan (115-29-7)			X												
13P. Endosulfan Sulfate (1031-07-8)			X												
14P. Endrin (72-20-8)			X												
15P. Endrin Aldehyde (7421-93-4)			X												
16P. Heptachlor (76-44-8)			X												

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EPA I.D. NUMBER (*copy from Item 1 of Form 1*)	OUTFALL NUMBER
IL0000108	A01

CONTINUED FROM PAGE V-8

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE (1) CONCENTRATION	a. MAXIMUM DAILY VALUE (2) MASS	b. MAXIMUM 30 DAY VALUE (*if available*) (1) CONCENTRATION	b. MAXIMUM 30 DAY VALUE (2) MASS	c. LONG TERM AVRG. VALUE (*if available*) (1) CONCENTRATION	c. LONG TERM AVRG. VALUE (2) MASS	d. NO. OF ANALYSES	a. CONCEN-TRATION	b. MASS	a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	a. LONG TERM AVERAGE VALUE (2) MASS	b. NO. OF ANALYSES
GC/MS FRACTION – PESTICIDES (*continued*)															
17P. Heptachlor Epoxide (1024-57-3)			X												
18P. PCB-1242 (53469-21-9)			X	<0.5						1	ug/L		<0.5		1
19P. PCB-1254 (11097-69-1)			X	<1.0						1	ug/L		<1.0		1
20P. PCB-1221 (11104-28-2)			X	<1.0						1	ug/L		<1.0		1
21P. PCB-1232 (11141-16-5)			X	<0.5						1	ug/L		<0.5		1
22P. PCB-1248 (12672-29-6)			X	<0.5						1	ug/L		<0.5		1
23P. PCB-1260 (11096-82-5)			X	<1.0						1	ug/L		<1.0		1
24P. PCB-1016 (12674-11-2)			X	<0.5						1	ug/L		<0.5		1
25P. Toxaphene (8001-35-2)			X												

PLEASE PRINT OR TYPE IN THE UNSHADED AREAS ONLY. You may report some or all of this information on separate sheets (*use the same format*) instead of completing these pages.
SEE INSTRUCTIONS.

EPA I.D. NUMBER (*copy from Item 1 of Form 1*)
IL0000108

V. INTAKE AND EFFLUENT CHARACTERISTICS *(continued from page 3 of Form 2-C)*

OUTFALL NO.
B01

PART A –You must provide the results of at least one analysis for every pollutant in this table. Complete one table for each outfall. See instructions for additional details.

1. POLLUTANT	2. EFFLUENT a. MAXIMUM DAILY VALUE (1) CONCENTRATION	2. EFFLUENT a. MAXIMUM DAILY VALUE (2) MASS	b. MAXIMUM 30 DAY VALUE (*if available*) (1) CONCENTRATION	b. (2) MASS	c. LONG TERM AVRG. VALUE (*if available*) (1) CONCENTRATION	c. (2) MASS	d. NO. OF ANALYSES	3. UNITS (*specify if blank*) a. CONCENTRATION	3. UNITS b. MASS	4. INTAKE (*optional*) a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	4. a. (2) MASS	4. b. NO. OF ANALYSES
a. Biochemical Oxygen Demand (*BOD*)	<4	<0.1					1	mg/L	lb/dy	4.4	<0.1	1
b. Chemical Oxygen Demand (*COD*)	44	0.4					1	mg/L	lb/dy	14	0.1	1
c. Total Organic Carbon (*TOC*)	18	0.2					1	mg/L	lb/dy	6.2	<0.1	1
d. Total Suspended Solids (*TSS*)	<4	<0.1	6	0.2	4	<0.1	1,2,24	mg/L	lb/dy	12	0.1	1
e. Ammonia (*as N*)	<1	<0.1					1	mg/L	lb/dy	<0.10	<0.1	1
f. Flow	VALUE 0.0012		VALUE 0.0033		VALUE 0.0018		1,2,24	MGD		VALUE		
g. Temperature (*winter*)	VALUE 15		VALUE		VALUE		1	°C		VALUE		
h. Temperature (*summer*)	VALUE		VALUE		VALUE		0	°C		VALUE		
i. pH	MINIMUM 7.21	MAXIMUM 8.05	MINIMUM	MAXIMUM			1	STANDARD UNITS				

PART B – Mark "X" in column 2-a for each pollutant you know or have reason to believe is present. Mark "X" in column 2-b for each pollutant you believe to be absent. If you mark column 2a for any pollutant which is limited either directly, or indirectly but expressly, in an effluent limitations guideline, you must provide the results of at least one analysis for that pollutant. For other pollutants for which you mark column 2a, you must provide quantitative data or an explanation of their presence in your discharge. Complete one table for each outfall. See the instructions for additional details and requirements.

1. POLLUTANT AND CAS NO. (*if available*)	2. MARK "X" a. BELIEVED PRESENT	2. MARK "X" b. BELIEVED ABSENT	3. EFFLUENT a. MAXIMUM DAILY VALUE (1) CONCENTRATION	a. (2) MASS	b. MAXIMUM 30 DAY VALUE (*if available*) (1) CONCENTRATION	b. (2) MASS	c. LONG TERM AVRG. VALUE (*if available*) (1) CONCENTRATION	c. (2) MASS	d. NO. OF ANALYSES	4. UNITS a. CONCENTRATION	4. UNITS b. MASS	5. INTAKE (*optional*) a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	5. a. (2) MASS	5. b. NO. OF ANALYSES
a. Bromide (24959-67-9)		X	<1.0	<0.01					1	mg/L	lb/dy	<1.0	<0.01	1
b. Chlorine, Total Residual		X							0	mg/L	lb/dy	<0.05		1
c. Color		X							0	---	---			0
d. Fecal Coliform		X							0	CFU/0.1L	---	3	---	1
e. Fluoride (16984-48-8)	X		1.0	0.01					1	mg/L	lb/dy	0.31	<0.01	1
f. Nitrate-Nitrite (*as N*)	X		0.80	<0.01					1	mg/L	lb/dy	0.81	<0.01	1

1. POLLUTANT AND CAS NO. (*if available*)	2. MARK "X" a. BELIEVED PRESENT	2. MARK "X" b. BELIEVED ABSENT	3. EFFLUENT a. MAXIMUM DAILY VALUE (1) CONCENTRATION	3. EFFLUENT a. MAXIMUM DAILY VALUE (2) MASS	3. EFFLUENT b. MAXIMUM 30 DAY VALUE (*if available*) (1) CONCENTRATION	3. EFFLUENT b. MAXIMUM 30 DAY VALUE (*if available*) (2) MASS	3. EFFLUENT c. LONG TERM AVRG. VALUE (*if available*) (1) CONCENTRATION	3. EFFLUENT c. LONG TERM AVRG. VALUE (*if available*) (2) MASS	3. EFFLUENT d. NO. OF ANALYSES	4. UNITS a. CONCEN-TRATION	4. UNITS b. MASS	5. INTAKE (*optional*) a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	5. INTAKE (*optional*) a. LONG TERM AVERAGE VALUE (2) MASS	5. INTAKE (*optional*) b. NO. OF ANALYSES
g. Nitrogen, Total Organic (*as N*)	X		1.8	0.01					1	mg/L	lb/dy	1.1	0.01	1
h. Oil and Grease		X	<5	<0.05			<6		1,4	mg/L	lb/dy	<5	<0.05	1
i. Phosphorus (as P), Total (7723-14-0)	X		0.71	<0.01					1	mg/L	lb/dy	<0.10	<0.01	1
j. Radioactivity														
(1) Alpha, Total									0					0
(2) Beta, Total									0					0
(3) Radium, Total									0					0
(4) Radium 226, Total									0					0
k. Sulfate (*as SO_4*) (14808-79-8)	X		260	2.6					1	mg/L	lb/dy	55	0.6	1
l. Sulfide (*as S*)		X	2.7	0.03					1	mg/L	lb/dy	<2.0	<0.02	1
m. Sulfite (*as SO_3*) (14265-45-3)		X	2.8	0.03					1	mg/L	lb/dy	<2.0	<0.02	1
n. Surfactants		X	0.16	<0.01					1	mg/L	lb/dy	0.19	<0.01	1
o. Aluminum, Total (7429-90-5)		X	<0.050	<0.01					1	mg/L	lb/dy	<0.050	<0.01	1
p. Barium, Total (7440-39-3)	X		0.22	<0.01					1	mg/L	lb/dy	0.06	<0.01	1
q. Boron, Total (7440-42-8)	X		0.57	<0.01					1	mg/L	lb/dy	0.35	<0.01	1
r. Cobalt, Total (7440-48-4)		X	<0.005	<0.01					1	mg/L	lb/dy	<0.005	<0.01	1
s. Iron, Total (7439-89-6)	X		0.015	<0.01					1	mg/L	lb/dy	0.08	<0.01	1
t. Magnesium, Total (7439-95-4)	X		52	0.5					1	mg/L	lb/dy	14	0.1	1
u. Molybdenum, Total (7439-98-7)	X		0.019	<0.01					1	mg/L	lb/dy	<0.010	<0.01	1
v. Manganese, Total (7439-96-5)		X	<0.010	<0.01					1	mg/L	lb/dy	0.024	<0.01	1
w. Tin, Total (7440-31-5)		X	<0.060	<0.01					1	mg/L	lb/dy	<0.060	<0.01	1
x. Titanium, Total (7440-32-6)		X	<0.005	<0.01					1	mg/L	lb/dy	<0.005	<0.01	1

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CONTINUED FROM PAGE 3 OF FORM 2-C

EPA I.D. NUMBER (*copy from Item 1 of Form 1*)	OUTFALL NUMBER
IL0000108	B01

PART C - If you are a primary industry and this outfall contains process wastewater, refer to Table 2c-2 in the instructions to determine which of the GC/MS fractions you must test for. Mark "X" in column 2-a for all such GC/MS fractions that apply to your industry and for ALL toxic metals, cyanides, and total phenols. If you are not required to mark column 2-a (*secondary industries, nonprocess wastewater outfalls, and nonrequired GC/MS fractions*), mark "X" in column 2-b for each pollutant you know or have reason to believe is present. Mark "X" in column 2-c for each pollutant you believe is absent. If you mark column 2a for any pollutant, you must provide the results of at least one analysis for that pollutant. If you mark column 2b for any pollutant, you must provide the results of at least one analysis for that pollutant if you know or have reason to believe it will be discharged in concentrations of 10 ppb or greater. If you mark column 2b for acrolein, acrylonitrile, 2,4 dinitrophenol, or 2-methyl-4, 6 dinitrophenol, you must provide the results of at least one analysis for each of these pollutants which you know or have reason to believe that you discharge in concentrations of 100 ppb or greater. Otherwise, for pollutants for which you mark column 2b, you must either submit at least one analysis or briefly describe the reasons the pollutant is expected to be discharged. Note that there are 7 pages to this part; please review each carefully. Complete one table (*all 7 pages*) for each outfall. See instructions for additional details and requirements.

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCEN-TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
METALS, CYANIDE, AND TOTAL PHENOLS															
1M. Antimony, Total (7440-36-0)	X		X	<20	<0.001					1	ug/L	lb/dy	<20	<0.001	1
2M. Arsenic, Total (7440-38-2)	X		X	<20	<0.001					1	ug/L	lb/dy	<20	<0.001	1
3M. Beryllium, Total (7440-41-7)	X		X	<5	<0.001					1	ug/L	lb/dy	<5	<0.001	1
4M. Cadmium, Total (7440-43-9)	X		X	<2	<0.001					1	ug/L	lb/dy	<2	<0.001	1
5M. Chromium, Total (7440-47-3)	X		X	<4	<0.001					1	ug/L	lb/dy	<4	<0.001	1
6M. Copper, Total (7440-50-8)	X	X		35	<0.001					1	ug/L	lb/dy	13	<0.001	1
7M. Lead, Total (7439-92-1)	X		X	<10	<0.001					1	ug/L	lb/dy	<10	<0.001	1
8M. Mercury, Total (7439-97-6)	X		X	62	<0.001					1	ng/L	lb/dy	<1	<0.001	1
9M. Nickel, Total (7440-02-0)	X		X	<10	<0.001					1	ug/L	lb/dy	<10	<0.001	1
10M. Selenium, Total (7782-49-2)	X		X	22	<0.001					1	ug/L	lb/dy	12	<0.001	1
11M. Silver, Total (7440-22-4)	X		X	<10	<0.001					1	ug/L	lb/dy	<10	<0.001	1
12M. Thallium, Total (7440-28-0)	X		X	<10	<0.001					1	ug/L	lb/dy	<10	<0.001	1
13M. Zinc, Total (7440-66-6)	X		X	<10	<0.001					1	ug/L	lb/dy	<10	<0.001	1
14M. Cyanide, Total (57-12-5)	X		X	<5	<0.001					1	ug/L	lb/dy	<5	<0.001	1
15M. Phenols, Total	X		X	<10	<0.001					1	ug/L	lb/dy	<5	<0.001	1
DIOXIN															
2,3,7,8-Tetra-chlorodibenzo-P-Dioxin (1764-01-6)			X	DESCRIBE RESULTS											

CONTINUE ON REVERSE

CONTINUED FROM THE FRONT

Outfall B01

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X" a. TESTING REQUIRED	2. MARK "X" b. BELIEVED PRESENT	2. MARK "X" c. BELIEVED ABSENT	3. EFFLUENT a. MAXIMUM DAILY VALUE (1) CONCENTRATION	3. EFFLUENT a. MAXIMUM DAILY VALUE (2) MASS	3. EFFLUENT b. MAXIMUM 30 DAY VALUE (*if available*) (1) CONCENTRATION	3. EFFLUENT b. MAXIMUM 30 DAY VALUE (*if available*) (2) MASS	3. EFFLUENT c. LONG TERM AVRG. VALUE (*if available*) (1) CONCENTRATION	3. EFFLUENT c. LONG TERM AVRG. VALUE (*if available*) (2) MASS	3. EFFLUENT d. NO. OF ANALYSES	4. UNITS a. CONCEN-TRATION	4. UNITS b. MASS	5. INTAKE (*optional*) a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	5. INTAKE (*optional*) a. LONG TERM AVERAGE VALUE (2) MASS	5. INTAKE (*optional*) b. NO. OF ANALYSES
GC/MS FRACTION – VOLATILE COMPOUNDS															
1V. Accrolein (107-02-8)	X		X	<50						1	ug/L		<50		1
2V. Acrylonitrile (107-13-1)	X		X	<50						1	ug/L		<50		1
3V. Benzene (71-43-2)	X		X	<5						1	ug/L		<5		1
4V. Bis (*Chloro-methyl*) Ether (542-88-1)				Note 1									Note 1		
5V. Bromoform (75-25-2)	X		X	<5						1	ug/L		<5		1
6V. Carbon Tetrachloride (56-23-5)	X		X	<5						1	ug/L		<5		1
7V. Chlorobenzene (108-90-7)	X		X	<5						1	ug/L		<5		1
8V. Chlorodi-bromomethane (124-48-1)	X		X	<5						1	ug/L		<5		1
9V. Chloroethane (75-00-3)	X		X	<5						1	ug/L		<5		1
10V. 2-Chloro-ethylvinyl Ether (110-75-8)	X		X	<5						1	ug/L		<5		1
11V. Chloroform (67-66-3)	X		X	Note 2									Note 2		
12V. Dichloro-bromomethane (75-27-4)	X		X	<5						1	ug/L		<5		1
13V. Dichloro-difluoromethane (75-71-8)				Note 1									Note 1		
14V. 1,1-Dichloro-ethane (75-34-3)	X		X	<5						1	ug/L		<5		1
15V. 1,2-Dichloro-ethane (107-06-2)	X		X	<5						1	ug/L		<5		1
16V. 1,1-Dichloro-ethylene (75-35-4)	X		X	<5						1	ug/L		<5		1
17V. 1,2-Dichloro-propane (78-87-5)	X		X	<5						1	ug/L		<5		1
18V. 1,3-Dichloro-propylene (542-75-6) **	X		X	<5						1	ug/L		<5		1
19V. Ethylbenzene (100-41-4)	X		X	<5						1	ug/L		<5		1
20V. Methyl Bromide (74-83-9)	X		X	<5						1	ug/L		<5		1
21V. Methyl Chloride (74-87-3)	X		X	<5						1	ug/L		<5		1

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Note 1 - These parameters deleted per 40CFR122, Appendix D.

Note 2 - Analysis suspect therefore no data provided for this constituent.

** This parameter is 1,3-Dichloropropylene per 40CFR122, Appendix D.

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1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCEN-TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION – VOLATILE COMPOUNDS (*continued*)															
22V. Methylene Chloride (75-09-2)	X		X	<5						1	ug/L		<5		1
23V. 1,1,2,2-Tetrachloroethane (79-34-5)	X		X	<5						1	ug/L		<5		1
24V. Tetrachloro-ethylene (127-18-4)	X		X	<5						1	ug/L		<5		1
25V. Toluene (108-88-3)	X		X	<5						1	ug/L		<5		1
26V. 1,2-Trans-Dichloroethylene (156-60-5)	X		X	<20						1	ug/L		<20		1
27V. 1,1,1-Trichloro-ethane (71-55-6)	X		X	<5						1	ug/L		<5		1
28V. 1,1,2-Trichloro-ethane (79-00-5)	X		X	<5						1	ug/L		<5		1
29V Trichloro-ethylene (79-01-6)	X		X	<5						1	ug/L		<5		1
30V. Trichloro-fluoromethane (75-69-4)				Note 1									Note 1		
31V. Vinyl Chloride (75-01-4)	X		X	<5						1	ug/L		<5		1
GC/MS FRACTION – ACID COMPOUNDS															
1A. 2-Chlorophenol (95-57-8)	X		X	<10						1	ug/L		<10		1
2A. 2,4-Dichloro-phenol (120-83-2)	X		X	<10						1	ug/L		<10		1
3A. 2,4-Dimethyl-phenol (105-67-9)	X		X	<10						1	ug/L		<10		1
4A. 4,6-Dinitro-O-Cresol (534-52-1)	X		X	<50						1	ug/L		<50		1
5A. 2,4-Dinitro-phenol (51-28-5)	X		X	<50						1	ug/L		<50		1
6A. 2-Nitrophenol (88-75-5)	X		X	<10						1	ug/L		<10		1
7A. 4-Nitrophenol (100-02-7)	X		X	<50						1	ug/L		<50		1
8A. P-Chloro-M-Cresol (59-50-7)	X		X	<10						1	ug/L		<10		1
9A. Pentachloro-phenol (87-86-5)	X		X	<50						1	ug/L		<50		1
10A. Phenol (108-95-2)	X		X	<10						1	ug/L		<10		1
11A. 2,4,6-Trichloro-phenol (88-05-2)	X		X	<50						1	ug/L		<50		1

 CONTINUE ON REVERSE

Note 1 - This parameter deleted per 40CFR122, Appendix D.

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Outfall B01

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCEN-TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION – BASE/NEUTRAL COMPOUNDS															
1B. Acenaphthene (83-32-9)	X		X	<10						1	ug/L		<10		1
2B. Acenaphtylene (208-96-8)	X		X	<10						1	ug/L		<10		1
3B. Anthracene (120-12-7)	X		X	<10						1	ug/L		<10		1
4B. Benzidine (92-87-5)	X		X	<80						1	ug/L		<80		1
5B. Benzo (*a*) Anthracene (56-55-3)	X		X	<10						1	ug/L		<10		1
6B. Benzo (*a*) Pyrene (50-32-8)	X		X	<10						1	ug/L		<10		1
7B. 3,4-Benzo-fluoranthene (205-99-2)	X		X	<10						1	ug/L		<10		1
8B. Benzo (*ghi*) Perylene (191-24-2)	X		X	<10						1	ug/L		<10		1
9B. Benzo (*k*) Fluoranthene (207-08-9)	X		X	<10						1	ug/L		<10		1
10B. Bis (*2-Chloro-ethoxy*) Methane (111-91-1)	X		X	<10						1	ug/L		<10		1
11B. Bis (*2-Chloro-ethyl*) Ether (111-44-4)	X		X	<10						1	ug/L		<10		1
12B. Bis (*2-Chloroisopropyl*) Ether (102-80-1)	X		X	<10						1	ug/L		<10		1
13B. Bis (*2-Ethyl-hexyl*) Phthalate (117-81-7)	X		X	<10						1	ug/L		<10		1
14B. 4-Bromophenyl Phenyl Ether (101-55-3)	X		X	<10						1	ug/L		<10		1
15B. Butyl Benzyl Phthalate (85-68-7)	X		X	<10						1	ug/L		<10		1
16B. 2-Chloro-naphthalene (91-58-7)	X		X	<10						1	ug/L		<10		1
17B. 4-Chloro-phenyl Phenyl Ether (7005-72-3)	X		X	<10						1	ug/L		<10		1
18B. Chrysene (218-01-9)	X		X	<10						1	ug/L		<10		1
19B. Dibenzo (*a,h*) Anthracene (53-70-3)	X		X	<10						1	ug/L		<10		1
20B. 1,2-Dichloro-benzene (95-50-1)	X		X	<10						1	ug/L		<10		1
21B. 1,3-Di-chloro-benzene (541-73-1)	X		X	<10						1	ug/L		<10		1

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Outfall B01

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X" a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	3. EFFLUENT a. MAXIMUM DAILY VALUE (1) CONCENTRATION	(2) MASS	b. MAXIMUM 30 DAY VALUE (*if available*) (1) CONCENTRATION	(2) MASS	c. LONG TERM AVRG. VALUE (*if available*) (1) CONCENTRATION	(2) MASS	d. NO. OF ANALYSES	4. UNITS a. CONCEN-TRATION	b. MASS	5. INTAKE (*optional*) a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	(2) MASS	b. NO. OF ANALYSES
GC/MS FRACTION – BASE/NEUTRAL COMPOUNDS (*continued*)															
22B. 1,4-Dichloro-benzene (106-46-7)	X		X	<10						1	ug/L		<10		1
23B. 3,3-Dichloro-benzidine (91-94-1)	X		X	<20						1	ug/L		<20		1
24B. Diethyl Phthalate (84-66-2)	X		X	<10						1	ug/L		<10		1
25B. Dimethyl Phthalate (131 -11-3)	X		X	<10						1	ug/L		<10		1
26B. Di-N-Butyl Phthalate (84-74-2)	X		X	<10						1	ug/L		<10		1
27B. 2,4-Dinitro-toluene (121-14-2)	X		X	<10						1	ug/L		<10		1
28B. 2,6-Dinitro-toluene (606-20-2)	X		X	<10						1	ug/L		<10		1
29B. Di-N-Octyl Phthalate (117-84-0)	X		X	<10						1	ug/L		<10		1
30B. 1,2-Diphenyl-hydrazine (*as Azo-benzene*) (122-66-7)	X		X	<10						1	ug/L		<10		1
31B. Fluoranthene (206-44-0)	X		X	<10						1	ug/L		<10		1
32B. Fluorene (86-73-7)	X		X	<10						1	ug/L		<10		1
33B. Hexachloro-benzene (118-74-1)	X		X	<10						1	ug/L		<10		1
34B. Hexachloro-butadiene (87-68-3)	X		X	<10						1	ug/L		<10		1
35B. Hexachloro-cyclopentadiene (77-47-4)	X		X	<50						1	ug/L		<50		1
36B Hexachloro-ethane (67-72-1)	X		X	<10						1	ug/L		<10		1
37B. Indeno (*1,2,3-cd*) Pyrene (193-39-5)	X		X	<10						1	ug/L		<10		1
38B. Isophorone (78-59-1)	X		X	<10						1	ug/L		<10		1
39B. Naphthalene (91-20-3)	X		X	<10						1	ug/L		<10		1
40B. Nitrobenzene (98-95-3)	X		X	<10						1	ug/L		<10		1
41B. N-Nitro-sodimethylamine (62-75-9)	X		X	<10						1	ug/L		<10		1
42B. N-Nitrosodi-N-Propylamine (621-64-7)	X		X	<10						1	ug/L		<10		1

CONTINUED FROM THE FRONT

Outfall B01

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X" a. TESTING REQUIRED	2. MARK "X" b. BELIEVED PRESENT	2. MARK "X" c. BELIEVED ABSENT	3. EFFLUENT a. MAXIMUM DAILY VALUE (1) CONCENTRATION	3. EFFLUENT a. MAXIMUM DAILY VALUE (2) MASS	3. EFFLUENT b. MAXIMUM 30 DAY VALUE (*if available*) (1) CONCENTRATION	3. EFFLUENT b. MAXIMUM 30 DAY VALUE (*if available*) (2) MASS	3. EFFLUENT c. LONG TERM AVRG. VALUE (*if available*) (1) CONCENTRATION	3. EFFLUENT c. LONG TERM AVRG. VALUE (*if available*) (2) MASS	3. EFFLUENT d. NO. OF ANALYSES	4. UNITS a. CONCEN-TRATION	4. UNITS b. MASS	5. INTAKE (*optional*) a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	5. INTAKE (*optional*) a. LONG TERM AVERAGE VALUE (2) MASS	5. INTAKE (*optional*) b. NO. OF ANALYSES
GC/MS FRACTION – BASE/NEUTRAL COMPOUNDS (*continued*)															
43B. N-Nitro-sodiphenylamine (86-30-6)	X		X	<10						1	ug/L		<10		1
44B. Phenanthrene (85-01-8)	X		X	<10						1	ug/L		<10		1
45B. Pyrene (129-00-0)	X		X	<10						1	ug/L		<10		1
46B. 1,2,4-Tri-chlorobenzene (120-82-1)	X		X	<10						1	ug/L		<10		1
GC/MS FRACTION – PESTICIDES															
1P. Aldrin (309-00-2)			X												
2P. α-BHC (319-84-6)			X												
3P. β-BHC (319-85-7)			X												
4P. γ-BHC (58-89-9)			X												
5P. δ-BHC (319-86-8)			X												
6P. Chlordane (57-74-9)			X												
7P. 4,4'-DDT (50-29-3)			X												
8P. 4,4'-DDE (72-55-9)			X												
9P. 4,4'-DDD (72-54-8)			X												
10P. Dieldrin (60-57-1)			X												
11P. α-Enosulfan (115-29-7)			X												
12P. β-Endosulfan (115-29-7)			X												
13P. Endosulfan Sulfate (1031-07-8)			X												
14P. Endrin (72-20-8)			X												
15P. Endrin Aldehyde (7421-93-4)			X												
16P. Heptachlor (76-44-8)			X												

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CONTINUED FROM PAGE V-8

EPA I.D. NUMBER (*copy from Item 1 of Form 1*)	OUTFALL NUMBER
IL0000108	B01

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCEN-TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION – PESTICIDES (*continued*)															
17P. Heptachlor Epoxide (1024-57-3)			X												
18P. PCB-1242 (53469-21-9)			X	<0.5						1	ug/L		<0.5		1
19P. PCB-1254 (11097-69-1)			X	<1.0						1	ug/L		<1.0		1
20P. PCB-1221 (11104-28-2)			X	<1.0						1	ug/L		<1.0		1
21P. PCB-1232 (11141-16-5)			X	<0.5						1	ug/L		<0.5		1
22P. PCB-1248 (12672-29-6)			X	<0.5						1	ug/L		<0.5		1
23P. PCB-1260 (11096-82-5)			X	<1.0						1	ug/L		<1.0		1
24P. PCB-1016 (12674-11-2)			X	<0.5						1	ug/L		<0.5		1
25P. Toxaphene (8001-35-2)			X												

PLEASE PRINT OR TYPE IN THE UNSHADED AREAS ONLY. You may report some or all of this information on separate sheets (*use the same format*) instead of completing these pages.
SEE INSTRUCTIONS.

EPA I.D. NUMBER (*copy from Item 1 of Form 1*)
IL0000108

V. INTAKE AND EFFLUENT CHARACTERISTICS (*continued from page 3 of Form 2-C*)

OUTFALL NO.
C01

PART A –You must provide the results of at least one analysis for every pollutant in this table. Complete one table for each outfall. See instructions for additional details.

1. POLLUTANT	2. EFFLUENT: a. MAXIMUM DAILY VALUE (1) CONCENTRATION	2. EFFLUENT: a. MAXIMUM DAILY VALUE (2) MASS	2. EFFLUENT: b. MAXIMUM 30 DAY VALUE (*if available*) (1) CONCENTRATION	2. EFFLUENT: b. MAXIMUM 30 DAY VALUE (*if available*) (2) MASS	2. EFFLUENT: c. LONG TERM AVRG. VALUE (*if available*) (1) CONCENTRATION	2. EFFLUENT: c. LONG TERM AVRG. VALUE (*if available*) (2) MASS	2. EFFLUENT: d. NO. OF ANALYSES	3. UNITS (*specify if blank*): a. CONCEN-TRATION	3. UNITS (*specify if blank*): b. MASS	4. INTAKE (*optional*): a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	4. INTAKE (*optional*): a. LONG TERM AVERAGE VALUE (2) MASS	4. INTAKE (*optional*): b. NO. OF ANALYSES
a. Biochemical Oxygen Demand (*BOD*)	<1	<2					1	mg/L	lb/dy	4.4	7	1
b. Chemical Oxygen Demand (*COD*)	26	40					1	mg/L	lb/dy	14	21	1
c. Total Organic Carbon (*TOC*)	7.0	11					1	mg/L	lb/dy	6.2	9	1
d. Total Suspended Solids (*TSS*)	11	17					1	mg/L	lb/dy	12	18	1
e. Ammonia (*as N*)	<1.0	<2					1	mg/L	lb/dy	<0.10	<1	1
f. Flow	VALUE 0.183		VALUE 0.780		VALUE 0.186		1,31,366	MGD		VALUE		
g. Temperature (*winter*)	VALUE 16		VALUE		VALUE		1	°C		VALUE		
h. Temperature (*summer*)	VALUE		VALUE		VALUE		0	°C		VALUE		
i. pH	MINIMUM 7.01	MAXIMUM 7.20	MINIMUM	MAXIMUM			1	STANDARD UNITS				

PART B – Mark "X" in column 2-a for each pollutant you know or have reason to believe is present. Mark "X" in column 2-b for each pollutant you believe to be absent. If you mark column 2a for any pollutant which is limited either directly, or indirectly but expressly, in an effluent limitations guideline, you must provide the results of at least one analysis for that pollutant. For other pollutants for which you mark column 2a, you must provide quantitative data or an explanation of their presence in your discharge. Complete one table for each outfall. See the instructions for additional details and requirements.

1. POLLUTANT AND CAS NO. (*if available*)	2. MARK "X": a. BELIEVED PRESENT	2. MARK "X": b. BELIEVED ABSENT	3. EFFLUENT: a. MAXIMUM DAILY VALUE (1) CONCENTRATION	3. EFFLUENT: a. MAXIMUM DAILY VALUE (2) MASS	3. EFFLUENT: b. MAXIMUM 30 DAY VALUE (*if available*) (1) CONCENTRATION	3. EFFLUENT: b. MAXIMUM 30 DAY VALUE (*if available*) (2) MASS	3. EFFLUENT: c. LONG TERM AVRG. VALUE (*if available*) (1) CONCENTRATION	3. EFFLUENT: c. LONG TERM AVRG. VALUE (*if available*) (2) MASS	3. EFFLUENT: d. NO. OF ANALYSES	4. UNITS: a. CONCEN-TRATION	4. UNITS: b. MASS	5. INTAKE (*optional*): a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	5. INTAKE (*optional*): a. LONG TERM AVERAGE VALUE (2) MASS	5. INTAKE (*optional*): b. NO. OF ANALYSES
a. Bromide (24959-67-9)		X	<1.0	<2					1	mg/L	lb/dy	<1.0	<2	1
b. Chlorine, Total Residual		X							0	mg/L	lb/dy	<0.05		1
c. Color		X							0	---	---			0
d. Fecal Coliform	X								0	CFU/0.1L	---	3	---	1
e. Fluoride (16984-48-8)	X		0.31	0.5					1	mg/L	lb/dy	0.31	0.5	1
f. Nitrate-Nitrite (*as N*)	X		0.86	1.3					1	mg/L	lb/dy	0.81	1.2	1

CONTINUE ON REVERSE

Note: This outfall is typically routed to the Recycle Pond.

Outfall C01

1. POLLUTANT AND CAS NO. (*if available*)	2. MARK "X"		3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. BELIEVED PRESENT	b. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCEN-TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
			(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
g. Nitrogen, Total Organic (*as N*)	X		1.6	2.4					1	mg/L	lb/dy	1.1	1.7	1
h. Oil and Grease	X		<5	<8					1	mg/L	lb/dy	<5	<8	1
i. Phosphorus (as P), Total (7723-14-0)	X		<0.10	<0.2						mg/L	lb/dy	<0.10	<0.2	1
j. Radioactivity														
(1) Alpha, Total									0					0
(2) Beta, Total									0					0
(3) Radium, Total									0					0
(4) Radium 226, Total									0					0
k. Sulfate (*as SO_4*) (14808-79-8)	X		58	88					1	mg/L	lb/dy	55	84	1
l. Sulfide (*as S*)		X	<2.0	<3					1	mg/L	lb/dy	<2.0	<3	1
m. Sulfite (*as SO_3*) (14265-45-3)		X	<2.0	<3					1	mg/L	lb/dy	<2.0	<3	1
n. Surfactants		X	2.0	3					1	mg/L	lb/dy	0.19	0.3	1
o. Aluminum, Total (7429-90-5)	X		0.11	0.2					1	mg/L	lb/dy	<0.050	<0.1	1
p. Barium, Total (7440-39-3)	X		0.06	<0.1					1	mg/L	lb/dy	0.06	<0.1	1
q. Boron, Total (7440-42-8)	X		0.36	0.5					1	mg/L	lb/dy	0.35	0.5	1
r. Cobalt, Total (7440-48-4)		X	<0.005	<0.1					1	mg/L	lb/dy	<0.005	<0.1	1
s. Iron, Total (7439-89-6)	X		0.15	0.2					1	mg/L	lb/dy	0.08	0.1	1
t. Magnesium, Total (7439-95-4)	X		14	21					1	mg/L	lb/dy	14	21	1
u. Molybdenum, Total (7439-98-7)		X	<0.010	<0.1					1	mg/L	lb/dy	<0.010	<0.1	1
v. Manganese, Total (7439-96-5)	X		0.030	<0.1					1	mg/L	lb/dy	0.024	<0.1	1
w. Tin, Total (7440-31-5)		X	<0.060	<0.1					1	mg/L	lb/dy	<0.060	<0.1	1
x. Titanium, Total (7440-32-6)		X	<0.005	<0.1					1	mg/L	lb/dy	<0.005	<0.1	1

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CONTINUED FROM PAGE 3 OF FORM 2-C

EPA I.D. NUMBER (*copy from Item 1 of Form 1*)	OUTFALL NUMBER
IL0000108	C01

PART C - If you are a primary industry and this outfall contains process wastewater, refer to Table 2c-2 in the instructions to determine which of the GC/MS fractions you must test for. Mark "X" in column 2-a for all such GC/MS fractions that apply to your industry and for ALL toxic metals, cyanides, and total phenols. If you are not required to mark column 2-a (*secondary industries, nonprocess wastewater outfalls, and nonrequired GC/MS fractions*), mark "X" in column 2-b for each pollutant you know or have reason to believe is present. Mark "X" in column 2-c for each pollutant you believe is absent. If you mark column 2a for any pollutant, you must provide the results of at least one analysis for that pollutant. If you mark column 2b for any pollutant, you must provide the results of at least one analysis for that pollutant if you know or have reason to believe it will be discharged in concentrations of 10 ppb or greater. If you mark column 2b for acrolein, acrylonitrile, 2,4 dinitrophenol, or 2-methyl-4, 6 dinitrophenol, you must provide the results of at least one analysis for each of these pollutants which you know or have reason to believe that you discharge in concentrations of 100 ppb or greater. Otherwise, for pollutants for which you mark column 2b, you must either submit at least one analysis or briefly describe the reasons the pollutant is expected to be discharged. Note that there are 7 pages to this part; please review each carefully. Complete one table (*all 7 pages*) for each outfall. See instructions for additional details and requirements.

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCEN-TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
METALS, CYANIDE, AND TOTAL PHENOLS															
1M. Antimony, Total (7440-36-0)	X		X	<20	<0.03					1	ug/L	lb/dy	<20	<0.03	1
2M. Arsenic, Total (7440-38-2)	X		X	<20	<0.03					1	ug/L	lb/dy	<20	<0.03	1
3M. Beryllium, Total (7440-41-7)	X		X	<5	<0.01					1	ug/L	lb/dy	<5	<0.01	1
4M. Cadmium, Total (7440-43-9)	X		X	<2	<0.01					1	ug/L	lb/dy	<2	<0.01	1
5M. Chromium, Total (7440-47-3)	X		X	<4	<0.01					1	ug/L	lb/dy	<4	<0.01	1
6M. Copper, Total (7440-50-8)	X		X	16	0.02					1	ug/L	lb/dy	13	0.02	1
7M. Lead, Total (7439-92-1)	X		X	<10	<0.01					1	ug/L	lb/dy	<10	<0.01	1
8M. Mercury, Total (7439-97-6)	X		X	2.0	<0.01					1	ng/L	lb/dy	<1	<0.01	1
9M. Nickel, Total (7440-02-0)	X		X	<10	<0.01					1	ug/L	lb/dy	<10	<0.01	1
10M. Selenium, Total (7782-49-2)	X		X	12	0.02					1	ug/L	lb/dy	12	0.02	1
11M. Silver, Total (7440-22-4)	X		X	<10	<0.01					1	ug/L	lb/dy	<10	<0.01	1
12M. Thallium, Total (7440-28-0)	X		X	<10	<0.01					1	ug/L	lb/dy	<10	<0.01	1
13M. Zinc, Total (7440-66-6)	X	X		10	0.01					1	ug/L	lb/dy	<10	<0.01	1
14M. Cyanide, Total (57-12-5)	X		X	<5	<0.01					1	ug/L	lb/dy	<5	<0.01	1
15M. Phenols, Total	X		X	<10	<0.01					1	ug/L	lb/dy	<5	<0.01	1
DIOXIN															
2,3,7,8-Tetra-chlorodibenzo-P-Dioxin (1764-01-6)			X	DESCRIBE RESULTS											

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Outfall C01

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X" a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	3. EFFLUENT a. MAXIMUM DAILY VALUE (1) CONCENTRATION	(2) MASS	b. MAXIMUM 30 DAY VALUE (*if available*) (1) CONCENTRATION	(2) MASS	c. LONG TERM AVRG. VALUE (*if available*) (1) CONCENTRATION	(2) MASS	d. NO. OF ANALYSES	4. UNITS a. CONCEN-TRATION	b. MASS	5. INTAKE (*optional*) a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	(2) MASS	b. NO. OF ANALYSES
GC/MS FRACTION – VOLATILE COMPOUNDS															
1V. Accrolein (107-02-8)	X		X	<50						1	ug/L		<50		1
2V. Acrylonitrile (107-13-1)	X		X	<50						1	ug/L		<50		1
3V. Benzene (71-43-2)	X		X	<5						1	ug/L		<5		1
4V. Bis (*Chloro-methyl*) Ether (542-88-1)				Note 1									Note 1		
5V. Bromoform (75-25-2)	X		X	<5						1	ug/L		<5		1
6V. Carbon Tetrachloride (56-23-5)	X		X	<5						1	ug/L		<5		1
7V. Chlorobenzene (108-90-7)	X		X	<5						1	ug/L		<5		1
8V. Chlorodi-bromomethane (124-48-1)	X		X	<5						1	ug/L		<5		1
9V. Chloroethane (75-00-3)	X		X	<5						1	ug/L		<5		1
10V. 2-Chloro-ethylvinyl Ether (110-75-8)	X		X	<5						1	ug/L		<5		1
11V. Chloroform (67-66-3)	X		X	Note 2									Note 2		
12V. Dichloro-bromomethane (75-27-4)	X		X	<5						1	ug/L		<5		1
13V. Dichloro-difluoromethane (75-71-8)				Note 1									Note 1		
14V. 1,1-Dichloro-ethane (75-34-3)	X		X	<5						1	ug/L		<5		1
15V. 1,2-Dichloro-ethane (107-06-2)	X		X	<5						1	ug/L		<5		1
16V. 1,1-Dichloro-ethylene (75-35-4)	X		X	<5						1	ug/L		<5		1
17V. 1,2-Dichloro-propane (78-87-5)	X		X	<5						1	ug/L		<5		1
18V. 1,3-Dichloro-propylene (542-75-6) **	X		X	<5						1	ug/L		<5		1
19V. Ethylbenzene (100-41-4)	X		X	<5						1	ug/L		<5		1
20V. Methyl Bromide (74-83-9)	X		X	<5						1	ug/L		<5		1
21V. Methyl Chloride (74-87-3)	X		X	<5						1	ug/L		<5		1

CONTINUE ON PAGE V-5

Note 1 - These parameters deleted per 40CFR122, Appendix D.

Note 2 - Analysis suspect therefore no data provided for this constituent.

** This parameter is 1,3-Dichloropropylene per 40CFR122, Appendix D.

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Outfall C01

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X" a. TESTING REQUIRED	2. b. BELIEVED PRESENT	2. c. BELIEVED ABSENT	3. EFFLUENT a. MAXIMUM DAILY VALUE (1) CONCENTRATION	a. (2) MASS	b. MAXIMUM 30 DAY VALUE (*if available*) (1) CONCENTRATION	b. (2) MASS	c. LONG TERM AVRG. VALUE (*if available*) (1) CONCENTRATION	c. (2) MASS	d. NO. OF ANALYSES	4. UNITS a. CONCEN-TRATION	4. b. MASS	5. INTAKE (*optional*) a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	a. (2) MASS	b. NO. OF ANALYSES
GC/MS FRACTION – VOLATILE COMPOUNDS (*continued*)															
22V. Methylene Chloride (75-09-2)	X		X	<5						1	ug/L		<5		1
23V. 1,1,2,2-Tetrachloroethane (79-34-5)	X		X	<5						1	ug/L		<5		1
24V. Tetrachloro-ethylene (127-18-4)	X		X	<5						1	ug/L		<5		1
25V. Toluene (108-88-3)	X		X	<5						1	ug/L		<5		1
26V. 1,2-Trans-Dichloroethylene (156-60-5)	X		X	<20						1	ug/L		<20		1
27V. 1,1,1-Trichloro-ethane (71-55-6)	X		X	<5						1	ug/L		<5		1
28V. 1,1,2-Trichloro-ethane (79-00-5)	X		X	<5						1	ug/L		<5		1
29V Trichloro-ethylene (79-01-6)	X		X	<5						1	ug/L		<5		1
30V. Trichloro-fluoromethane (75-69-4)				Note 1									Note 1		
31V. Vinyl Chloride (75-01-4)	X		X	<5						1	ug/L		<5		1
GC/MS FRACTION – ACID COMPOUNDS															
1A. 2-Chlorophenol (95-57-8)	X		X	<10						1	ug/L		<10		1
2A. 2,4-Dichloro-phenol (120-83-2)	X		X	<10						1	ug/L		<10		1
3A. 2,4-Dimethyl-phenol (105-67-9)	X		X	<10						1	ug/L		<10		1
4A. 4,6-Dinitro-O-Cresol (534-52-1)	X		X	<50						1	ug/L		<50		1
5A. 2,4-Dinitro-phenol (51-28-5)	X		X	<50						1	ug/L		<50		1
6A. 2-Nitrophenol (88-75-5)	X		X	<10						1	ug/L		<10		1
7A. 4-Nitrophenol (100-02-7)	X		X	<50						1	ug/L		<50		1
8A. P-Chloro-M-Cresol (59-50-7)	X		X	<10						1	ug/L		<10		1
9A. Pentachloro-phenol (87-86-5)	X		X	<50						1	ug/L		<50		1
10A. Phenol (108-95-2)	X		X	<10						1	ug/L		<10		1
11A. 2,4,6-Trichloro-phenol (88-05-2)	X		X	<50						1	ug/L		<50		1

 CONTINUE ON REVERSE

Note 1 - This parameter deleted per 40CFR122, Appendix D.

CONTINUED FROM THE FRONT

Outfall C01

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCEN-TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION – BASE/NEUTRAL COMPOUNDS															
1B. Acenaphthene (83-32-9)	X		X	<10						1	ug/L		<10		1
2B. Acenaphtylene (208-96-8)	X		X	<10						1	ug/L		<10		1
3B. Anthracene (120-12-7)	X		X	<10						1	ug/L		<10		1
4B. Benzidine (92-87-5)	X		X	<80						1	ug/L		<80		1
5B. Benzo (*a*) Anthracene (56-55-3)	X		X	<10						1	ug/L		<10		1
6B. Benzo (*a*) Pyrene (50-32-8)	X		X	<10						1	ug/L		<10		1
7B. 3,4-Benzo-fluoranthene (205-99-2)	X		X	<10						1	ug/L		<10		1
8B. Benzo (*ghi*) Perylene (191-24-2)	X		X	<10						1	ug/L		<10		1
9B. Benzo (*k*) Fluoranthene (207-08-9)	X		X	<10						1	ug/L		<10		1
10B. Bis (*2-Chloro-ethoxy*) Methane (111-91-1)	X		X	<10						1	ug/L		<10		1
11B. Bis (*2-Chloro-ethyl*) Ether (111-44-4)	X		X	<10						1	ug/L		<10		1
12B. Bis (*2-Chloroisopropyl*) Ether (102-80-1)	X		X	<10						1	ug/L		<10		1
13B. Bis (*2-Ethyl-hexyl*) Phthalate (117-81-7)	X		X	<10						1	ug/L		<10		1
14B. 4-Bromophenyl Phenyl Ether (101-55-3)	X		X	<10						1	ug/L		<10		1
15B. Butyl Benzyl Phthalate (85-68-7)	X		X	<10						1	ug/L		<10		1
16B. 2-Chloro-naphthalene (91-58-7)	X		X	<10						1	ug/L		<10		1
17B. 4-Chloro-phenyl Phenyl Ether (7005-72-3)	X		X	<10						1	ug/L		<10		1
18B. Chrysene (218-01-9)	X		X	<10						1	ug/L		<10		1
19B. Dibenzo (*a,h*) Anthracene (53-70-3)	X		X	<10						1	ug/L		<10		1
20B. 1,2-Dichloro-benzene (95-50-1)	X		X	<10						1	ug/L		<10		1
21B. 1,3-Di-chloro-benzene (541-73-1)	X		X	<10						1	ug/L		<10		1

 CONTINUE ON PAGE V-7

CONTINUED FROM PAGE V-6

Outfall C01

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X" a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	3. EFFLUENT a. MAXIMUM DAILY VALUE (1) CONCENTRATION	(2) MASS	b. MAXIMUM 30 DAY VALUE (*if available*) (1) CONCENTRATION	(2) MASS	c. LONG TERM AVRG. VALUE (*if available*) (1) CONCENTRATION	(2) MASS	d. NO. OF ANALYSES	4. UNITS a. CONCEN-TRATION	b. MASS	5. INTAKE (*optional*) a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	(2) MASS	b. NO. OF ANALYSES
GC/MS FRACTION – BASE/NEUTRAL COMPOUNDS (*continued*)															
22B. 1,4-Dichloro-benzene (106-46-7)	X		X	<10						1	ug/L		<10		1
23B. 3,3-Dichloro-benzidine (91-94-1)	X		X	<20						1	ug/L		<20		1
24B. Diethyl Phthalate (84-66-2)	X		X	<10						1	ug/L		<10		1
25B. Dimethyl Phthalate (131 -11-3)	X		X	<10						1	ug/L		<10		1
26B. Di-N-Butyl Phthalate (84-74-2)	X		X	<10						1	ug/L		<10		1
27B. 2,4-Dinitro-toluene (121-14-2)	X		X	<10						1	ug/L		<10		1
28B. 2,6-Dinitro-toluene (606-20-2)	X		X	<10						1	ug/L		<10		1
29B. Di-N-Octyl Phthalate (117-84-0)	X		X	<10						1	ug/L		<10		1
30B. 1,2-Diphenyl-hydrazine (*as Azo-benzene*) (122-66-7)	X		X	<10						1	ug/L		<10		1
31B. Fluoranthene (206-44-0)	X		X	<10						1	ug/L		<10		1
32B. Fluorene (86-73-7)	X		X	<10						1	ug/L		<10		1
33B. Hexachloro-benzene (118-74-1)	X		X	<10						1	ug/L		<10		1
34B. Hexachloro-butadiene (87-68-3)	X		X	<10						1	ug/L		<10		1
35B. Hexachloro-cyclopentadiene (77-47-4)	X		X	<50						1	ug/L		<50		1
36B Hexachloro-ethane (67-72-1)	X		X	<10						1	ug/L		<10		1
37B. Indeno (*1,2,3-cd*) Pyrene (193-39-5)	X		X	<10						1	ug/L		<10		1
38B. Isophorone (78-59-1)	X		X	<10						1	ug/L		<10		1
39B. Naphthalene (91-20-3)	X		X	<10						1	ug/L		<10		1
40B. Nitrobenzene (98-95-3)	X		X	<10						1	ug/L		<10		1
41B. N-Nitro-sodimethylamine (62-75-9)	X		X	<10						1	ug/L		<10		1
42B. N-Nitrosodi-N-Propylamine (621-64-7)	X		X	<10						1	ug/L		<10		1

CONTINUE ON REVERSE

CONTINUED FROM THE FRONT

Outfall C01

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCEN-TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION – BASE/NEUTRAL COMPOUNDS (*continued*)															
43B. N-Nitro-sodiphenylamine (86-30-6)	X		X	<10						1	ug/L		<10		1
44B. Phenanthrene (85-01-8)	X		X	<10						1	ug/L		<10		1
45B. Pyrene (129-00-0)	X		X	<10						1	ug/L		<10		1
46B. 1,2,4-Tri-chlorobenzene (120-82-1)	X		X	<10						1	ug/L		<10		1
GC/MS FRACTION – PESTICIDES															
1P. Aldrin (309-00-2)			X												
2P. α-BHC (319-84-6)			X												
3P. β-BHC (319-85-7)			X												
4P. γ-BHC (58-89-9)			X												
5P. δ-BHC (319-86-8)			X												
6P. Chlordane (57-74-9)			X												
7P. 4,4'-DDT (50-29-3)			X												
8P. 4,4'-DDE (72-55-9)			X												
9P. 4,4'-DDD (72-54-8)			X												
10P. Dieldrin (60-57-1)			X												
11P. α-Enosulfan (115-29-7)			X												
12P. β-Endosulfan (115-29-7)			X												
13P. Endosulfan Sulfate (1031-07-8)			X												
14P. Endrin (72-20-8)			X												
15P. Endrin Aldehyde (7421-93-4)			X												
16P. Heptachlor (76-44-8)			X												

CONTINUE ON PAGE V-9

EPA I.D. NUMBER (*copy from Item 1 of Form 1*)	OUTFALL NUMBER
IL0000108	C01

CONTINUED FROM PAGE V-8

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X" a. TESTING REQUIRED	2. b. BELIEVED PRESENT	2. c. BELIEVED ABSENT	3. EFFLUENT a. MAXIMUM DAILY VALUE (1) CONCENTRATION	3.a. (2) MASS	3. b. MAXIMUM 30 DAY VALUE (*if available*) (1) CONCENTRATION	3.b. (2) MASS	3. c. LONG TERM AVRG. VALUE (*if available*) (1) CONCENTRATION	3.c. (2) MASS	3. d. NO. OF ANALYSES	4. UNITS a. CONCEN-TRATION	4. b. MASS	5. INTAKE (*optional*) a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	5.a. (2) MASS	5. b. NO. OF ANALYSES
GC/MS FRACTION – PESTICIDES (*continued*)															
17P. Heptachlor Epoxide (1024-57-3)			X												
18P. PCB-1242 (53469-21-9)			X	<0.5						1	ug/L		<0.5		1
19P. PCB-1254 (11097-69-1)			X	<1.0						1	ug/L		<1.0		1
20P. PCB-1221 (11104-28-2)			X	<1.0						1	ug/L		<1.0		1
21P. PCB-1232 (11141-16-5)			X	<0.5						1	ug/L		<0.5		1
22P. PCB-1248 (12672-29-6)			X	<0.5						1	ug/L		<0.5		1
23P. PCB-1260 (11096-82-5)			X	<1.0						1	ug/L		<1.0		1
24P. PCB-1016 (12674-11-2)			X	<0.5						1	ug/L		<0.5		1
25P. Toxaphene (8001-35-2)			X												

Please print or type in the unshaded areas only.	EPA ID Number (copy from Item 1 of Form 1) IL0000108	Form Approved. OMB No. 2040-0086. Approval expires 5-31-92.

FORM 2E NPDES

EPA Facilities Which Do Not Discharge Process Wastewater

I. RECEIVING WATERS

For this outfall, list the latitude and longitude, and name of the receiving water(s).

Outfall Number *(list)*	Latitude			Longitude			Receiving Water *(name)*
	Deg	Min	Sec	Deg	Min	Sec	Coffeen Lake (via Outfalls 001/020/021/022)
D01	39	03	34	89	23	28	

II. DISCHARGE DATE *(If a new discharger, the date you expect to begin discharging)*

existing

III. TYPE OF WASTE

A. Check the box(es) indicating the general type(s) of wastes discharged.

☑ Sanitary Wastes ☐ Restaurant or Cafeteria Wastes ☐ Noncontact Cooling Water ☐ Other Nonprocess Wastewater *(Identify)*

B. If any cooling water additives are used, list them here. Briefly describe their composition if this information is available.

IV. EFFLUENT CHARACTERISTICS

A. **Existing Sources** — Provide measurements for the parameters listed in the left-hand column below, unless waived by the permitting authority *(see instructions)*.

B. **New Dischargers** — Provide estimates for the parameters listed in the left-hand column below, unless waived by the permitting authority. Instead of the number of measurements taken, provide the source of estimated values *(see instructions)*.

Pollutant or Parameter	(1) Maximum Daily Value *(include units)*		(2) Average Daily Value *(last year)* *(include units)*		(3) Number of Measurements Taken *(last year)*	*(or)* (4) Source of Estimate *(if new discharger)*
	Mass	Concentration	Mass	Concentration		
Biochemical Oxygen Demand (BOD)		11 mg/L		<5 mg/L	1,24	
Total Suspended Solids (TSS)		4.4 mg/L		7.6 mg/L	1,24	
Fecal Coliform *(if believed present or if sanitary waste is discharged)*		48,100 **			1	
Total Residual Chlorine *(if chlorine is used)*					0	
Oil and Grease		<5.0 mg/L			1	
*Chemical oxygen demand (COD)		23 mg/L			1	
*Total organic carbon (TOC)		6.8 mg/L			1	
Ammonia *(as N)*		14 mg/L			1	
Discharge Flow	Value 0.00675 MGD		0.0168 MGD		1,24	
pH *(give range)*	Value 6.82-7.02		6.5-7.7		1,24	
Temperature *(Winter)*	14 °C		°C		1	
Temperature *(Summer)*	°C		°C		0	

*If noncontact cooling water is discharged

** Units = CFUs/100mL

V. Except for leaks or spills, will the discharge described in this form be intermittent or seasonal? ☑ Yes ☐ No

If yes, briefly describe the frequency of flow and duration.

Effluent flow is dependent upon cyclic influent flow from sanitary lift station pumps.

VI. TREATMENT SYSTEM *(Describe briefly any treatment system(s) used or to be used)*

Sanitary package sewage treatment plant is composed of a Spirahoff holding tank, tricking filter, and sand filter.

VII. OTHER INFORMATION *(Optional)*

Use the space below to expand upon any of the above questions or to bring to the attention of the reviewer any other information you feel should be considered in establishing permit limitations. Attach additional sheets, if necessary.

VIII. CERTIFICATION

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

A. Name & Official Title	B. Phone No. *(area code & no.)*
Michael L. Menne, Vice President - Environmental Services	314-554-2816
C. Signature	D. Date Signed
Michael L. Menne	07-25-12

PLEASE PRINT OR TYPE IN THE UNSHADED AREAS ONLY. You may report some or all of this information on separate sheets (*use the same format*) instead of completing these pages.
SEE INSTRUCTIONS.

EPA I.D. NUMBER (*copy from Item 1 of Form 1*)
IL0000108

V. INTAKE AND EFFLUENT CHARACTERISTICS (*continued from page 3 of Form 2-C*)

OUTFALL NO.
E01

PART A –You must provide the results of at least one analysis for every pollutant in this table. Complete one table for each outfall. See instructions for additional details.

1. POLLUTANT	2. EFFLUENT a. MAXIMUM DAILY VALUE (1) CONCENTRATION	(2) MASS	b. MAXIMUM 30 DAY VALUE (*if available*) (1) CONCENTRATION	(2) MASS	c. LONG TERM AVRG. VALUE (*if available*) (1) CONCENTRATION	(2) MASS	d. NO. OF ANALYSES	3. UNITS (*specify if blank*) a. CONCENTRATION	b. MASS	4. INTAKE (*optional*) a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	(2) MASS	b. NO. OF ANALYSES
a. Biochemical Oxygen Demand (*BOD*)	<1	<0.1					1	mg/L	lb/dy	4.4	0.6	1
b. Chemical Oxygen Demand (*COD*)	26	3.2					1	mg/L	lb/dy	14	1.8	1
c. Total Organic Carbon (*TOC*)	7.0	0.9					1	mg/L	lb/dy	6.2	0.8	1
d. Total Suspended Solids (*TSS*)	11	1.4					1	mg/L	lb/dy	12	1.5	1
e. Ammonia (*as N*)	<1.0	<0.1					1	mg/L	lb/dy	<0.10	<0.1	1
f. Flow	VALUE 0.015		VALUE 0.510		VALUE 0.051		1,31,366	MGD		VALUE		
g. Temperature (*winter*)	VALUE 16		VALUE		VALUE		1	°C		VALUE		
h. Temperature (*summer*)	VALUE		VALUE		VALUE		0	°C		VALUE		
i. pH	MINIMUM 7.01	MAXIMUM 7.20	MINIMUM	MAXIMUM			1	STANDARD UNITS				

PART B – Mark "X" in column 2-a for each pollutant you know or have reason to believe is present. Mark "X" in column 2-b for each pollutant you believe to be absent. If you mark column 2a for any pollutant which is limited either directly, or indirectly but expressly, in an effluent limitations guideline, you must provide the results of at least one analysis for that pollutant. For other pollutants for which you mark column 2a, you must provide quantitative data or an explanation of their presence in your discharge. Complete one table for each outfall. See the instructions for additional details and requirements.

1. POLLUTANT AND CAS NO. (*if available*)	2. MARK "X" a. BELIEVED PRESENT	b. BELIEVED ABSENT	3. EFFLUENT a. MAXIMUM DAILY VALUE (1) CONCENTRATION	(2) MASS	b. MAXIMUM 30 DAY VALUE (*if available*) (1) CONCENTRATION	(2) MASS	c. LONG TERM AVRG. VALUE (*if available*) (1) CONCENTRATION	(2) MASS	d. NO. OF ANALYSES	4. UNITS a. CONCENTRATION	b. MASS	5. INTAKE (*optional*) a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	(2) MASS	b. NO. OF ANALYSES
a. Bromide (24959-67-9)		X	<1.0	<0.1					1	mg/L	lb/dy	<1.0	<0.1	1
b. Chlorine, Total Residual		X							0	mg/L	lb/dy	<0.05		1
c. Color		X							0	---	---			0
d. Fecal Coliform	X								0	CFU/0.1L	---	3	---	1
e. Fluoride (16984-48-8)	X		0.31	<0.1					1	mg/L	lb/dy	0.31	<0.1	1
f. Nitrate-Nitrite (*as N*)	X		0.86	0.1						mg/L	lb/dy	0.81	0.1	1

Note: This outfall is typically routed to the Recycle Pond.
Outfall C01 data provided for this outfall, per IEPA authorization.

ITEM V-B CONTINUED FROM FRONT

Outfall E01

1. POLLUTANT AND CAS NO. (*if available*)	2. MARK "X"		3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. BELIEVED PRESENT	b. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCEN-TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
			(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
g. Nitrogen, Total Organic (*as N*)	X		1.6	0.2					1	mg/L	lb/dy	1.1	0.1	1
h. Oil and Grease	X		<5	<0.6					1	mg/L	lb/dy	<5	<0.6	1
i. Phosphorus (as P), Total (7723-14-0)	X		<0.10	<0.1					1	mg/L	lb/dy	<0.10	<0.1	1
j. Radioactivity														
(1) Alpha, Total									0					0
(2) Beta, Total									0					0
(3) Radium, Total									0					0
(4) Radium 226, Total									0					0
k. Sulfate (*as SO_4*) (14808-79-8)	X		58	7.3					1	mg/L	lb/dy	55	6.9	1
l. Sulfide (*as S*)		X	<2.0	<0.2					1	mg/L	lb/dy	<2.0	<0.2	1
m. Sulfite (*as SO_3*) (14265-45-3)		X	<2.0	<0.2					1	mg/L	lb/dy	<2.0	<0.2	1
n. Surfactants		X	2.0	0.2					1	mg/L	lb/dy	0.19	<0.1	1
o. Aluminum, Total (7429-90-5)	X		0.11	<0.1					1	mg/L	lb/dy	<0.050	<0.1	1
p. Barium, Total (7440-39-3)	X		0.06	<0.1					1	mg/L	lb/dy	0.06	<0.1	1
q. Boron, Total (7440-42-8)	X		0.36	<0.1					1	mg/L	lb/dy	0.35	<0.1	1
r. Cobalt, Total (7440-48-4)		X	<0.005	<0.1					1	mg/L	lb/dy	<0.005	<0.1	1
s. Iron, Total (7439-89-6)	X		0.15	<0.1					1	mg/L	lb/dy	0.08	<0.1	1
t. Magnesium, Total (7439-95-4)	X		14	1.8					1	mg/L	lb/dy	14	1.8	1
u. Molybdenum, Total (7439-98-7)		X	<0.010	<0.1					1	mg/L	lb/dy	<0.010	<0.1	1
v. Manganese, Total (7439-96-5)	X		0.030	<0.1					1	mg/L	lb/dy	0.024	<0.1	1
w. Tin, Total (7440-31-5)		X	<0.060	<0.1					1	mg/L	lb/dy	<0.060	<0.1	1
x. Titanium, Total (7440-32-6)		X	<0.005	<0.1					1	mg/L	lb/dy	<0.005	<0.1	1

CONTINUE ON PAGE V-3

CONTINUED FROM PAGE 3 OF FORM 2-C

EPA I.D. NUMBER (*copy from Item 1 of Form 1*)	OUTFALL NUMBER
IL0000108	E01

PART C - If you are a primary industry and this outfall contains process wastewater, refer to Table 2c-2 in the instructions to determine which of the GC/MS fractions you must test for. Mark "X" in column 2-a for all such GC/MS fractions that apply to your industry and for ALL toxic metals, cyanides, and total phenols. If you are not required to mark column 2-a (*secondary industries, nonprocess wastewater outfalls, and nonrequired GC/MS fractions*), mark "X" in column 2-b for each pollutant you know or have reason to believe is present. Mark "X" in column 2-c for each pollutant you believe is absent. If you mark column 2a for any pollutant, you must provide the results of at least one analysis for that pollutant. If you mark column 2b for any pollutant, you must provide the results of at least one analysis for that pollutant if you know or have reason to believe it will be discharged in concentrations of 10 ppb or greater. If you mark column 2b for acrolein, acrylonitrile, 2,4 dinitrophenol, or 2-methyl-4, 6 dinitrophenol, you must provide the results of at least one analysis for each of these pollutants which you know or have reason to believe that you discharge in concentrations of 100 ppb or greater. Otherwise, for pollutants for which you mark column 2b, you must either submit at least one analysis or briefly describe the reasons the pollutant is expected to be discharged. Note that there are 7 pages to this part; please review each carefully. Complete one table (*all 7 pages*) for each outfall. See instructions for additional details and requirements.

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCEN-TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
METALS, CYANIDE, AND TOTAL PHENOLS															
1M. Antimony, Total (7440-36-0)	X		X	<20	<0.01					1	ug/L	lb/dy	<20	<0.01	1
2M. Arsenic, Total (7440-38-2)	X		X	<20	<0.01					1	ug/L	lb/dy	<20	<0.01	1
3M. Beryllium, Total (7440-41-7)	X		X	<5	<0.01					1	ug/L	lb/dy	<5	<0.01	1
4M. Cadmium, Total (7440-43-9)	X		X	<2	<0.01					1	ug/L	lb/dy	<2	<0.01	1
5M. Chromium, Total (7440-47-3)	X		X	<4	<0.01					1	ug/L	lb/dy	<4	<0.01	1
6M. Copper, Total (7440-50-8)	X		X	16	<0.01					1	ug/L	lb/dy	13	<0.01	1
7M. Lead, Total (7439-92-1)	X		X	<10	<0.01					1	ug/L	lb/dy	<10	<0.01	1
8M. Mercury, Total (7439-97-6)	X		X	2.0	<0.01					1	ng/L	lb/dy	<1	<0.01	1
9M. Nickel, Total (7440-02-0)	X		X	<10	<0.01					1	ug/L	lb/dy	<10	<0.01	1
10M. Selenium, Total (7782-49-2)	X		X	12	<0.01					1	ug/L	lb/dy	12	<0.01	1
11M. Silver, Total (7440-22-4)	X		X	<10	<0.01					1	ug/L	lb/dy	<10	<0.01	1
12M. Thallium, Total (7440-28-0)	X		X	<10	<0.01					1	ug/L	lb/dy	<10	<0.01	1
13M. Zinc, Total (7440-66-6)	X	X		10	<0.01					1	ug/L	lb/dy	<10	<0.01	1
14M. Cyanide, Total (57-12-5)	X		X	<5	<0.01					1	ug/L	lb/dy	<5	<0.01	1
15M. Phenols, Total	X		X	<10	<0.01					1	ug/L	lb/dy	<5	<0.01	1
DIOXIN															
2,3,7,8-Tetra-chlorodibenzo-P-Dioxin (1764-01-6)			X	DESCRIBE RESULTS											

CONTINUED FROM THE FRONT

Outfall E01

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X" a. TESTING REQUIRED	2. b. BELIEVED PRESENT	2. c. BELIEVED ABSENT	3. EFFLUENT a. MAXIMUM DAILY VALUE (1) CONCENTRATION	3. a. (2) MASS	3. b. MAXIMUM 30 DAY VALUE (*if available*) (1) CONCENTRATION	3. b. (2) MASS	3. c. LONG TERM AVRG. VALUE (*if available*) (1) CONCENTRATION	3. c. (2) MASS	3. d. NO. OF ANALYSES	4. UNITS a. CONCEN-TRATION	4. b. MASS	5. INTAKE (*optional*) a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	5. a. (2) MASS	5. b. NO. OF ANALYSES
GC/MS FRACTION – VOLATILE COMPOUNDS															
1V. Accrolein (107-02-8)	X		X	<50						1	ug/L		<50		1
2V. Acrylonitrile (107-13-1)	X		X	<50						1	ug/L		<50		1
3V. Benzene (71-43-2)	X		X	<5						1	ug/L		<5		1
4V. Bis (*Chloro-methyl*) Ether (542-88-1)				Note 1									Note 1		
5V. Bromoform (75-25-2)	X		X	<5						1	ug/L		<5		1
6V. Carbon Tetrachloride (56-23-5)	X		X	<5						1	ug/L		<5		1
7V. Chlorobenzene (108-90-7)	X		X	<5						1	ug/L		<5		1
8V. Chlorodi-bromomethane (124-48-1)	X		X	<5						1	ug/L		<5		1
9V. Chloroethane (75-00-3)	X		X	<5						1	ug/L		<5		1
10V. 2-Chloro-ethylvinyl Ether (110-75-8)	X		X	<5						1	ug/L		<5		1
11V. Chloroform (67-66-3)	X		X	Note 2									Note 2		
12V. Dichloro-bromomethane (75-27-4)	X		X	<5						1	ug/L		<5		1
13V. Dichloro-difluoromethane (75-71-8)				Note 1									Note 1		
14V. 1,1-Dichloro-ethane (75-34-3)	X		X	<5						1	ug/L		<5		1
15V. 1,2-Dichloro-ethane (107-06-2)	X		X	<5						1	ug/L		<5		1
16V. 1,1-Dichloro-ethylene (75-35-4)	X		X	<5						1	ug/L		<5		1
17V. 1,2-Dichloro-propane (78-87-5)	X		X	<5						1	ug/L		<5		1
18V. 1,3-Dichloro-propylene ** (542-75-6)	X		X	<5						1	ug/L		<5		1
19V. Ethylbenzene (100-41-4)	X		X	<5						1	ug/L		<5		1
20V. Methyl Bromide (74-83-9)	X		X	<5						1	ug/L		<5		1
21V. Methyl Chloride (74-87-3)	X		X	<5						1	ug/L		<5		1

 CONTINUE ON PAGE V-5

Note 1 - These parameters deleted per 40CFR122, Appendix D.

Note 2 - Analysis suspect therefore no data provided for this constituent.

** This parameter is 1,3-Dichloropropylene per 40CFR122, Appendix D.

CONTINUED FROM PAGE V-4

Outfall E01

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE (1) CONCENTRATION	a. MAXIMUM DAILY VALUE (2) MASS	b. MAXIMUM 30 DAY VALUE (*if available*) (1) CONCENTRATION	b. (2) MASS	c. LONG TERM AVRG. VALUE (*if available*) (1) CONCENTRATION	c. (2) MASS	d. NO. OF ANALYSES	a. CONCEN-TRATION	b. MASS	a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	a. (2) MASS	b. NO. OF ANALYSES
GC/MS FRACTION – VOLATILE COMPOUNDS (*continued*)															
22V. Methylene Chloride (75-09-2)	X		X	<5						1	ug/L		<5		1
23V. 1,1,2,2-Tetrachloroethane (79-34-5)	X		X	<5						1	ug/L		<5		1
24V. Tetrachloro-ethylene (127-18-4)	X		X	<5						1	ug/L		<5		1
25V. Toluene (108-88-3)	X		X	<5						1	ug/L		<5		1
26V. 1,2-Trans-Dichloroethylene (156-60-5)	X		X	<20						1	ug/L		<20		1
27V. 1,1,1-Trichloro-ethane (71-55-6)	X		X	<5						1	ug/L		<5		1
28V. 1,1,2-Trichloro-ethane (79-00-5)	X		X	<5						1	ug/L		<5		1
29V Trichloro-ethylene (79-01-6)	X		X	<5						1	ug/L		<5		1
30V. Trichloro-fluoromethane (75-69-4)				Note 1									Note 1		
31V. Vinyl Chloride (75-01-4)	X		X	<5						1	ug/L		<5		1
GC/MS FRACTION – ACID COMPOUNDS															
1A. 2-Chlorophenol (95-57-8)	X		X	<10						1	ug/L		<10		1
2A. 2,4-Dichloro-phenol (120-83-2)	X		X	<10						1	ug/L		<10		1
3A. 2,4-Dimethyl-phenol (105-67-9)	X		X	<10						1	ug/L		<10		1
4A. 4,6-Dinitro-O-Cresol (534-52-1)	X		X	<50						1	ug/L		<50		1
5A. 2,4-Dinitro-phenol (51-28-5)	X		X	<50						1	ug/L		<50		1
6A. 2-Nitrophenol (88-75-5)	X		X	<10						1	ug/L		<10		1
7A. 4-Nitrophenol (100-02-7)	X		X	<50						1	ug/L		<50		1
8A. P-Chloro-M-Cresol (59-50-7)	X		X	<10						1	ug/L		<10		1
9A. Pentachloro-phenol (87-86-5)	X		X	<50						1	ug/L		<50		1
10A. Phenol (108-95-2)	X		X	<10						1	ug/L		<10		1
11A. 2,4,6-Trichloro-phenol (88-05-2)	X		X	<50						1	ug/L		<50		1

CONTINUE ON REVERSE

Note 1 - This parameter deleted per 40CFR122, Appendix D.

CONTINUED FROM THE FRONT

Outfall E01

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCEN-TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION – BASE/NEUTRAL COMPOUNDS															
1B. Acenaphthene (83-32-9)	X		X	<10						1	ug/L		<10		1
2B. Acenaphtylene (208-96-8)	X		X	<10						1	ug/L		<10		1
3B. Anthracene (120-12-7)	X		X	<10						1	ug/L		<10		1
4B. Benzidine (92-87-5)	X		X	<80						1	ug/L		<80		1
5B. Benzo (*a*) Anthracene (56-55-3)	X		X	<10						1	ug/L		<10		1
6B. Benzo (*a*) Pyrene (50-32-8)	X		X	<10						1	ug/L		<10		1
7B. 3,4-Benzo-fluoranthene (205-99-2)	X		X	<10						1	ug/L		<10		1
8B. Benzo (*ghi*) Perylene (191-24-2)	X		X	<10						1	ug/L		<10		1
9B. Benzo (*k*) Fluoranthene (207-08-9)	X		X	<10						1	ug/L		<10		1
10B. Bis (*2-Chloro-ethoxy*) Methane (111-91-1)	X		X	<10						1	ug/L		<10		1
11B. Bis (*2-Chloro-ethyl*) Ether (111-44-4)	X		X	<10						1	ug/L		<10		1
12B. Bis (*2-Chloroisopropyl*) Ether (102-80-1)	X		X	<10						1	ug/L		<10		1
13B. Bis (*2-Ethyl-hexyl*) Phthalate (117-81-7)	X		X	<10						1	ug/L		<10		1
14B. 4-Bromophenyl Phenyl Ether (101-55-3)	X		X	<10						1	ug/L		<10		1
15B. Butyl Benzyl Phthalate (85-68-7)	X		X	<10						1	ug/L		<10		1
16B. 2-Chloro-naphthalene (91-58-7)	X		X	<10						1	ug/L		<10		1
17B. 4-Chloro-phenyl Phenyl Ether (7005-72-3)	X		X	<10						1	ug/L		<10		1
18B. Chrysene (218-01-9)	X		X	<10						1	ug/L		<10		1
19B. Dibenzo (*a,h*) Anthracene (53-70-3)	X		X	<10						1	ug/L		<10		1
20B. 1,2-Dichloro-benzene (95-50-1)	X		X	<10						1	ug/L		<10		1
21B. 1,3-Di-chloro-benzene (541-73-1)	X		X	<10						1	ug/L		<10		1

CONTINUE ON PAGE V-7

CONTINUED FROM PAGE V-6

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X" a. TESTING REQUIRED	2. b. BELIEVED PRESENT	2. c. BELIEVED ABSENT	3. EFFLUENT a. MAXIMUM DAILY VALUE (1) CONCENTRATION	a. (2) MASS	b. MAXIMUM 30 DAY VALUE (*if available*) (1) CONCENTRATION	b. (2) MASS	c. LONG TERM AVRG. VALUE (*if available*) (1) CONCENTRATION	c. (2) MASS	d. NO. OF ANALYSES	4. UNITS a. CONCEN-TRATION	4. b. MASS	5. INTAKE (*optional*) a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	a. (2) MASS	b. NO. OF ANALYSES
GC/MS FRACTION – BASE/NEUTRAL COMPOUNDS (*continued*)															
22B. 1,4-Dichloro-benzene (106-46-7)	X		X	<10						1	ug/L		<10		1
23B. 3,3-Dichloro-benzidine (91-94-1)	X		X	<20						1	ug/L		<20		1
24B. Diethyl Phthalate (84-66-2)	X		X	<10						1	ug/L		<10		1
25B. Dimethyl Phthalate (131 -11-3)	X		X	<10						1	ug/L		<10		1
26B. Di-N-Butyl Phthalate (84-74-2)	X		X	<10						1	ug/L		<10		1
27B. 2,4-Dinitro-toluene (121-14-2)	X		X	<10						1	ug/L		<10		1
28B. 2,6-Dinitro-toluene (606-20-2)	X		X	<10						1	ug/L		<10		1
29B. Di-N-Octyl Phthalate (117-84-0)	X		X	<10						1	ug/L		<10		1
30B. 1,2-Diphenyl-hydrazine (*as Azo-benzene*) (122-66-7)	X		X	<10						1	ug/L		<10		1
31B. Fluoranthene (206-44-0)	X		X	<10						1	ug/L		<10		1
32B. Fluorene (86-73-7)	X		X	<10						1	ug/L		<10		1
33B. Hexachloro-benzene (118-74-1)	X		X	<10						1	ug/L		<10		1
34B. Hexachloro-butadiene (87-68-3)	X		X	<10						1	ug/L		<10		1
35B. Hexachloro-cyclopentadiene (77-47-4)	X		X	<50						1	ug/L		<50		1
36B Hexachloro-ethane (67-72-1)	X		X	<10						1	ug/L		<10		1
37B. Indeno (*1,2,3-cd*) Pyrene (193-39-5)	X		X	<10						1	ug/L		<10		1
38B. Isophorone (78-59-1)	X		X	<10						1	ug/L		<10		1
39B. Naphthalene (91-20-3)	X		X	<10						1	ug/L		<10		1
40B. Nitrobenzene (98-95-3)	X		X	<10						1	ug/L		<10		1
41B. N-Nitro-sodimethylamine (62-75-9)	X		X	<10						1	ug/L		<10		1
42B. N-Nitrosodi-N-Propylamine (621-64-7)	X		X	<10						1	ug/L		<10		1

CONTINUE ON REVERSE

CONTINUED FROM THE FRONT

Outfall E01

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCEN-TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION – BASE/NEUTRAL COMPOUNDS (*continued*)															
43B. N-Nitro-sodiphenylamine (86-30-6)	X		X	<10						1	ug/L		<10		1
44B. Phenanthrene (85-01-8)	X		X	<10						1	ug/L		<10		1
45B. Pyrene (129-00-0)	X		X	<10						1	ug/L		<10		1
46B. 1,2,4-Tri-chlorobenzene (120-82-1)	X		X	<10						1	ug/L		<10		1
GC/MS FRACTION – PESTICIDES															
1P. Aldrin (309-00-2)			X												
2P. α-BHC (319-84-6)			X												
3P. β-BHC (319-85-7)			X												
4P. γ-BHC (58-89-9)			X												
5P. δ-BHC (319-86-8)			X												
6P. Chlordane (57-74-9)			X												
7P. 4,4'-DDT (50-29-3)			X												
8P. 4,4'-DDE (72-55-9)			X												
9P. 4,4'-DDD (72-54-8)			X												
10P. Dieldrin (60-57-1)			X												
11P. α-Enosulfan (115-29-7)			X												
12P. β-Endosulfan (115-29-7)			X												
13P. Endosulfan Sulfate (1031-07-8)			X												
14P. Endrin (72-20-8)			X												
15P. Endrin Aldehyde (7421-93-4)			X												
16P. Heptachlor (76-44-8)			X												

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EPA I.D. NUMBER (*copy from Item 1 of Form 1*)	OUTFALL NUMBER
IL0000108	E01

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCEN- TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION – PESTICIDES (*continued*)															
17P. Heptachlor Epoxide (1024-57-3)			X												
18P. PCB-1242 (53469-21-9)			X	<0.5						1	ug/L		<0.5		1
19P. PCB-1254 (11097-69-1)			X	<1.0						1	ug/L		<1.0		1
20P. PCB-1221 (11104-28-2)			X	<1.0						1	ug/L		<1.0		1
21P. PCB-1232 (11141-16-5)			X	<0.5						1	ug/L		<0.5		1
22P. PCB-1248 (12672-29-6)			X	<0.5						1	ug/L		<0.5		1
23P. PCB-1260 (11096-82-5)			X	<1.0						1	ug/L		<1.0		1
24P. PCB-1016 (12674-11-2)			X	<0.5						1	ug/L		<0.5		1
25P. Toxaphene (8001-35-2)			X												

PLEASE PRINT OR TYPE IN THE UNSHADED AREAS ONLY. You may report some or all of this information on separate sheets (*use the same format*) instead of completing these pages.
SEE INSTRUCTIONS.

EPA I.D. NUMBER (*copy from Item 1 of Form 1*)
IL0000108

V. INTAKE AND EFFLUENT CHARACTERISTICS (*continued from page 3 of Form 2-C*)

OUTFALL NO.
G01

PART A –You must provide the results of at least one analysis for every pollutant in this table. Complete one table for each outfall. See instructions for additional details.

1. POLLUTANT	2. EFFLUENT							3. UNITS (*specify if blank*)		4. INTAKE (*optional*)		
	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCEN-TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
a. Biochemical Oxygen Demand (*BOD*)	<4						1	mg/L	lb/dy	4.4		1
b. Chemical Oxygen Demand (*COD*)	44						1	mg/L	lb/dy	14		1
c. Total Organic Carbon (*TOC*)	18						1	mg/L	lb/dy	6.2		1
d. Total Suspended Solids (*TSS*)	<4		6		4		1,2,24	mg/L	lb/dy	12		1
e. Ammonia (*as N*)	<1						1	mg/L	lb/dy	<0.10		1
f. Flow	VALUE 0		VALUE		VALUE		1	MGD		VALUE		
g. Temperature (*winter*)	VALUE 15		VALUE		VALUE		1	°C		VALUE		
h. Temperature (*summer*)	VALUE		VALUE		VALUE		0	°C		VALUE		
i. pH	MINIMUM 7.21	MAXIMUM 8.05	MINIMUM	MAXIMUM			1	STANDARD UNITS				

PART B – Mark "X" in column 2-a for each pollutant you know or have reason to believe is present. Mark "X" in column 2-b for each pollutant you believe to be absent. If you mark column 2a for any pollutant which is limited either directly, or indirectly but expressly, in an effluent limitations guideline, you must provide the results of at least one analysis for that pollutant. For other pollutants for which you mark column 2a, you must provide quantitative data or an explanation of their presence in your discharge. Complete one table for each outfall. See the instructions for additional details and requirements.

1. POLLUTANT AND CAS NO. (*if available*)	2. MARK "X"		3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. BELIEVED PRESENT	b. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCEN-TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
			(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
a. Bromide (24959-67-9)		X	<1.0						1	mg/L	lb/dy	<1.0		1
b. Chlorine, Total Residual		X							0	mg/L	lb/dy	<0.05		1
c. Color		X							0	---	---			0
d. Fecal Coliform		X							0	CFU/0.1L	---	3	---	1
e. Fluoride (16984-48-8)	X		1.0						1	mg/L	lb/dy	0.31		1
f. Nitrate-Nitrite (*as N*)	X		0.80							mg/L	lb/dy	0.81		1

Note: Outfall B01 data provided for this outfall, per IEPA authorization.

ITEM V-B CONTINUED FROM FRONT

Outfall G01

1. POLLUTANT AND CAS NO. *(if available)*	2. MARK "X"		3. EFFLUENT							4. UNITS		5. INTAKE *(optional)*		
	a. BELIEVED PRESENT	b. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE *(if available)*		c. LONG TERM AVRG. VALUE *(if available)*		d. NO. OF ANALYSES	a. CONCEN-TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
			(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
g. Nitrogen, Total Organic *(as N)*	X		1.8						1	mg/L	lb/dy	1.1		1
h. Oil and Grease		X	<5				<6		1,4	mg/L	lb/dy	<5		1
i. Phosphorus (as P), Total (7723-14-0)	X		0.71						1	mg/L	lb/dy	<0.10		1
j. Radioactivity														
(1) Alpha, Total									0					0
(2) Beta, Total									0					0
(3) Radium, Total									0					0
(4) Radium 226, Total									0					0
k. Sulfate *(as SO_4)* (14808-79-8)	X		260						1	mg/L	lb/dy	55		1
l. Sulfide *(as S)*		X	2.7						1	mg/L	lb/dy	<2.0		1
m. Sulfite *(as SO_3)* (14265-45-3)		X	2.8						1	mg/L	lb/dy	<2.0		1
n. Surfactants		X	0.16						1	mg/L	lb/dy	0.19		1
o. Aluminum, Total (7429-90-5)		X	<0.050						1	mg/L	lb/dy	<0.050		1
p. Barium, Total (7440-39-3)	X		0.22						1	mg/L	lb/dy	0.06		1
q. Boron, Total (7440-42-8)	X		0.57						1	mg/L	lb/dy	0.35		1
r. Cobalt, Total (7440-48-4)		X	<0.005						1	mg/L	lb/dy	<0.005		1
s. Iron, Total (7439-89-6)	X		0.015						1	mg/L	lb/dy	0.08		1
t. Magnesium, Total (7439-95-4)	X		52						1	mg/L	lb/dy	14		1
u. Molybdenum, Total (7439-98-7)	X		0.019						1	mg/L	lb/dy	<0.010		1
v. Manganese, Total (7439-96-5)		X	<0.010						1	mg/L	lb/dy	0.024		1
w. Tin, Total (7440-31-5)		X	<0.060						1	mg/L	lb/dy	<0.060		1
x. Titanium, Total (7440-32-6)		X	<0.005						1	mg/L	lb/dy	<0.005		1

 CONTINUE ON PAGE V-3

CONTINUED FROM PAGE 3 OF FORM 2-C

EPA I.D. NUMBER (*copy from Item 1 of Form 1*)	OUTFALL NUMBER
IL0000108	G01

PART C - If you are a primary industry and this outfall contains process wastewater, refer to Table 2c-2 in the instructions to determine which of the GC/MS fractions you must test for. Mark "X" in column 2-a for all such GC/MS fractions that apply to your industry and for ALL toxic metals, cyanides, and total phenols. If you are not required to mark column 2-a (*secondary industries, nonprocess wastewater outfalls, and nonrequired GC/MS fractions*), mark "X" in column 2-b for each pollutant you know or have reason to believe is present. Mark "X" in column 2-c for each pollutant you believe is absent. If you mark column 2a for any pollutant, you must provide the results of at least one analysis for that pollutant. If you mark column 2b for any pollutant, you must provide the results of at least one analysis for that pollutant if you know or have reason to believe it will be discharged in concentrations of 10 ppb or greater. If you mark column 2b for acrolein, acrylonitrile, 2,4 dinitrophenol, or 2-methyl-4, 6 dinitrophenol, you must provide the results of at least one analysis for each of these pollutants which you know or have reason to believe that you discharge in concentrations of 100 ppb or greater. Otherwise, for pollutants for which you mark column 2b, you must either submit at least one analysis or briefly describe the reasons the pollutant is expected to be discharged. Note that there are 7 pages to this part; please review each carefully. Complete one table (*all 7 pages*) for each outfall. See instructions for additional details and requirements.

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCEN-TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
METALS, CYANIDE, AND TOTAL PHENOLS															
1M. Antimony, Total (7440-36-0)	X		X	<20						1	ug/L	lb/dy	<20		1
2M. Arsenic, Total (7440-38-2)	X		X	<20						1	ug/L	lb/dy	<20		1
3M. Beryllium, Total (7440-41-7)	X		X	<5						1	ug/L	lb/dy	<5		1
4M. Cadmium, Total (7440-43-9)	X		X	<2						1	ug/L	lb/dy	<2		1
5M. Chromium, Total (7440-47-3)	X		X	<4						1	ug/L	lb/dy	<4		1
6M. Copper, Total (7440-50-8)	X	X		35						1	ug/L	lb/dy	13		1
7M. Lead, Total (7439-92-1)	X		X	<10						1	ug/L	lb/dy	<10		1
8M. Mercury, Total (7439-97-6)	X		X	62						1	ng/L	lb/dy	<1		1
9M. Nickel, Total (7440-02-0)	X		X	<10						1	ug/L	lb/dy	<10		1
10M. Selenium, Total (7782-49-2)	X		X	22						1	ug/L	lb/dy	12		1
11M. Silver, Total (7440-22-4)	X		X	<10						1	ug/L	lb/dy	<10		1
12M. Thallium, Total (7440-28-0)	X		X	<10						1	ug/L	lb/dy	<10		1
13M. Zinc, Total (7440-66-6)	X		X	<10						1	ug/L	lb/dy	<10		1
14M. Cyanide, Total (57-12-5)	X		X	<5						1	ug/L	lb/dy	<5		1
15M. Phenols, Total	X		X	<10						1	ug/L	lb/dy	<5		1
DIOXIN															
2,3,7,8-Tetra-chlorodibenzo-P-Dioxin (1764-01-6)			X	DESCRIBE RESULTS											

CONTINUE ON REVERSE

CONTINUED FROM THE FRONT

Outfall G01

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X" a. TESTING REQUIRED	2. MARK "X" b. BELIEVED PRESENT	2. MARK "X" c. BELIEVED ABSENT	3. EFFLUENT a. MAXIMUM DAILY VALUE (1) CONCENTRATION	3. EFFLUENT a. MAXIMUM DAILY VALUE (2) MASS	3. EFFLUENT b. MAXIMUM 30 DAY VALUE (*if available*) (1) CONCENTRATION	3. EFFLUENT b. MAXIMUM 30 DAY VALUE (*if available*) (2) MASS	3. EFFLUENT c. LONG TERM AVRG. VALUE (*if available*) (1) CONCENTRATION	3. EFFLUENT c. LONG TERM AVRG. VALUE (*if available*) (2) MASS	3. EFFLUENT d. NO. OF ANALYSES	4. UNITS a. CONCEN-TRATION	4. UNITS b. MASS	5. INTAKE (*optional*) a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	5. INTAKE (*optional*) a. LONG TERM AVERAGE VALUE (2) MASS	5. INTAKE (*optional*) b. NO. OF ANALYSES
GC/MS FRACTION – VOLATILE COMPOUNDS															
1V. Accrolein (107-02-8)	X		X	<50						1	ug/L		<50		1
2V. Acrylonitrile (107-13-1)	X		X	<50						1	ug/L		<50		1
3V. Benzene (71-43-2)	X		X	<5						1	ug/L		<5		1
4V. Bis (*Chloro-methyl*) Ether (542-88-1)				Note 1									Note 1		
5V. Bromoform (75-25-2)	X		X	<5						1	ug/L		<5		1
6V. Carbon Tetrachloride (56-23-5)	X		X	<5						1	ug/L		<5		1
7V. Chlorobenzene (108-90-7)	X		X	<5						1	ug/L		<5		1
8V. Chlorodi-bromomethane (124-48-1)	X		X	<5						1	ug/L		<5		1
9V. Chloroethane (75-00-3)	X		X	<5						1	ug/L		<5		1
10V. 2-Chloro-ethylvinyl Ether (110-75-8)	X		X	<5						1	ug/L		<5		1
11V. Chloroform (67-66-3)	X		X	Note 2									Note 2		
12V. Dichloro-bromomethane (75-27-4)	X		X	<5						1	ug/L		<5		1
13V. Dichloro-difluoromethane (75-71-8)				Note 1									Note 1		
14V. 1,1-Dichloro-ethane (75-34-3)	X		X	<5						1	ug/L		<5		1
15V. 1,2-Dichloro-ethane (107-06-2)	X		X	<5						1	ug/L		<5		1
16V. 1,1-Dichloro-ethylene (75-35-4)	X		X	<5						1	ug/L		<5		1
17V. 1,2-Dichloro-propane (78-87-5)	X		X	<5						1	ug/L		<5		1
18V. 1,3-Dichloro-propylene ** (542-75-6)	X		X	<5						1	ug/L		<5		1
19V. Ethylbenzene (100-41-4)	X		X	<5						1	ug/L		<5		1
20V. Methyl Bromide (74-83-9)	X		X	<5						1	ug/L		<5		1
21V. Methyl Chloride (74-87-3)	X		X	<5						1	ug/L		<5		1

CONTINUE ON PAGE V-5

Note 1 - These parameters deleted per 40CFR122, Appendix D.

Note 2 - Analysis suspect therefore no data provided for this constituent.

** This parameter is 1,3-Dichloropropylene per 40CFR122, Appendix D.

CONTINUED FROM PAGE V-4

Outfall G01

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCEN-TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION – VOLATILE COMPOUNDS (*continued*)															
22V. Methylene Chloride (75-09-2)	X		X	<5						1	ug/L		<5		1
23V. 1,1,2,2-Tetrachloroethane (79-34-5)	X		X	<5						1	ug/L		<5		1
24V. Tetrachloro-ethylene (127-18-4)	X		X	<5						1	ug/L		<5		1
25V. Toluene (108-88-3)	X		X	<5						1	ug/L		<5		1
26V. 1,2-Trans-Dichloroethylene (156-60-5)	X		X	<20						1	ug/L		<20		1
27V. 1,1,1-Trichloro-ethane (71-55-6)	X		X	<5						1	ug/L		<5		1
28V. 1,1,2-Trichloro-ethane (79-00-5)	X		X	<5						1	ug/L		<5		1
29V Trichloro-ethylene (79-01-6)	X		X	<5						1	ug/L		<5		1
30V. Trichloro-fluoromethane (75-69-4)				Note 1									Note 1		
31V. Vinyl Chloride (75-01-4)	X		X	<5						1	ug/L		<5		1
GC/MS FRACTION – ACID COMPOUNDS															
1A. 2-Chlorophenol (95-57-8)	X		X	<10						1	ug/L		<10		1
2A. 2,4-Dichloro-phenol (120-83-2)	X		X	<10						1	ug/L		<10		1
3A. 2,4-Dimethyl-phenol (105-67-9)	X		X	<10						1	ug/L		<10		1
4A. 4,6-Dinitro-O-Cresol (534-52-1)	X		X	<50						1	ug/L		<50		1
5A. 2,4-Dinitro-phenol (51-28-5)	X		X	<50						1	ug/L		<50		1
6A. 2-Nitrophenol (88-75-5)	X		X	<10						1	ug/L		<10		1
7A. 4-Nitrophenol (100-02-7)	X		X	<50						1	ug/L		<50		1
8A. P-Chloro-M-Cresol (59-50-7)	X		X	<10						1	ug/L		<10		1
9A. Pentachloro-phenol (87-86-5)	X		X	<50						1	ug/L		<50		1
10A. Phenol (108-95-2)	X		X	<10						1	ug/L		<10		1
11A. 2,4,6-Trichloro-phenol (88-05-2)	X		X	<50						1	ug/L		<50		1

CONTINUE ON REVERSE

Note 1 - This parameter deleted per 40CFR122, Appendix D.

CONTINUED FROM THE FRONT

Outfall G01

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X" a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	3. EFFLUENT a. MAXIMUM DAILY VALUE (1) CONCENTRATION	(2) MASS	b. MAXIMUM 30 DAY VALUE (*if available*) (1) CONCENTRATION	(2) MASS	c. LONG TERM AVRG. VALUE (*if available*) (1) CONCENTRATION	(2) MASS	d. NO. OF ANALYSES	4. UNITS a. CONCEN-TRATION	b. MASS	5. INTAKE (*optional*) a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	(2) MASS	b. NO. OF ANALYSES
GC/MS FRACTION – BASE/NEUTRAL COMPOUNDS															
1B. Acenaphthene (83-32-9)	X		X	<10						1	ug/L		<10		1
2B. Acenaphtylene (208-96-8)	X		X	<10						1	ug/L		<10		1
3B. Anthracene (120-12-7)	X		X	<10						1	ug/L		<10		1
4B. Benzidine (92-87-5)	X		X	<80						1	ug/L		<80		1
5B. Benzo (*a*) Anthracene (56-55-3)	X		X	<10						1	ug/L		<10		1
6B. Benzo (*a*) Pyrene (50-32-8)	X		X	<10						1	ug/L		<10		1
7B. 3,4-Benzo-fluoranthene (205-99-2)	X		X	<10						1	ug/L		<10		1
8B. Benzo (*ghi*) Perylene (191-24-2)	X		X	<10						1	ug/L		<10		1
9B. Benzo (*k*) Fluoranthene (207-08-9)	X		X	<10						1	ug/L		<10		1
10B. Bis (*2-Chloro-ethoxy*) Methane (111-91-1)	X		X	<10						1	ug/L		<10		1
11B. Bis (*2-Chloro-ethyl*) Ether (111-44-4)	X		X	<10						1	ug/L		<10		1
12B. Bis (*2-Chloroisopropyl*) Ether (102-80-1)	X		X	<10						1	ug/L		<10		1
13B. Bis (*2-Ethyl-hexyl*) Phthalate (117-81-7)	X		X	<10						1	ug/L		<10		1
14B. 4-Bromophenyl Phenyl Ether (101-55-3)	X		X	<10						1	ug/L		<10		1
15B. Butyl Benzyl Phthalate (85-68-7)	X		X	<10						1	ug/L		<10		1
16B. 2-Chloro-naphthalene (91-58-7)	X		X	<10						1	ug/L		<10		1
17B. 4-Chloro-phenyl Phenyl Ether (7005-72-3)	X		X	<10						1	ug/L		<10		1
18B. Chrysene (218-01-9)	X		X	<10						1	ug/L		<10		1
19B. Dibenzo (*a,h*) Anthracene (53-70-3)	X		X	<10						1	ug/L		<10		1
20B. 1,2-Dichloro-benzene (95-50-1)	X		X	<10						1	ug/L		<10		1
21B. 1,3-Di-chloro-benzene (541-73-1)	X		X	<10						1	ug/L		<10		1

CONTINUE ON PAGE V-7

CONTINUED FROM PAGE V-6

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCEN-TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION – BASE/NEUTRAL COMPOUNDS (*continued*)															
22B. 1,4-Dichloro-benzene (106-46-7)	X		X	<10						1	ug/L		<10		1
23B. 3,3-Dichloro-benzidine (91-94-1)	X		X	<20						1	ug/L		<20		1
24B. Diethyl Phthalate (84-66-2)	X		X	<10						1	ug/L		<10		1
25B. Dimethyl Phthalate (131 -11-3)	X		X	<10						1	ug/L		<10		1
26B. Di-N-Butyl Phthalate (84-74-2)	X		X	<10						1	ug/L		<10		1
27B. 2,4-Dinitro-toluene (121-14-2)	X		X	<10						1	ug/L		<10		1
28B. 2,6-Dinitro-toluene (606-20-2)	X		X	<10						1	ug/L		<10		1
29B. Di-N-Octyl Phthalate (117-84-0)	X		X	<10						1	ug/L		<10		1
30B. 1,2-Diphenyl-hydrazine (*as Azo-benzene*) (122-66-7)	X		X	<10						1	ug/L		<10		1
31B. Fluoranthene (206-44-0)	X		X	<10						1	ug/L		<10		1
32B. Fluorene (86-73-7)	X		X	<10						1	ug/L		<10		1
33B. Hexachloro-benzene (118-74-1)	X		X	<10						1	ug/L		<10		1
34B. Hexachloro-butadiene (87-68-3)	X		X	<10						1	ug/L		<10		1
35B. Hexachloro-cyclopentadiene (77-47-4)	X		X	<50						1	ug/L		<50		1
36B Hexachloro-ethane (67-72-1)	X		X	<10						1	ug/L		<10		1
37B. Indeno (*1,2,3-cd*) Pyrene (193-39-5)	X		X	<10						1	ug/L		<10		1
38B. Isophorone (78-59-1)	X		X	<10						1	ug/L		<10		1
39B. Naphthalene (91-20-3)	X		X	<10						1	ug/L		<10		1
40B. Nitrobenzene (98-95-3)	X		X	<10						1	ug/L		<10		1
41B. N-Nitro-sodimethylamine (62-75-9)	X		X	<10						1	ug/L		<10		1
42B. N-Nitrosodi-N-Propylamine (621-64-7)	X		X	<10						1	ug/L		<10		1

CONTINUE ON REVERSE

Outfall G01

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X" a. TESTING REQUIRED	2. MARK "X" b. BELIEVED PRESENT	2. MARK "X" c. BELIEVED ABSENT	3. EFFLUENT a. MAXIMUM DAILY VALUE (1) CONCENTRATION	3. EFFLUENT a. MAXIMUM DAILY VALUE (2) MASS	3. EFFLUENT b. MAXIMUM 30 DAY VALUE (*if available*) (1) CONCENTRATION	3. EFFLUENT b. MAXIMUM 30 DAY VALUE (*if available*) (2) MASS	3. EFFLUENT c. LONG TERM AVRG. VALUE (*if available*) (1) CONCENTRATION	3. EFFLUENT c. LONG TERM AVRG. VALUE (*if available*) (2) MASS	3. EFFLUENT d. NO. OF ANALYSES	4. UNITS a. CONCEN-TRATION	4. UNITS b. MASS	5. INTAKE (*optional*) a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	5. INTAKE (*optional*) a. LONG TERM AVERAGE VALUE (2) MASS	5. INTAKE (*optional*) b. NO. OF ANALYSES
GC/MS FRACTION – BASE/NEUTRAL COMPOUNDS (*continued*)															
43B. N-Nitro-sodiphenylamine (86-30-6)	X		X	<10						1	ug/L		<10		1
44B. Phenanthrene (85-01-8)	X		X	<10						1	ug/L		<10		1
45B. Pyrene (129-00-0)	X		X	<10						1	ug/L		<10		1
46B. 1,2,4-Tri-chlorobenzene (120-82-1)	X		X	<10						1	ug/L		<10		1
GC/MS FRACTION – PESTICIDES															
1P. Aldrin (309-00-2)			X												
2P. α-BHC (319-84-6)			X												
3P. β-BHC (319-85-7)			X												
4P. γ-BHC (58-89-9)			X												
5P. δ-BHC (319-86-8)			X												
6P. Chlordane (57-74-9)			X												
7P. 4,4'-DDT (50-29-3)			X												
8P. 4,4'-DDE (72-55-9)			X												
9P. 4,4'-DDD (72-54-8)			X												
10P. Dieldrin (60-57-1)			X												
11P. α-Enosulfan (115-29-7)			X												
12P. β-Endosulfan (115-29-7)			X												
13P. Endosulfan Sulfate (1031-07-8)			X												
14P. Endrin (72-20-8)			X												
15P. Endrin Aldehyde (7421-93-4)			X												
16P. Heptachlor (76-44-8)			X												

CONTINUE ON PAGE V-9

CONTINUED FROM PAGE V-8

EPA I.D. NUMBER (*copy from Item 1 of Form 1*)	OUTFALL NUMBER
IL0000108	G01

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X" a. TESTING REQUIRED	2. b. BELIEVED PRESENT	2. c. BELIEVED ABSENT	3. EFFLUENT a. MAXIMUM DAILY VALUE (1) CONCENTRATION	a. (2) MASS	b. MAXIMUM 30 DAY VALUE (*if available*) (1) CONCENTRATION	b. (2) MASS	c. LONG TERM AVRG. VALUE (*if available*) (1) CONCENTRATION	c. (2) MASS	d. NO. OF ANALYSES	4. UNITS a. CONCEN-TRATION	4. b. MASS	5. INTAKE (*optional*) a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	a. (2) MASS	b. NO. OF ANALYSES
GC/MS FRACTION – PESTICIDES (*continued*)															
17P. Heptachlor Epoxide (1024-57-3)			X												
18P. PCB-1242 (53469-21-9)			X	<0.5						1	ug/L		<0.5		1
19P. PCB-1254 (11097-69-1)			X	<1.0						1	ug/L		<1.0		1
20P. PCB-1221 (11104-28-2)			X	<1.0						1	ug/L		<1.0		1
21P. PCB-1232 (11141-16-5)			X	<0.5						1	ug/L		<0.5		1
22P. PCB-1248 (12672-29-6)			X	<0.5						1	ug/L		<0.5		1
23P. PCB-1260 (11096-82-5)			X	<1.0						1	ug/L		<1.0		1
24P. PCB-1016 (12674-11-2)			X	<0.5						1	ug/L		<0.5		1
25P. Toxaphene (8001-35-2)			X												

PLEASE PRINT OR TYPE IN THE UNSHADED AREAS ONLY. You may report some or all of this information on separate sheets (*use the same format*) instead of completing these pages.
SEE INSTRUCTIONS.

EPA I.D. NUMBER (*copy from Item 1 of Form 1*)
IL0000108

V. INTAKE AND EFFLUENT CHARACTERISTICS *(continued from page 3 of Form 2-C)*

OUTFALL NO. 002

PART A –You must provide the results of at least one analysis for every pollutant in this table. Complete one table for each outfall. See instructions for additional details.

1. POLLUTANT	2. EFFLUENT							3. UNITS (*specify if blank*)		4. INTAKE (*optional*)		
	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCEN-TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
a. Biochemical Oxygen Demand (*BOD*)	<4	<38					1	mg/L	lb/dy	4.4	42	1
b. Chemical Oxygen Demand (*COD*)	22	210					1	mg/L	lb/dy	14	130	1
c. Total Organic Carbon (*TOC*)	5.1	48					1	mg/L	lb/dy	6.2	58	1
d. Total Suspended Solids (*TSS*)	21	200	50	1,250	16	80	1,5,53	mg/L	lb/dy	12	110	1
e. Ammonia (*as N*)	0.23	2					1	mg/L	lb/dy	<0.10	<1	1
f. Flow	VALUE 1.13		VALUE 3.01		VALUE 0.6		1,5,53	MGD	---	VALUE		
g. Temperature (*winter*)	VALUE 9		VALUE		VALUE		1	°C		VALUE		
h. Temperature (*summer*)	VALUE		VALUE		VALUE		0	°C		VALUE		
i. pH	MINIMUM 7.38	MAXIMUM 7.49	MINIMUM 6.9	MAXIMUM 7.6			1,24	STANDARD UNITS				

PART B – Mark "X" in column 2-a for each pollutant you know or have reason to believe is present. Mark "X" in column 2-b for each pollutant you believe to be absent. If you mark column 2a for any pollutant which is limited either directly, or indirectly but expressly, in an effluent limitations guideline, you must provide the results of at least one analysis for that pollutant. For other pollutants for which you mark column 2a, you must provide quantitative data or an explanation of their presence in your discharge. Complete one table for each outfall. See the instructions for additional details and requirements.

1. POLLUTANT AND CAS NO. (*if available*)	2. MARK "X"		3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. BELIEVED PRESENT	b. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCEN-TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
			(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
a. Bromide (24959-67-9)		X	<1.0	<9					1	mg/L	lb/dy	<1.0	<9	1
b. Chlorine, Total Residual		X							0	mg/L	lb/dy	<0.05		1
c. Color		X							0	---	---			0
d. Fecal Coliform	X								0	CFU/0.1L	---	3	---	1
e. Fluoride (16984-48-8)	X		0.32	3					1	mg/L	lb/dy	0.31	3	1
f. Nitrate-Nitrite (*as N*)	X		0.86	8					1	mg/L	lb/dy	0.81	8	1

CONTINUE ON REVERSE

ITEM V-B CONTINUED FROM FRONT

Outfall 002

1. POLLUTANT AND CAS NO. (*if available*)	2. MARK "X"		3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. BELIEVED PRESENT	b. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCEN-TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
			(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
g. Nitrogen, Total Organic (*as N*)	X		1.3	12					1	mg/L	lb/dy	1.1	10	1
h. Oil and Grease		X	<5	<50	<7	<180	<6	<30	1,1,12	mg/L	lb/dy	<5	<50	1
i. Phosphorus (as P), Total (7723-14-0)	X		0.13	1.2					1	mg/L	lb/dy	<0.10	<0.9	1
j. Radioactivity														
(1) Alpha, Total									0					0
(2) Beta, Total									0					0
(3) Radium, Total									0					0
(4) Radium 226, Total									0					0
k. Sulfate (*as SO_4*) (14808-79-8)	X		96	900					1	mg/L	lb/dy	55	520	1
l. Sulfide (*as S*)		X	<2.0	<20					1	mg/L	lb/dy	<2.0	<20	1
m. Sulfite (*as SO_3*) (14265-45-3)		X	<2.0	<20					1	mg/L	lb/dy	<2.0	<20	1
n. Surfactants		X	0.10	0.9					1	mg/L	lb/dy	0.19	1.8	1
o. Aluminum, Total (7429-90-5)	X		0.29	2.7					1	mg/L	lb/dy	<0.050	<0.5	1
p. Barium, Total (7440-39-3)	X		0.10	0.9					1	mg/L	lb/dy	0.06	0.6	1
q. Boron, Total (7440-42-8)	X		0.47	4.4	1.1	28	0.60	3.0	1,1,12	mg/L	lb/dy	0.35	3.3	1
r. Cobalt, Total (7440-48-4)		X	<0.005	<0.1					1	mg/L	lb/dy	<0.005	<0.1	1
s. Iron, Total (7439-89-6)	X		0.33	3.1	0.37	9.2	0.15	0.7	1,4	mg/L	lb/dy	0.08	0.7	1
t. Magnesium, Total (7439-95-4)	X		17	160					1	mg/L	lb/dy	14	130	1
u. Molybdenum, Total (7439-98-7)		X	<0.010	<0.1					1	mg/L	lb/dy	<0.010	<0.1	1
v. Manganese, Total (7439-96-5)	X		0.022	0.2	0.038	0.9	0.020	0.1	1,1,12	mg/L	lb/dy	0.024	0.2	1
w. Tin, Total (7440-31-5)	X		<0.060	<0.6					1	mg/L	lb/dy	<0.060	<0.6	1
x. Titanium, Total (7440-32-6)	X		0.008	<0.1					1	mg/L	lb/dy	<0.005	<0.1	1

CONTINUE ON PAGE V-3

	EPA I.D. NUMBER (*copy from Item 1 of Form 1*)	OUTFALL NUMBER
CONTINUED FROM PAGE 3 OF FORM 2-C	IL0000108	002

PART C - If you are a primary industry and this outfall contains process wastewater, refer to Table 2c-2 in the instructions to determine which of the GC/MS fractions you must test for. Mark "X" in column 2-a for all such GC/MS fractions that apply to your industry and for ALL toxic metals, cyanides, and total phenols. If you are not required to mark column 2-a (*secondary industries, nonprocess wastewater outfalls, and nonrequired GC/MS fractions*), mark "X" in column 2-b for each pollutant you know or have reason to believe is present. Mark "X" in column 2-c for each pollutant you believe is absent. If you mark column 2a for any pollutant, you must provide the results of at least one analysis for that pollutant. If you mark column 2b for any pollutant, you must provide the results of at least one analysis for that pollutant if you know or have reason to believe it will be discharged in concentrations of 10 ppb or greater. If you mark column 2b for acrolein, acrylonitrile, 2,4 dinitrophenol, or 2-methyl-4, 6 dinitrophenol, you must provide the results of at least one analysis for each of these pollutants which you know or have reason to believe that you discharge in concentrations of 100 ppb or greater. Otherwise, for pollutants for which you mark column 2b, you must either submit at least one analysis or briefly describe the reasons the pollutant is expected to be discharged. Note that there are 7 pages to this part; please review each carefully. Complete one table (*all 7 pages*) for each outfall. See instructions for additional details and requirements.

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X" a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	3. EFFLUENT a. MAXIMUM DAILY VALUE (1) CONCENTRATION	(2) MASS	b. MAXIMUM 30 DAY VALUE (*if available*) (1) CONCENTRATION	(2) MASS	c. LONG TERM AVRG. VALUE (*if available*) (1) CONCENTRATION	(2) MASS	d. NO. OF ANALYSES	4. UNITS a. CONCEN-TRATION	b. MASS	5. INTAKE (*optional*) a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	(2) MASS	b. NO. OF ANALYSES
METALS, CYANIDE, AND TOTAL PHENOLS															
1M. Antimony, Total (7440-36-0)	X		X	<20	<0.19					1	ug/L	lb/dy	<20	<0.19	1
2M. Arsenic, Total (7440-38-2)	X		X	<20	<0.19					1	ug/L	lb/dy	<20	<0.19	1
3M. Beryllium, Total (7440-41-7)	X		X	<5	<0.05					1	ug/L	lb/dy	<5	<0.05	1
4M. Cadmium, Total (7440-43-9)	X		X	<2	<0.02					1	ug/L	lb/dy	<2	<0.02	1
5M. Chromium, Total (7440-47-3)	X		X	<4	<0.04					1	ug/L	lb/dy	<4	<0.04	1
6M. Copper, Total (7440-50-8)	X		X	10	0.09					1	ug/L	lb/dy	13	0.12	1
7M. Lead, Total (7439-92-1)	X		X	<10	<0.09					1	ug/L	lb/dy	<10	<0.09	1
8M. Mercury, Total (7439-97-6)	X		X	1.7	<0.01					1	ng/L	lb/dy	<1	<0.01	1
9M. Nickel, Total (7440-02-0)	X		X	<10	<0.09					1	ug/L	lb/dy	<10	<0.09	1
10M. Selenium, Total (7782-49-2)	X		X	12	0.11					1	ug/L	lb/dy	12	0.11	1
11M. Silver, Total (7440-22-4)	X		X	<10	<0.09					1	ug/L	lb/dy	<10	<0.09	1
12M. Thallium, Total (7440-28-0)	X		X	<10	<0.09					1	ug/L	lb/dy	<10	<0.09	1
13M. Zinc, Total (7440-66-6)	X		X	<10	<0.09					1	ug/L	lb/dy	<10	<0.09	1
14M. Cyanide, Total (57-12-5)	X		X	<5	<0.05					1	ug/L	lb/dy	<5	<0.05	1
15M. Phenols, Total	X		X	<10	<0.09					1	ug/L	lb/dy	<5	<0.09	1
DIOXIN															
2,3,7,8-Tetra-chlorodibenzo-P-Dioxin (1764-01-6)			X	DESCRIBE RESULTS											

CONTINUED FROM THE FRONT

Outfall 002

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCEN-TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION – VOLATILE COMPOUNDS															
1V. Accrolein (107-02-8)	X		X	<50						1	ug/L		<50		1
2V. Acrylonitrile (107-13-1)	X		X	<50						1	ug/L		<50		1
3V. Benzene (71-43-2)	X		X	<5						1	ug/L		<5		1
4V. Bis (*Chloro-methyl*) Ether (542-88-1)				Note 1									Note 1		
5V. Bromoform (75-25-2)	X		X	<5						1	ug/L		<5		1
6V. Carbon Tetrachloride (56-23-5)	X		X	<5						1	ug/L		<5		1
7V. Chlorobenzene (108-90-7)	X		X	<5						1	ug/L		<5		1
8V. Chlorodi-bromomethane (124-48-1)	X		X	<5						1	ug/L		<5		1
9V. Chloroethane (75-00-3)	X		X	<5						1	ug/L		<5		1
10V. 2-Chloro-ethylvinyl Ether (110-75-8)	X		X	<5						1	ug/L		<5		1
11V. Chloroform (67-66-3)	X		X	Note 2									Note 2		
12V. Dichloro-bromomethane (75-27-4)	X		X	<5						1	ug/L		<5		1
13V. Dichloro-difluoromethane (75-71-8)				Note 1									Note 1		
14V. 1,1-Dichloro-ethane (75-34-3)	X		X	<5						1	ug/L		<5		1
15V. 1,2-Dichloro-ethane (107-06-2)	X		X	<5						1	ug/L		<5		1
16V. 1,1-Dichloro-ethylene (75-35-4)	X		X	<5						1	ug/L		<5		1
17V. 1,2-Dichloro-propane (78-87-5)	X		X	<5						1	ug/L		<5		1
18V. 1,3-Dichloro-propylene ** (542-75-6)	X		X	<5						1	ug/L		<5		1
19V. Ethylbenzene (100-41-4)	X		X	<5						1	ug/L		<5		1
20V. Methyl Bromide (74-83-9)	X		X	<5						1	ug/L		<5		1
21V. Methyl Chloride (74-87-3)	X		X	<5						1	ug/L		<5		1

CONTINUE ON PAGE V-5

Note 1 - These parameters deleted per 40CFR122, Appendix D.

Note 2 - Analysis suspect therefore no data provided for this constituent.

** This parameter is 1,3-Dichloropropylene per 40CFR122, Appendix D.

CONTINUED FROM PAGE V-4

Outfall 002

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCEN-TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION – VOLATILE COMPOUNDS (*continued*)															
22V. Methylene Chloride (75-09-2)	X		X	<5						1	ug/L		<5		1
23V. 1,1,2,2-Tetrachloroethane (79-34-5)	X		X	<5						1	ug/L		<5		1
24V. Tetrachloro-ethylene (127-18-4)	X		X	<5						1	ug/L		<5		1
25V. Toluene (108-88-3)	X		X	<5						1	ug/L		<5		1
26V. 1,2-Trans-Dichloroethylene (156-60-5)	X		X	<20						1	ug/L		<20		1
27V. 1,1,1-Trichloro-ethane (71-55-6)	X		X	<5						1	ug/L		<5		1
28V. 1,1,2-Trichloro-ethane (79-00-5)	X		X	<5						1	ug/L		<5		1
29V Trichloro-ethylene (79-01-6)	X		X	<5						1	ug/L		<5		1
30V. Trichloro-fluoromethane (75-69-4)				Note 1									Note 1		
31V. Vinyl Chloride (75-01-4)	X		X	<5						1	ug/L		<5		1
GC/MS FRACTION – ACID COMPOUNDS															
1A. 2-Chlorophenol (95-57-8)	X		X	<10						1	ug/L		<10		1
2A. 2,4-Dichloro-phenol (120-83-2)	X		X	<10						1	ug/L		<10		1
3A. 2,4-Dimethyl-phenol (105-67-9)	X		X	<10						1	ug/L		<10		1
4A. 4,6-Dinitro-O-Cresol (534-52-1)	X		X	<50						1	ug/L		<50		1
5A. 2,4-Dinitro-phenol (51-28-5)	X		X	<50						1	ug/L		<50		1
6A. 2-Nitrophenol (88-75-5)	X		X	<10						1	ug/L		<10		1
7A. 4-Nitrophenol (100-02-7)	X		X	<50						1	ug/L		<50		1
8A. P-Chloro-M-Cresol (59-50-7)	X		X	<10						1	ug/L		<10		1
9A. Pentachloro-phenol (87-86-5)	X		X	<50						1	ug/L		<50		1
10A. Phenol (108-95-2)	X		X	<10						1	ug/L		<10		1
11A. 2,4,6-Trichloro-phenol (88-05-2)	X		X	<50						1	ug/L		<50		1

 CONTINUE ON REVERSE

Note 1 - This parameter deleted per 40CFR122, Appendix D.

CONTINUED FROM THE FRONT

Outfall 002

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X" a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	3. EFFLUENT a. MAXIMUM DAILY VALUE (1) CONCENTRATION	(2) MASS	b. MAXIMUM 30 DAY VALUE (*if available*) (1) CONCENTRATION	(2) MASS	c. LONG TERM AVRG. VALUE (*if available*) (1) CONCENTRATION	(2) MASS	d. NO. OF ANALYSES	4. UNITS a. CONCEN-TRATION	b. MASS	5. INTAKE (*optional*) a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	(2) MASS	b. NO. OF ANALYSES
GC/MS FRACTION – BASE/NEUTRAL COMPOUNDS															
1B. Acenaphthene (83-32-9)	X		X	<10						1	ug/L		<10		1
2B. Acenaphtylene (208-96-8)	X		X	<10						1	ug/L		<10		1
3B. Anthracene (120-12-7)	X		X	<10						1	ug/L		<10		1
4B. Benzidine (92-87-5)	X		X	<80						1	ug/L		<80		1
5B. Benzo (*a*) Anthracene (56-55-3)	X		X	<10						1	ug/L		<10		1
6B. Benzo (*a*) Pyrene (50-32-8)	X		X	<10						1	ug/L		<10		1
7B. 3,4-Benzo-fluoranthene (205-99-2)	X		X	<10						1	ug/L		<10		1
8B. Benzo (*ghi*) Perylene (191-24-2)	X		X	<10						1	ug/L		<10		1
9B. Benzo (*k*) Fluoranthene (207-08-9)	X		X	<10						1	ug/L		<10		1
10B. Bis (*2-Chloro-ethoxy*) Methane (111-91-1)	X		X	<10						1	ug/L		<10		1
11B. Bis (*2-Chloro-ethyl*) Ether (111-44-4)	X		X	<10						1	ug/L		<10		1
12B. Bis (*2-Chloroisopropyl*) Ether (102-80-1)	X		X	<10						1	ug/L		<10		1
13B. Bis (*2-Ethyl-hexyl*) Phthalate (117-81-7)	X		X	<10						1	ug/L		<10		1
14B. 4-Bromophenyl Phenyl Ether (101-55-3)	X		X	<10						1	ug/L		<10		1
15B. Butyl Benzyl Phthalate (85-68-7)	X		X	<10						1	ug/L		<10		1
16B. 2-Chloro-naphthalene (91-58-7)	X		X	<10						1	ug/L		<10		1
17B. 4-Chloro-phenyl Phenyl Ether (7005-72-3)	X		X	<10						1	ug/L		<10		1
18B. Chrysene (218-01-9)	X		X	<10						1	ug/L		<10		1
19B. Dibenzo (*a,h*) Anthracene (53-70-3)	X		X	<10						1	ug/L		<10		1
20B. 1,2-Dichloro-benzene (95-50-1)	X		X	<10						1	ug/L		<10		1
21B. 1,3-Di-chloro-benzene (541-73-1)	X		X	<10						1	ug/L		<10		1

CONTINUE ON PAGE V-7

CONTINUED FROM PAGE V-6

Outfall 002

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCEN-TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION – BASE/NEUTRAL COMPOUNDS (*continued*)															
22B. 1,4-Dichloro-benzene (106-46-7)	X		X	<10						1	ug/L		<10		1
23B. 3,3-Dichloro-benzidine (91-94-1)	X		X	<20						1	ug/L		<20		1
24B. Diethyl Phthalate (84-66-2)	X		X	<10						1	ug/L		<10		1
25B. Dimethyl Phthalate (131 -11-3)	X		X	<10						1	ug/L		<10		1
26B. Di-N-Butyl Phthalate (84-74-2)	X		X	<10						1	ug/L		<10		1
27B. 2,4-Dinitro-toluene (121-14-2)	X		X	<10						1	ug/L		<10		1
28B. 2,6-Dinitro-toluene (606-20-2)	X		X	<10						1	ug/L		<10		1
29B. Di-N-Octyl Phthalate (117-84-0)	X		X	<10						1	ug/L		<10		1
30B. 1,2-Diphenyl-hydrazine (*as Azo-benzene*) (122-66-7)	X		X	<10						1	ug/L		<10		1
31B. Fluoranthene (206-44-0)	X		X	<10						1	ug/L		<10		1
32B. Fluorene (86-73-7)	X		X	<10						1	ug/L		<10		1
33B. Hexachloro-benzene (118-74-1)	X		X	<10						1	ug/L		<10		1
34B. Hexachloro-butadiene (87-68-3)	X		X	<10						1	ug/L		<10		1
35B. Hexachloro-cyclopentadiene (77-47-4)	X		X	<50						1	ug/L		<50		1
36B Hexachloro-ethane (67-72-1)	X		X	<10						1	ug/L		<10		1
37B. Indeno (*1,2,3-cd*) Pyrene (193-39-5)	X		X	<10						1	ug/L		<10		1
38B. Isophorone (78-59-1)	X		X	<10						1	ug/L		<10		1
39B. Naphthalene (91-20-3)	X		X	<10						1	ug/L		<10		1
40B. Nitrobenzene (98-95-3)	X		X	<10						1	ug/L		<10		1
41B. N-Nitro-sodimethylamine (62-75-9)	X		X	<10						1	ug/L		<10		1
42B. N-Nitrosodi-N-Propylamine (621-64-7)	X		X	<10						1	ug/L		<10		1

CONTINUE ON REVERSE

CONTINUED FROM THE FRONT

Outfall 002

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCEN-TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION – BASE/NEUTRAL COMPOUNDS (*continued*)															
43B. N-Nitro-sodiphenylamine (86-30-6)	X		X	<10						1	ug/L		<10		1
44B. Phenanthrene (85-01-8)	X		X	<10						1	ug/L		<10		1
45B. Pyrene (129-00-0)	X		X	<10						1	ug/L		<10		1
46B. 1,2,4-Tri-chlorobenzene (120-82-1)	X		X	<10						1	ug/L		<10		1
GC/MS FRACTION – PESTICIDES															
1P. Aldrin (309-00-2)			X												
2P. α-BHC (319-84-6)			X												
3P. β-BHC (319-85-7)			X												
4P. γ-BHC (58-89-9)			X												
5P. δ-BHC (319-86-8)			X												
6P. Chlordane (57-74-9)			X												
7P. 4,4'-DDT (50-29-3)			X												
8P. 4,4'-DDE (72-55-9)			X												
9P. 4,4'-DDD (72-54-8)			X												
10P. Dieldrin (60-57-1)			X												
11P. α-Enosulfan (115-29-7)			X												
12P. β-Endosulfan (115-29-7)			X												
13P. Endosulfan Sulfate (1031-07-8)			X												
14P. Endrin (72-20-8)			X												
15P. Endrin Aldehyde (7421-93-4)			X												
16P. Heptachlor (76-44-8)			X												

CONTINUE ON PAGE V-9

EPA I.D. NUMBER (*copy from Item 1 of Form 1*)	OUTFALL NUMBER
IL0000108	002

CONTINUED FROM PAGE V-8

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCEN-TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION – PESTICIDES (*continued*)															
17P. Heptachlor Epoxide (1024-57-3)			X												
18P. PCB-1242 (53469-21-9)			X	<0.5						1	ug/L		<0.5		1
19P. PCB-1254 (11097-69-1)			X	<1.0						1	ug/L		<1.0		1
20P. PCB-1221 (11104-28-2)			X	<1.0						1	ug/L		<1.0		1
21P. PCB-1232 (11141-16-5)			X	<0.5						1	ug/L		<0.5		1
22P. PCB-1248 (12672-29-6)			X	<0.5						1	ug/L		<0.5		1
23P. PCB-1260 (11096-82-5)			X	<1.0						1	ug/L		<1.0		1
24P. PCB-1016 (12674-11-2)			X	<0.5						1	ug/L		<0.5		1
25P. Toxaphene (8001-35-2)			X												

Please print or type in the unshaded areas only.	EPA ID Number (copy from Item 1 of Form 1) IL0000108	Form Approved. OMB No. 2040-0086. Approval expires 5-31-92.

FORM 2E NPDES

EPA Facilities Which Do Not Discharge Process Wastewater

I. RECEIVING WATERS

For this outfall, list the latitude and longitude, and name of the receiving water(s).

Outfall Number *(list)*	Latitude Deg	Latitude Min	Latitude Sec	Longitude Deg	Longitude Min	Longitude Sec	Receiving Water *(name)*
003	39	03	36	89	24	18	Coffeen Lake

II. DISCHARGE DATE *(If a new discharger, the date you expect to begin discharging)*

existing

III. TYPE OF WASTE

A. Check the box(es) indicating the general type(s) of wastes discharged.

(intake screen backwash)

☐ Sanitary Wastes ☐ Restaurant or Cafeteria Wastes ☐ Noncontact Cooling Water ☑ Other Nonprocess Wastewater *(Identify)*

B. If any cooling water additives are used, list them here. Briefly describe their composition if this information is available.

IV. EFFLUENT CHARACTERISTICS

A. **Existing Sources** — Provide measurements for the parameters listed in the left-hand column below, unless waived by the permitting authority *(see instructions)*.

B. **New Dischargers** — Provide estimates for the parameters listed in the left-hand column below, unless waived by the permitting authority. Instead of the number of measurements taken, provide the source of estimated values *(see instructions)*.

Pollutant or Parameter	(1) Maximum Daily Value *(include units)*		(2) Average Daily Value *(last year)* *(include units)*		(3) Number of Measurements Taken *(last year)*	*(or)* (4) Source of Estimate *(if new discharger)*
	Mass	Concentration	Mass	Concentration		
Biochemical Oxygen Demand (BOD)		4.4 mg/L			1	
Total Suspended Solids (TSS)		12 mg/L			1	
Fecal Coliform *(if believed present or if sanitary waste is discharged)*		NA			0	
Total Residual Chlorine *(if chlorine is used)*		NA			0	
Oil and Grease		<5.0 mg/L			1	
*Chemical oxygen demand (COD)		14 mg/L			1	
*Total organic carbon (TOC)		6.2 mg/L			1	
Ammonia *(as N)*		<0.10mg/L			1	
Discharge Flow	Value 2.33 MGD		0.085 MGD		1	
pH *(give range)*	Value 7.21 - 7.47				1	
Temperature *(Winter)*	11 °C		°C		1	
Temperature *(Summer)*	°C		°C		0	

*If noncontact cooling water is discharged

Outfall 003

V. Except for leaks or spills, will the discharge described in this form be intermittent or seasonal? If yes, briefly describe the frequency of flow and duration.	☑ Yes ☐ No

Intake screen backwash pumps are typically operated three times per day.

VI. TREATMENT SYSTEM *(Describe briefly any treatment system(s) used or to be used)*

None, "screened" Coffeen Lake waater is used to wash the intake screens.

VII. OTHER INFORMATION *(Optional)*

Use the space below to expand upon any of the above questions or to bring to the attention of the reviewer any other information you feel should be considered in establishing permit limitations. Attach additional sheets, if necessary.

Provided flow values are calculated based on pump capacity and runtime.

VIII. CERTIFICATION

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

A. Name & Official Title	B. Phone No. *(area code & no.)*
Michael L. Menne, Vice President - Environmental Services	314-554-2816
C. Signature: Michael L. Menne	D. Date Signed: 07-25-12

EPA ID Number (*copy from Item 1 of Form 1*)
IL0000108

Form Approved. OMB No. 2040-0086
Approval expires 5-31-92

VII. Discharge information *(Continued from page 3 of Form 2F)*

Part A – You must provide the results of at least one analysis for every pollutant in this table. Complete one table for each outfall. See instructions for additional details.

Pollutant and CAS Number *(if available)*	Maximum Values *(include units)*		Average Values *(include units)*		Number of Storm Events Sampled	Sources of Pollutants
	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite		
Oil and Grease	<10 mg/L	N/A			1	Coal, coal ash
Biological Oxygen Demand (BOD5)	<4 mg/L	<4 mg/L			1	Coal, coal ash
Chemical Oxygen Demand (COD)	67 mg/L	35 mg/L			1	Coal, coal ash
Total Suspended Solids (TSS)	150 mg/L	180 mg/L			1	Coal, coal ash, natural sources
Total Nitrogen	1.7 mg/L	1.4 mg/L			1	Coal, coal ash, natural sources
Total Phosphorus	0.17 mg/L	0.16 mg/L			1	Coal, coal ash, natural sources
pH	Minimum 7.05	Maximum 7.05	Minimum	Maximum	1	Coal, coal ash

Part B – List each pollutant that is limited in an effluent guideline which the facility is subject to or any pollutant listed in the facility's NPDES permit for its process wastewater (if the facility is operating under an existing NPDES permit). Complete one table for each outfall. See the instructions for additional details and requirements.

Pollutant and CAS Number *(if available)*	Maximum Values *(include units)*		Average Values *(include units)*		Number of Storm Events Sampled	Sources of Pollutants
	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite		
Total Dissolved	740 mg/L	810 mg/L	830 mg/L	840 mg/L	1,3	Coal, coal ash, natural sources
Solids (TDS)						
Boron	1.7 mg/L	2.0 mg/L	2.3 mg/L	2.2 mg/L	1,3	Coal, coal ash
Manganese	0.14 mg/L	0.16 mg/L	0.30 mg/L	0.24 mg/L	1,3	Coal, coal ash, natural sources
Iron	2.5 mg/L	4.1 mg/L			1	Coal, coal ash, natural sources
PCBs	<0.005 mg/L	<0.005 mg/L			1	Steam electric effluent guidelines

Part C - List each pollutant shown in Table 2F-2, 2F-3, and 2F-4 that you know or have reason to believe is present. See the instructions for additional details and requirements. Complete one table for each outfall.

Pollutant and CAS Number (if available)	Maximum Values (include units)		Average Values (include units)		Number of Storm Events Sampled	Sources of Pollutants
	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite		
Sulfate	250 mg/L	420 mg/L	380 mg/L	420 mg/L	1,3	Coal, coal ash, natural sources
Pesticides	no detect	no dedect			1	Herrbicide control

Part D – Provide data for the storm event(s) which resulted in the maximum values for the flow weighted composite sample.

1. Date of Storm Event	2. Duration of Storm Event (in minutes)	3. Total rainfall during storm event (in inches)	4. Number of hours between beginning of storm measured and end of previous measurable rain event	5. Maximum flow rate during rain event (gallons/minute or specify units)	6. Total flow from rain event (gallons or specify units)
3/02/2012	720	0.70	>72	15 gpm, average	21,600 gallons

7. Provide a description of the method of flow measurement or estimate.

V-notch weir height measurement, standard conversion calculation to obtain flowrate. Total flow calculated based on drainage area, precipitation, and estimated runoff coefficient.

EPA ID Number (*copy from Item 1 of Form 1*)
IL0000108

Form Approved. OMB No. 2040-0086
Approval expires 5-31-92

VII. Discharge information *(Continued from page 3 of Form 2F)*

Part A – You must provide the results of at least one analysis for every pollutant in this table. Complete one table for each outfall. See instructions for additional details.

Pollutant and CAS Number *(if available)*	Maximum Values *(include units)*		Average Values *(include units)*		Number of Storm Events Sampled	Sources of Pollutants
	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite		
Oil and Grease	<10 mg/L	N/A			1	Coal, coal ash
Biological Oxygen Demand (BOD5)	<4 mg/L	<4 mg/L			1	Coal, coal ash
Chemical Oxygen Demand (COD)	42 mg/L	54 mg/L			1	Coal, coal ash
Total Suspended Solids (TSS)	39 mg/L	15 mg/L			1	Coal, coal ash, natural sources
Total Nitrogen	1.4 mg/L	1.6 mg/L			1	Coal, coal ash, natural sources
Total Phosphorus	0.15 mg/L	0.16 mg/L			1	Coal, coal ash, natural sources
pH	Minimum 6.97	Maximum 6.97	Minimum	Maximum	1	Coal, coal ash

Part B – List each pollutant that is limited in an effluent guideline which the facility is subject to or any pollutant listed in the facility's NPDES permit for its process wastewater (if the facility is operating under an existing NPDES permit). Complete one table for each outfall. See the instructions for additional details and requirements.

Pollutant and CAS Number *(if available)*	Maximum Values *(include units)*		Average Values *(include units)*		Number of Storm Events Sampled	Sources of Pollutants
	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite		
Total Dissolved	660 mg/L	620 mg/L	990 mg/L	1020 mg/L	1,3	Coal, coal ash, natural sources
Solids (TDS)						
Boron	0.27 mg/L	0.28 mg/L	0.40 mg/L	0.5 mg/L	1,3	Coal, coal ash
Manganese	0.27 mg/L	0.97 mg/L	1.8 mg/L	2.8 mg/L	1,3	Coal, coal ash, natural sources
Iron	1.0 mg/L	1.2 mg/L			1	Coal, coal ash, natural sources
PCBs	<0.005 mg/L	<0.005 mg/L			1	Steam electric effluent guidelines

Continue on Reverse

Continued from the Front

Outfall 009

Part C - List each pollutant shown in Table 2F-2, 2F-3, and 2F-4 that you know or have reason to believe is present. See the instructions for additional details and requirements. Complete one table for each outfall.

Pollutant and CAS Number *(if available)*	Maximum Values *(include units)*		Average Values *(include units)*		Number of Storm Events Sampled	Sources of Pollutants
	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite		
Sulfate	400 mg/L	400 mg/L	610 mg/L	590 mg/L	1,3	Coal, coal ash, natural sources
Pesticides	no detect	no dedect			1	Herrbicide control

Part D – Provide data for the storm event(s) which resulted in the maximum values for the flow weighted composite sample.

1. Date of Storm Event	2. Duration of Storm Event *(in minutes)*	3. Total rainfall during storm event *(in inches)*	4. Number of hours between beginning of storm measured and end of previous measurable rain event	5. Maximum flow rate during rain event *(gallons/minute or specify units)*	6. Total flow from rain event *(gallons or specify units)*
3/02/2012	720	0.70	>72	7.5 gpm, average	10,800 gallons

7. Provide a description of the method of flow measurement or estimate.

V-notch weir height measurement, standard conversion calculation to obtain flowrate. Total flow calculated based on drainage area, precipitation, and estimated runoff coefficient.

EPA ID Number (*copy from Item 1 of Form 1*)
IL0000108

Form Approved. OMB No. 2040-0086
Approval expires 5-31-92

VII. Discharge information *(Continued from page 3 of Form 2F)*

Part A – You must provide the results of at least one analysis for every pollutant in this table. Complete one table for each outfall. See instructions for additional details.

Pollutant and CAS Number *(if available)*	Maximum Values *(include units)*		Average Values *(include units)*		Number of Storm Events Sampled	Sources of Pollutants
	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite		
Oil and Grease	<10 mg/L	N/A			1	Coal, coal ash
Biological Oxygen Demand (BOD5)	<4 mg/L	<4 mg/L			1	Coal, coal ash
Chemical Oxygen Demand (COD)	42 mg/L	54 mg/L			1	Coal, coal ash
Total Suspended Solids (TSS)	39 mg/L	15 mg/L			1	Coal, coal ash, natural sources
Total Nitrogen	1.4 mg/L	1.6 mg/L			1	Coal, coal ash, natural sources
Total Phosphorus	0.15 mg/L	0.16 mg/L			1	Coal, coal ash, natural sources
pH	Minimum 6.97	Maximum 6.97	Minimum	Maximum	1	Coal, coal ash

Part B – List each pollutant that is limited in an effluent guideline which the facility is subject to or any pollutant listed in the facility's NPDES permit for its process wastewater (if the facility is operating under an existing NPDES permit). Complete one table for each outfall. See the instructions for additional details and requirements.

Pollutant and CAS Number *(if available)*	Maximum Values *(include units)*		Average Values *(include units)*		Number of Storm Events Sampled	Sources of Pollutants
	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite		
Total Dissolved Solids (TDS)	660 mg/L	620 mg/L	970 mg/L	1000 mg/L	1,3	Coal, coal ash, natural sources
Boron	0.27 mg/L	0.28 mg/L	0.41 mg/L	0.40 mg/L	1,3	Coal, coal ash
Manganese	0.27 mg/L	0.97 mg/L	1.1 mg/L	2.1 mg/L	1,3	Coal, coal ash, natural sources
Iron	1.0 mg/L	1.2 mg/L			1	Coal, coal ash, natural sources
PCBs	<0.005 mg/L	<0.005 mg/L			1	Steam electric effluent guidelines

Continue on Reverse

Outfall 010

Part C - List each pollutant shown in Table 2F-2, 2F-3, and 2F-4 that you know or have reason to believe is present. See the instructions for additional details and requirements. Complete one table for each outfall.

Pollutant and CAS Number (if available)	Maximum Values (include units)		Average Values (include units)		Number of Storm Events Sampled	Sources of Pollutants
	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite		
Sulfate	400 mg/L	400 mg/L	540 mg/L	540 mg/L	1,3	Coal, coal ash, natural sources
Pesticides	no detect	no dedect			1	Herrbicide control

Part D – Provide data for the storm event(s) which resulted in the maximum values for the flow weighted composite sample.

1. Date of Storm Event	2. Duration of Storm Event (in minutes)	3. Total rainfall during storm event (in inches)	4. Number of hours between beginning of storm measured and end of previous measurable rain event	5. Maximum flow rate during rain event (gallons/minute or specify units)	6. Total flow from rain event (gallons or specify units)
3/02/2012	720	0.70	>72	Not applicable (see below comment)	2,700 gallons

7. Provide a description of the method of flow measurement or estimate.

V-notch weir height measurement, standard conversion calculation to obtain flowrate. Total flow calculated based on drainage area, precipitation, and estimated runoff coefficient.

Outfall 009 parameters substituted for this Outfall (010) except average values and calculated total flow from rain event, per IEPA approval.

Outfall 011

EPA ID Number (*copy from Item 1 of Form 1*)
IL0000108

Form Approved. OMB No. 2040-0086
Approval expires 5-31-92

VII. Discharge information *(Continued from page 3 of Form 2F)*

Part A – You must provide the results of at least one analysis for every pollutant in this table. Complete one table for each outfall. See instructions for additional details.

Pollutant and CAS Number *(if available)*	Maximum Values *(include units)*		Average Values *(include units)*		Number of Storm Events Sampled	Sources of Pollutants
	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite		
Oil and Grease	<10 mg/L	N/A			1	Coal, coal ash
Biological Oxygen Demand (BOD5)	<4 mg/L	<4 mg/L			1	Coal, coal ash
Chemical Oxygen Demand (COD)	42 mg/L	54 mg/L			1	Coal, coal ash
Total Suspended Solids (TSS)	39 mg/L	15 mg/L			1	Coal, coal ash, natural sources
Total Nitrogen	1.4 mg/L	1.6 mg/L			1	Coal, coal ash, natural sources
Total Phosphorus	0.15 mg/L	0.16 mg/L			1	Coal, coal ash, natural sources
pH	Minimum 6.97	Maximum 6.97	Minimum	Maximum	1	Coal, coal ash

Part B – List each pollutant that is limited in an effluent guideline which the facility is subject to or any pollutant listed in the facility's NPDES permit for its process wastewater (if the facility is operating under an existing NPDES permit). Complete one table for each outfall. See the instructions for additional details and requirements.

Pollutant and CAS Number *(if available)*	Maximum Values *(include units)*		Average Values *(include units)*		Number of Storm Events Sampled	Sources of Pollutants
	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite		
Total Dissolved	660 mg/L	620 mg/L			1	Coal, coal ash, natural sources
Solids (TDS)						
Boron	0.27 mg/L	0.28 mg/L			1	Coal, coal ash
Manganese	0.27 mg/L	0.97 mg/L			1	Coal, coal ash, natural sources
Iron	1.0 mg/L	1.2 mg/L			1	Coal, coal ash, natural sources
PCBs	<0.005 mg/L	<0.005 mg/L			1	Steam electric effluent guidelines

Continue on Reverse

Continued from the Front

Outfall 011

Part C - List each pollutant shown in Table 2F-2, 2F-3, and 2F-4 that you know or have reason to believe is present. See the instructions for additional details and requirements. Complete one table for each outfall.

Pollutant and CAS Number (if available)	Maximum Values (include units)		Average Values (include units)		Number of Storm Events Sampled	Sources of Pollutants
	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite		
Sulfate	400 mg/L	400 mg/L			1	Coal, coal ash, natural sources
Pesticides	no detect	no dedect			1	Herbicide control

Part D – Provide data for the storm event(s) which resulted in the maximum values for the flow weighted composite sample.

1. Date of Storm Event	2. Duration of Storm Event (in minutes)	3. Total rainfall during storm event (in inches)	4. Number of hours between beginning of storm measured and end of previous measurable rain event	5. Maximum flow rate during rain event (gallons/minute or specify units)	6. Total flow from rain event (gallons or specify units)
3/02/2012	720	0.70	>72	Not applicable (see below comment)	2,700 gallons

7. Provide a description of the method of flow measurement or estimate.

V-notch weir height measurement, standard conversion calculation to obtain flowrate. Total flow calculated based on drainage area, precipitation, and estimated runoff coefficient.

Outfall 009 parameters substituted for this Outfall (011) except calculated total flow from rain event, per IEPA approval.

EPA ID Number (*copy from Item 1 of Form 1*)
IL0000108

Form Approved. OMB No. 2040-0086
Approval expires 5-31-92

VII. Discharge information *(Continued from page 3 of Form 2F)*

Part A – You must provide the results of at least one analysis for every pollutant in this table. Complete one table for each outfall. See instructions for additional details.

Pollutant and CAS Number *(if available)*	Maximum Values *(include units)*		Average Values *(include units)*		Number of Storm Events Sampled	Sources of Pollutants
	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite		
Oil and Grease	<10 mg/L	N/A			1	Coal, coal ash
Biological Oxygen Demand (BOD5)	<4 mg/L	<4 mg/L			1	Coal, coal ash
Chemical Oxygen Demand (COD)	42 mg/L	54 mg/L			1	Coal, coal ash
Total Suspended Solids (TSS)	39 mg/L	15 mg/L			1	Coal, coal ash, natural sources
Total Nitrogen	1.4 mg/L	1.6 mg/L			1	Coal, coal ash, natural sources
Total Phosphorus	0.15 mg/L	0.16 mg/L			1	Coal, coal ash, natural sources
pH	Minimum 6.97	Maximum 6.97	Minimum	Maximum	1	Coal, coal ash

Part B – List each pollutant that is limited in an effluent guideline which the facility is subject to or any pollutant listed in the facility's NPDES permit for its process wastewater (if the facility is operating under an existing NPDES permit). Complete one table for each outfall. See the instructions for additional details and requirements.

Pollutant and CAS Number *(if available)*	Maximum Values *(include units)*		Average Values *(include units)*		Number of Storm Events Sampled	Sources of Pollutants
	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite		
Total Dissolved	660 mg/L	620 mg/L	340 mg/L	330 mg/L	1,3	Coal, coal ash, natural sources
Solids (TDS)						
Boron	0.27 mg/L	0.28 mg/L	0.22 mg/L	0.22 mg/L	1,3	Coal, coal ash
Manganese	0.27 mg/L	0.97 mg/L	0.12 mg/L	0.34 mg/L	1,3	Coal, coal ash, natural sources
Iron	1.0 mg/L	1.2 mg/L			1	Coal, coal ash, natural sources
PCBs	<0.005 mg/L	<0.005 mg/L			1	Steam electric effluent guidelines

Continue on Reverse

Outfall 012

Part C - List each pollutant shown in Table 2F-2, 2F-3, and 2F-4 that you know or have reason to believe is present. See the instructions for additional details and requirements. Complete one table for each outfall.

Pollutant and CAS Number (if available)	Maximum Values (include units)		Average Values (include units)		Number of Storm Events Sampled	Sources of Pollutants
	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite		
Sulfate	400 mg/L	400 mg/L	150 mg/L	150 mg/L	1,3	Coal, coal ash, natural sources
Pesticides	no detect	no dedect			1	Herbicide control

Part D – Provide data for the storm event(s) which resulted in the maximum values for the flow weighted composite sample.

1. Date of Storm Event	2. Duration of Storm Event (in minutes)	3. Total rainfall during storm event (in inches)	4. Number of hours between beginning of storm measured and end of previous measurable rain event	5. Maximum flow rate during rain event (gallons/minute or specify units)	6. Total flow from rain event (gallons or specify units)
3/02/2012	720	0.70	>72	Not applicable (see below comment)	17,000 gallons

7. Provide a description of the method of flow measurement or estimate.

V-notch weir height measurement, standard conversion calculation to obtain flowrate. Total flow calculated based on drainage area, precipitation, and estimated runoff coefficient.

Outfall 009 parameters substituted for this Outfall (012) except average values and calculated total flow from rain event, per IEPA approval.

EPA ID Number (*copy from Item 1 of Form 1*)
IL0000108

Form Approved. OMB No. 2040-0086
Approval expires 5-31-92

VII. Discharge information *(Continued from page 3 of Form 2F)*

Part A – You must provide the results of at least one analysis for every pollutant in this table. Complete one table for each outfall. See instructions for additional details.

Pollutant and CAS Number *(if available)*	Maximum Values *(include units)*		Average Values *(include units)*		Number of Storm Events Sampled	Sources of Pollutants
	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite		
Oil and Grease	<10 mg/L	N/A			1	Coal, coal ash
Biological Oxygen Demand (BOD5)	<4 mg/L	<4 mg/L			1	Coal, coal ash
Chemical Oxygen Demand (COD)	40 mg/L	66 mg/L			1	Coal, coal ash
Total Suspended Solids (TSS)	77 mg/L	150 mg/L			1	Coal, coal ash, natural sources
Total Nitrogen	1.3 mg/L	1.8 mg/L			1	Coal, coal ash, natural sources
Total Phosphorus	0.22 mg/L	0.34 mg/L			1	Coal, coal ash, natural sources
pH	Minimum 6.44	Maximum 6.44	Minimum	Maximum	1	Coal, coal ash

Part B – List each pollutant that is limited in an effluent guideline which the facility is subject to or any pollutant listed in the facility's NPDES permit for its process wastewater (if the facility is operating under an existing NPDES permit). Complete one table for each outfall. See the instructions for additional details and requirements.

Pollutant and CAS Number *(if available)*	Maximum Values *(include units)*		Average Values *(include units)*		Number of Storm Events Sampled	Sources of Pollutants
	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite		
Total Dissolved	260 mg/L	240 mg/L			1	Coal, coal ash, natural sources
Solids (TDS)						
Boron	0.09 mg/L	0.09 mg/L			1	Coal, coal ash
Manganese	0.13 mg/L	0.26 mg/L			1	Coal, coal ash, natural sources
Iron	1.2 mg/L	4.5 mg/L			1	Coal, coal ash, natural sources
PCBs	<0.005 mg/L	<0.005 mg/L			1	Steam electric effluent guidelines

Continue on Reverse

Part C - List each pollutant shown in Table 2F-2, 2F-3, and 2F-4 that you know or have reason to believe is present. See the instructions for additional details and requirements. Complete one table for each outfall.

Pollutant and CAS Number *(if available)*	Maximum Values *(include units)*		Average Values *(include units)*		Number of Storm Events Sampled	Sources of Pollutants
	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite		
Sulfate	110 mg/L	50 mg/L			1	Coal, coal ash, natural sources
Pesticides	no detect	no dedect			1	Herbicide control

Part D – Provide data for the storm event(s) which resulted in the maximum values for the flow weighted composite sample.

1. Date of Storm Event	2. Duration of Storm Event *(in minutes)*	3. Total rainfall during storm event *(in inches)*	4. Number of hours between beginning of storm measured and end of previous measurable rain event	5. Maximum flow rate during rain event *(gallons/minute or specify units)*	6. Total flow from rain event *(gallons or specify units)*
3/02/2012	720	0.70	>72	7.5, average	10,800 gallons

7. Provide a description of the method of flow measurement or estimate.

V-notch weir height measurement, standard conversion calculation to obtain flowrate. Total flow calculated based on drainage area, precipitation, and estimated runoff coefficient.

Outfall 014

EPA ID Number (*copy from Item 1 of Form 1*)
IL0000108

Form Approved. OMB No. 2040-0086
Approval expires 5-31-92

VII. Discharge information *(Continued from page 3 of Form 2F)*

Part A – You must provide the results of at least one analysis for every pollutant in this table. Complete one table for each outfall. See instructions for additional details.

Pollutant and CAS Number *(if available)*	Maximum Values *(include units)*		Average Values *(include units)*		Number of Storm Events Sampled	Sources of Pollutants
	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite		
Oil and Grease	<10 mg/L	N/A			1	Coal, coal ash
Biological Oxygen Demand (BOD5)	<4 mg/L	<4 mg/L			1	Coal, coal ash
Chemical Oxygen Demand (COD)	40 mg/L	66 mg/L			1	Coal, coal ash
Total Suspended Solids (TSS)	77 mg/L	150 mg/L			1	Coal, coal ash, natural sources
Total Nitrogen	1.3 mg/L	1.8 mg/L			1	Coal, coal ash, natural sources
Total Phosphorus	0.22 mg/L	0.34 mg/L			1	Coal, coal ash, natural sources
pH	Minimum 6.44	Maximum 6.44	Minimum	Maximum	1	Coal, coal ash

Part B – List each pollutant that is limited in an effluent guideline which the facility is subject to or any pollutant listed in the facility's NPDES permit for its process wastewater (if the facility is operating under an existing NPDES permit). Complete one table for each outfall. See the instructions for additional details and requirements.

Pollutant and CAS Number *(if available)*	Maximum Values *(include units)*		Average Values *(include units)*		Number of Storm Events Sampled	Sources of Pollutants
	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite		
Total Dissolved	260 mg/L	240 mg/L			1	Coal, coal ash, natural sources
Solids (TDS)						
Boron	0.09 mg/L	0.09 mg/L			1	Coal, coal ash
Manganese	0.13 mg/L	0.26 mg/L			1	Coal, coal ash, natural sources
Iron	1.2 mg/L	4.5 mg/L			1	Coal, coal ash, natural sources
PCBs	<0.005 mg/L	<0.005 mg/L			1	Steam electric effluent guidelines

Continue on Reverse

Continued from the Front

Outfall 014

Part C - List each pollutant shown in Table 2F-2, 2F-3, and 2F-4 that you know or have reason to believe is present. See the instructions for additional details and requirements. Complete one table for each outfall.

Pollutant and CAS Number (if available)	Maximum Values (include units)		Average Values (include units)		Number of Storm Events Sampled	Sources of Pollutants
	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite		
Sulfate	110 mg/L	50 mg/L			1	Coal, coal ash, natural sources
Pesticides	no detect	no dedect			1	Herbicide control

Part D – Provide data for the storm event(s) which resulted in the maximum values for the flow weighted composite sample.

1. Date of Storm Event	2. Duration of Storm Event (in minutes)	3. Total rainfall during storm event (in inches)	4. Number of hours between beginning of storm measured and end of previous measurable rain event	5. Maximum flow rate during rain event (gallons/minute or specify units)	6. Total flow from rain event (gallons or specify units)
3/02/2012	720	0.70	>72	Not applicable (see below comment)	13,100 gallons

7. Provide a description of the method of flow measurement or estimate.

V-notch weir height measurement, standard conversion calculation to obtain flowrate. Total flow calculated based on drainage area, precipitation, and estimated runoff coefficient.

Outfall 013 parameters substituted for this Outfall (014) except calculated total flow from rain event, per IEPA approval.

EPA ID Number (*copy from Item 1 of Form 1*)
IL0000108

Form Approved. OMB No. 2040-0086
Approval expires 5-31-92

VII. Discharge information *(Continued from page 3 of Form 2F)*

Part A – You must provide the results of at least one analysis for every pollutant in this table. Complete one table for each outfall. See instructions for additional details.

Pollutant and CAS Number *(if available)*	Maximum Values *(include units)*		Average Values *(include units)*		Number of Storm Events Sampled	Sources of Pollutants
	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite		
Oil and Grease	<10 mg/L	N/A			1	Coal, coal ash
Biological Oxygen Demand (BOD5)	<4 mg/L	<4 mg/L			1	Coal, coal ash
Chemical Oxygen Demand (COD)	40 mg/L	66 mg/L			1	Coal, coal ash
Total Suspended Solids (TSS)	77 mg/L	150 mg/L			1	Coal, coal ash, natural sources
Total Nitrogen	1.3 mg/L	1.8 mg/L			1	Coal, coal ash, natural sources
Total Phosphorus	0.22 mg/L	0.34 mg/L			1	Coal, coal ash, natural sources
pH	Minimum 6.44	Maximum 6.44	Minimum	Maximum	1	Coal, coal ash

Part B – List each pollutant that is limited in an effluent guideline which the facility is subject to or any pollutant listed in the facility's NPDES permit for its process wastewater (if the facility is operating under an existing NPDES permit). Complete one table for each outfall. See the instructions for additional details and requirements.

Pollutant and CAS Number *(if available)*	Maximum Values *(include units)*		Average Values *(include units)*		Number of Storm Events Sampled	Sources of Pollutants
	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite		
Total Dissolved Solids (TDS)	260 mg/L	240 mg/L			1	Coal, coal ash, natural sources
Boron	0.09 mg/L	0.09 mg/L			1	Coal, coal ash
Manganese	0.13 mg/L	0.26 mg/L			1	Coal, coal ash, natural sources
Iron	1.2 mg/L	4.5 mg/L			1	Coal, coal ash, natural sources
PCBs	<0.005 mg/L	<0.005 mg/L			1	Steam electric effluent guidelines

Continue on Reverse

Outfall 015

Part C - List each pollutant shown in Table 2F-2, 2F-3, and 2F-4 that you know or have reason to believe is present. See the instructions for additional details and requirements. Complete one table for each outfall.

Pollutant and CAS Number (if available)	Maximum Values (include units)		Average Values (include units)		Number of Storm Events Sampled	Sources of Pollutants
	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite		
Sulfate	110 mg/L	50 mg/L			1	Coal, coal ash, natural sources
Pesticides	no detect	no dedect			1	Herbicide control

Part D – Provide data for the storm event(s) which resulted in the maximum values for the flow weighted composite sample.

1. Date of Storm Event	2. Duration of Storm Event (in minutes)	3. Total rainfall during storm event (in inches)	4. Number of hours between beginning of storm measured and end of previous measurable rain event	5. Maximum flow rate during rain event (gallons/minute or specify units)	6. Total flow from rain event (gallons or specify units)
3/02/2012	720	0.70	>72	Not applicable (see below comment)	9,000 gallons

7. Provide a description of the method of flow measurement or estimate.

V-notch weir height measurement, standard conversion calculation to obtain flowrate. Total flow calculated based on drainage area, precipitation, and estimated runoff coefficient.

Outfall 013 parameters substituted for this Outfall (015) except calculated total flow from rain event, per IEPA approval.

Outfall 016

EPA ID Number (*copy from Item 1 of Form 1*)
IL0000108

Form Approved. OMB No. 2040-0086
Approval expires 5-31-92

VII. Discharge information *(Continued from page 3 of Form 2F)*

Part A – You must provide the results of at least one analysis for every pollutant in this table. Complete one table for each outfall. See instructions for additional details.

Pollutant and CAS Number *(if available)*	Maximum Values *(include units)*		Average Values *(include units)*		Number of Storm Events Sampled	Sources of Pollutants
	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite		
Oil and Grease	<8 mg/L	N/A			1	Coal, coal ash
Biological Oxygen Demand (BOD5)	5 mg/L	7 mg/L			1	Coal, coal ash
Chemical Oxygen Demand (COD)	12 mg/L	10 mg/L			1	Coal, coal ash
Total Suspended Solids (TSS)	21 mg/L	18 mg/L			1	Coal, coal ash, natural sources
Total Nitrogen	<1.0 mg/L	<1.0 mg/L			1	Coal, coal ash, natural sources
Total Phosphorus	0.10 mg/L	<0.10 mg/L			1	Coal, coal ash, natural sources
pH	Minimum 6.94	Maximum 6.94	Minimum	Maximum	1	Coal, coal ash

Part B – List each pollutant that is limited in an effluent guideline which the facility is subject to or any pollutant listed in the facility's NPDES permit for its process wastewater (if the facility is operating under an existing NPDES permit). Complete one table for each outfall. See the instructions for additional details and requirements.

Pollutant and CAS Number *(if available)*	Maximum Values *(include units)*		Average Values *(include units)*		Number of Storm Events Sampled	Sources of Pollutants
	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite		
Total Dissolved	540 mg/L	540 mg/L			1	Coal, coal ash, natural sources
Solids (TDS)						
Boron	0.23 mg/L	0.30 mg/L			1	Coal, coal ash
Manganese	0.10 mg/L	0.09 mg/L			1	Coal, coal ash, natural sources
Iron	0.53 mg/L	0.55 mg/L			1	Coal, coal ash, natural sources
PCBs	<0.005 mg/L	<0.005 mg/L			1	Steam electric effluent guidelines

Continue on Reverse

Part C - List each pollutant shown in Table 2F-2, 2F-3, and 2F-4 that you know or have reason to believe is present. See the instructions for additional details and requirements. Complete one table for each outfall.

Pollutant and CAS Number *(if available)*	Maximum Values *(include units)*		Average Values *(include units)*		Number of Storm Events Sampled	Sources of Pollutants
	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite		
Sulfate	180 mg/L	170 mg/L			1	Coal, coal ash, natural sources
Pesticides	no detect	no dedect			1	Herbicide control

Part D – Provide data for the storm event(s) which resulted in the maximum values for the flow weighted composite sample.

1. Date of Storm Event	2. Duration of Storm Event *(in minutes)*	3. Total rainfall during storm event *(in inches)*	4. Number of hours between beginning of storm measured and end of previous measurable rain event	5. Maximum flow rate during rain event *(gallons/minute or specify units)*	6. Total flow from rain event *(gallons or specify units)*
3/08/2012	180	0.40	>72	15 gpm	3,600 gallons

7. Provide a description of the method of flow measurement or estimate.

V-notch weir height measurement, standard conversion calculation to obtain flowrate. Total flow calculated based on drainage area, precipitation, and estimated runoff coefficient.

Outfall 018

EPA ID Number (*copy from Item 1 of Form 1*) IL0000108

Form Approved. OMB No. 2040-0086
Approval expires 5-31-92

VII. Discharge information *(Continued from page 3 of Form 2F)*

Part A – You must provide the results of at least one analysis for every pollutant in this table. Complete one table for each outfall. See instructions for additional details.

Pollutant and CAS Number (*if available*)	Maximum Values (*include units*)		Average Values (*include units*)		Number of Storm Events Sampled	Sources of Pollutants
	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite		
Oil and Grease	<17 mg/L	N/A			1	Coal, coal ash
Biological Oxygen Demand (BOD5)	<4 mg/L	<4 mg/L			1	Coal, coal ash
Chemical Oxygen Demand (COD)	16 mg/L	14 mg/L			1	Coal, coal ash
Total Suspended Solids (TSS)	6.4 mg/L	<4 mg/L	5.6 mg/L	NA	1,10	Coal, coal ash, natural sources
Total Nitrogen	1.0 mg/L	<1 mg/L			1	Coal, coal ash, natural sources
Total Phosphorus	<0.10 mg/L	<0.10 mg/L	0.07 mg/L		1,6	Coal, coal ash, natural sources
pH	Minimum 7.11	Maximum 7.11	Minimum 6.74	Maximum 7.77	1,6	Coal, coal ash

Part B – List each pollutant that is limited in an effluent guideline which the facility is subject to or any pollutant listed in the facility's NPDES permit for its process wastewater (if the facility is operating under an existing NPDES permit). Complete one table for each outfall. See the instructions for additional details and requirements.

Pollutant and CAS Number (*if available*)	Maximum Values (*include units*)		Average Values (*include units*)		Number of Storm Events Sampled	Sources of Pollutants
	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite		
Total Dissolved	170 mg/L	230 mg/L			1	Coal, coal ash, natural sources
Solids (TDS)						
Boron	0.05 mg/L	0.05 mg/L	0.05 mg/L	NA	1,11	Coal, coal ash
Manganese	<0.10 mg/L	<0.10 mg/L	<0.01 mg/L	NA	1,11	Coal, coal ash, natural sources
Iron	0.12 mg/L	0.08 mg/L	0.14 mg/L	NA	1,11	Coal, coal ash, natural sources
PCBs	<0.005 mg/L	<0.005 mg/L			1	Steam electric effluent guidelines

Part C - List each pollutant shown in Table 2F-2, 2F-3, and 2F-4 that you know or have reason to believe is present. See the instructions for additional details and requirements. Complete one table for each outfall.

Pollutant and CAS Number (if available)	Maximum Values (include units)		Average Values (include units)		Number of Storm Events Sampled	Sources of Pollutants
	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite		
Sulfate	20 mg/L	44 mg/L	15 mg/L	NA	1,11	Coal, coal ash, natural sources
Pesticides	no detect	no detect			1	Herbicide control
Chloride	5 mg/L	NA	6 mg/L	NA	1,10	Coal, coal ash, natural sources
Mercury	<1 ng/L	NA	<1 ng/L	NA	1,2	Coal, coal ash, natural sources
Lead	<10 ug/L	NA	<10 ug/L	NA	1,10	Coal, coal ash, natural sources
Nickel	<5 ug/L	NA	<8 ug/L	NA	1,10	Coal, coal ash, natural sources
Selenium	<5 ug/L	NA	<8 ug/L	NA	1,10	Coal, coal ash, natural sources
Silver	<3 ug/L	NA	<6 ug/L	NA	1,10	Coal, coal ash, natural sources
Zinc	19 ug/L	NA	<30 ug/L	NA	1,10	Coal, coal ash, natural sources
Arsenic	<20 ug/L	NA	<18 ug/L	NA	1,10	Coal, coal ash, natural sources
Barium	70 ug/L	NA	71 ug/L	NA	1,10	Coal, coal ash, natural sources
Cadmium	<1 ug/L	NA	<1 ug/L	NA	1,10	Coal, coal ash, natural sources
Chromium	<4 ug/L	NA	<4 ug/L	NA	1,10	Coal, coal ash, natural sources
Chromium+6	<10 ug/L	NA	<6 ug/L	NA	1,10	Coal, coal ash, natural sources
Copper	<5 ug/L	NA	<6 ug/L	NA	1,10	Coal, coal ash, natural sources
Cyanide	<5 ug/L	NA	<5 ug/L	NA	1,10	Coal, coal ash, natural sources
CyanideWAD	<5 ug/L	NA	<5 ug/L	NA	1,10	Coal, coal ash, natural sources
Fluoride	0.33 mg/L	NA	0.32mg/L	NA	1,10	Coal, coal ash, natural sources

Part D – Provide data for the storm event(s) which resulted in the maximum values for the flow weighted composite sample.

1. Date of Storm Event	2. Duration of Storm Event (in minutes)	3. Total rainfall during storm event (in inches)	4. Number of hours between beginning of storm measured and end of previous measurable rain event	5. Maximum flow rate during rain event (gallons/minute or specify units)	6. Total flow from rain event (gallons or specify units)
3/02/2012	720	0.70	>72	20 gpm	2,880 gallons

7. Provide a description of the method of flow measurement or estimate.

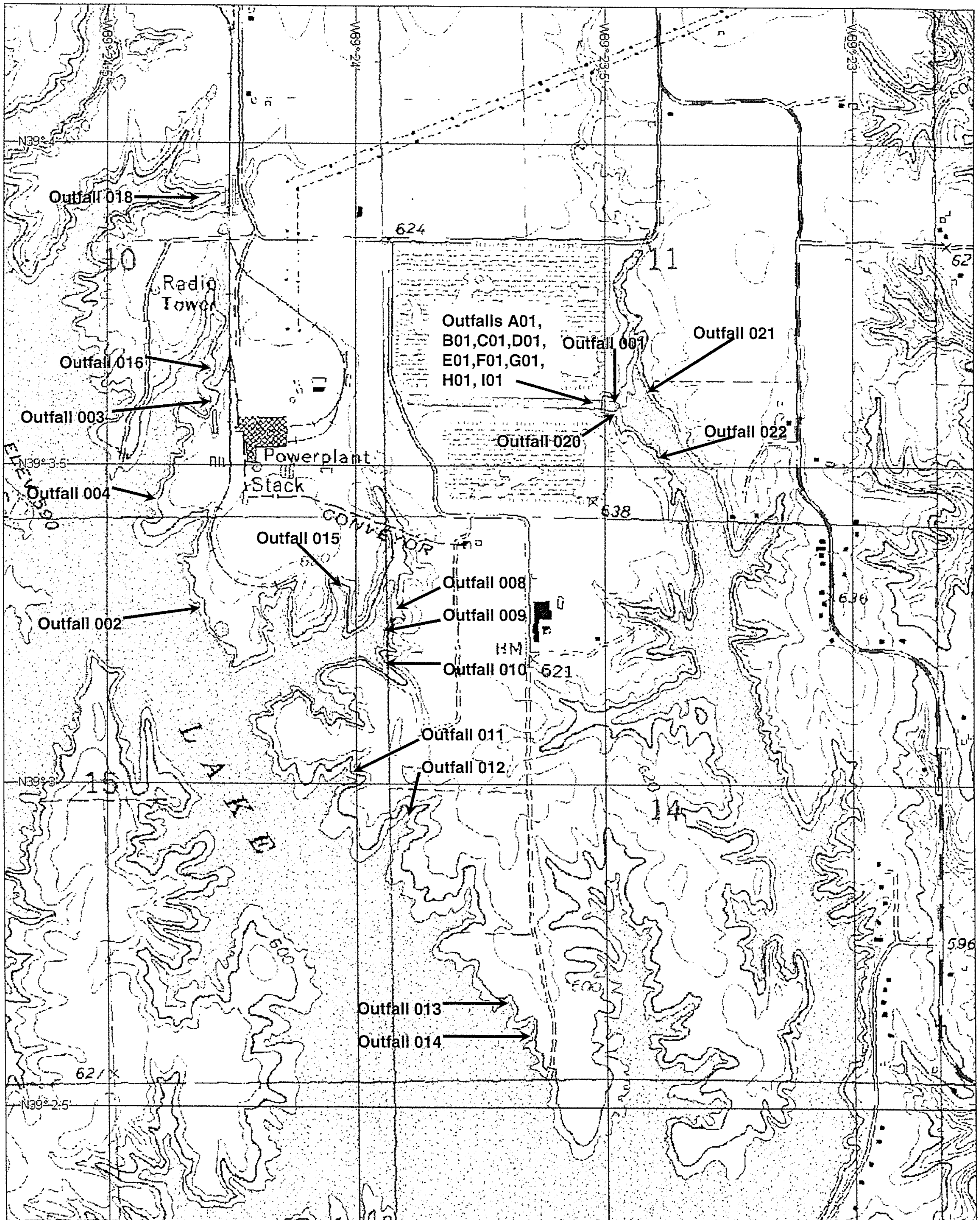
Height of flow in discharge conduit, standard conversion calculation to obtain flowrate and total flow from rain event.

Prior to discharge, a settling basin with treatment for >100-year,24-hour precipitation event is provided. Therefore, composite sample data for those parameters noted as "NA" is not provided for this Outfall (018).

Data for As, Ba, Cd, Cr, Cr+6, Cu, CN, CN (WAD), F-, Pb, Ni, Se, Ag, and Zn are provided in accordance with Special Condition 24 of the current effective NPDES permit.

Ameren Energy Generating Company – Coffeen Power Station
NPDES Permit IL0000108 Outfalls

Revised 27JULY2012



3-D TopoQuads Copyright © 1999 DeLorme Yarmouth, ME 04096 Source Data: USGS

400 ft Scale: 1 : 14,400 Detail: 13-4 Datum: WGS84

COFFEEN POWER STATION
NPDES PERMIT REAPPLICATION

Attachment Index

Attachment A
Description of Site & Designated Outfalls

General Site Description

The Ameren Energy Generating Company Coffeen Power Station is a 950 MW coal-fired electric generating station that initially commenced operations in 1965. The station is located on Coffeen Lake, approximately three miles south of the town of Coffeen, Montgomery County, Illinois. The plant site encompasses approximately 1,350 acres.

The existing Coffeen Power Station NPDES permit contains 22 designated outfalls; each is described below.

Outfall 001 – Condenser Cooling Water Flume Discharge

This is the discharge from the condenser cooling water flume. Non-contact water used for cooling the condensers and other heat exchangers is combined with other process wastewater streams prior to discharge. Stoplogs were placed at the Outfall 001 discharge structure, resulting in the diversion of the cooling water discharge to Outfall 020. Normally, only minor *de minimis* leakage occurs through the stoplogs. This leakage is estimated once/week by Station staff and reported to the Agency.

Outfall 020 – Condenser Cooling Water Diversion Channel Overflow

This is the discharge from the condenser cooling water flume. Non-contact water used for cooling the condensers and other heat exchangers is combined with other process wastewater streams prior to discharge. Discharge is to Coffeen Lake and this outfall is considered to be a process wastestream.

Outfall 021 – Condenser Cooling Water Supplemental Cooling Pond Overflow

This is the discharge from the supplemental perched cooling pond. Water from the condenser cooling water flume is pumped to the pond as necessary to comply with mixing zone temperature limitations. Discharge is to Coffeen Lake.

Outfall 022 – Condenser Cooling Water Supplemental Cooling Tower Discharge

This discharge is from the permanent supplemental cooling towers. Water from the condenser cooling water flume is pumped to the mechanical draft cooling towers as necessary to comply with mixing zone temperature limitations. Discharge is to Coffeen Lake.

Outfall A01 – Boiler Draining Wastewater

This is the discharge from the periodic draining of the Unit 1 and 2 boilers. This wastestream consists of high-purity demineralized water with dilute aqueous ammonia to maintain a pH within the range of 8.2-8.6 during normal operations. Occasionally, the boilers are drained through this outfall to perform maintenance activities. Discharge is to the Station cooling water flume. This outfall is considered to be a process wastestream.

Outfall B01 – Raw Water Treatment and Demineralizer Regenerant Wastes

This outfall is comprised of wastewater from the Station raw water treatment system (microfiltration and reverse osmosis) and demineralizer regeneration. Prior to discharge, these wastestreams are routed to an equalization tank. Discharge is to the Station cooling water flume. Outfall B01 is considered to be a process wastestream.

Outfall C01 – Unit 1 Floor Drains and Sumps

This is the discharge from the oil/water separator that serves the Unit 1 floor and equipment drains and sumps; including storm water (roof and yard drains) associated with industrial activity. This discharge is normally routed to the Recycle Pond. Alternatively, the discharge may be routed to the Station cooling water flume via Outfall C01. Excluding storm water, this outfall is considered to be a process wastestream.

Outfall D01 – Sewage Treatment Plant Discharge

This is the discharge from the Station package sewage treatment plant that features an Imhoff tank, trickling filter, and sand filter. The sewage treatment plant primarily receives sanitary wastes from Station restrooms and lunch facilities. Minor amounts of wastewater from the Station chemical laboratory is also received by this sewage treatment plant. Treated sanitary sewage effluent is discharged into the Station cooling water flume. This discharge is considered to be a non-process wastestream.

Outfall E01 – Unit 2 Floor Drains and Sumps

This is the discharge from the oil/water separator that serves the Unit 2 floor and equipment drains and sumps; including storm water (roof and yard drains) associated with industrial activity. This discharge is normally routed to the Recycle Pond. Alternatively, the discharge may be routed to the Station cooling water flume via Outfall E01. Excluding storm water, this outfall is considered to be a process wastestream.

Outfall F01 – Maintenance Shop Oil/Water Separator

This is the discharge from the maintenance shop oil/water separator. This outfall is designated by the Agency as Outfall F01 with no requirements for monitoring. The Station utilizes Best Management Practices, including routine visual inspections. Discharge of the maintenance shop oil/water separator is to the Station cooling water flume.

Outfall G01 – Equalization Tank Bypass Line Discharge

This is the discharge from the same wastewater sources as Outfall B01. As conditions dictate, the equalization tank is removed from service for maintenance of the tank. The Station has committed to restricting the equalization tank bypass (and subsequent discharge via Outfall G01) to the minimum amount of time necessary to perform equalization tank maintenance. Discharge during periods of equalization tank bypass is to the Station cooling water flume. This outfall is considered to be a process wastestream.

Outfalls H01 & I01 – Storm Water from the Closed Ash Pond

These are designated outfalls that would discharge storm water during major maintenance activities of the closed ash pond cap requiring strategic cuts into the pond berm. Discharge is to the cooling water discharge flume. These outfalls are not yet constructed and therefore are not functional.

Outfall 002 – Coal Yard Settling Pond Discharge

The Station Coal Yard Settling Pond receives storm water runoff from the coal yard, low volume wastestreams, limestone runoff pond overflow, and plant yard drains. The pond was designed to contain a 10-year 24-hour storm event for treatment. Periodically, coal is recovered from the pond and placed on the coal pile for combustion in the Station boilers. Discharge is to Coffeen Lake. This outfall is considered to be a process wastestream, excluding storm water.

Outfall 003 – Intake Screen Backwash

This outfall consists of wastewater from the intake screen backwash. This outfall is considered to be a non-process wastestream as it is a return of water from Coffeen Lake. Screened Coffeen Lake water is used to wash traveling screens at the intake at periodic intervals. Note that the discharge of collected debris is removed via a trash basket prior to discharge of the water.

Outfalls 008-016 – Storm Water Runoff from Rail Spur

These outfalls receive storm water from various drainage areas, including the Station rail spur. Discharge is to Coffeen Lake.

Outfall 018 – Storm Water Associated with the Ash Landfill

This outfall is the overflow of the treatment pond that receives storm water from the Station coal combustion byproduct landfill and surrounding area. The treatment pond is designed to provide treatment for a >100year, 24-hour precipitation event. Discharge is to Coffeen Lake.

Attachment B
Description of Other Discharges

De-icing Line

The Coffeen Power Station has a point at which water could be returned to Coffeen Lake that is not designated as an outfall. This point is associated with the plant intake structure. During winter months (as ambient temperature may dictate), a portion of the non-contact cooling water from the Station condensers is diverted through the deicing line and discharged at the face of the intake structure to prevent ice formation on the intake screens and trash racks. When this system is operated, intake circulating water flow forces the heated deicing water directly into the intake structure. Note that the combined intake circulating water flow and deicing line flows would enter the condensers and be discharged via the Station cooling water discharge flume and Outfalls 001, 020, 021 and/or 022.

Gypsum Management Facility

The Coffeen Power Station employs two impoundments for management of gypsum material from the wet flue gas desulfurization (WFGD) system. These two impoundments, the "Gypsum Stack" and "Reclaim Pond", collectively comprise the Gypsum Management Facility (GMF). Gypsum slurry from the WFGD is directed to the Gypsum Stack where the gypsum separates from the liquid component. Decant water flows to the Reclaim Pond which also acts as a surge storage volume for ultimate reuse in the WFGD system. Operation of the no-discharge GMF is governed via Water Pollution Control Permit 2008-EA-4661. Dam safety regulations dictate that the GMF design incorporate an engineered overflow structure in the Reclaim Pond to maintain integrity of the GMF during extreme conditions.

Attachment C
Reapplication Sampling and Analysis

Analysis and Flow Data

This section describes the source of data listed in Forms 2C, 2E, and 2F, enclosed with this NPDES permit reapplication.

- Data from the special sampling project described below is listed in the "Maximum Daily Value" columns. Where applicable, the flows monitored during the sampling period are shown here and used to calculate mass discharges under this heading.
- Values listed under the headings "Maximum 30 Day Value" and "Long Term Average Value" were compiled from data required by the existing NPDES permit during the March 2011 – February 2012 period. Mass discharges under these headings were calculated using the appropriate long-term average flow rates. Rounding of calculations was performed in accordance with Standard Methods, 21st Edition.
- "Intake" columns list data collected from a composite sample obtained from Coffeen Lake.

Sampling and Analysis for this Reapplication

A series of water samples were collected by Ameren Energy Generating Company employees as follows:

Outfall or Source	Date Sampled
Outfalls 008, 009, 013, 018	March 2, 2012
Outfalls C01, 002, Coffeen Lake	March 6, 2012
Outfall 016	March 8, 2012
Outfalls 020, A01, B01, D01	March 14, 2012

Samples were obtained on April 23, 2012 for those non-stormwater locations requiring semi-volatile organic and pesticide analyses.

Composite samples were not required for Outfall 002, as the retention time exceeds 24 hours (per 40 CFR, Part 122.21 (g) (7)). A single grab sample was obtained for Outfall 002.

Analyses of Outfalls 020, A01, B01, C01, and D01 samples consisted of 4 individual grabs (for non-compositing parameters: pH, oil & grease, total residual chlorine, and temperature). Composite samples consisted of at least 8 flow proportional aliquots obtained during the 24-hour operation of the facility during the sampling event.

Sampling and analyses for storm water outfalls 008, 009, 013, 016, and 018 were conducted during the first three hours of discharge from a qualified rain event. Analyses were performed on the "first flush" and flow-weighted composite samples. A flow-weighted average oil & grease component was determined via analysis of individual grab samples obtained during the compositing period. The minimum and maximum listed pH values are from samples obtained during the compositing period.

The following effluent constituents were substituted for various outfalls, per prior approval by the Agency:

Outfall	Forms Submitted	Substituted Outfall
001	2C *	020
020	2C *	---
021	2C *	020
022	2C *	020
A01	2C *	---
B01	2C *	---
C01	2C *	---
D01	2E	---
E01	2C *	C01
F01	None	---
G01	2C *	B01
H01	2F	---
I01	2F	---
002	2C *	---
003	2E	Coffeen Lake
008	2F	---
009	2F	---
010	2F	009
011	2F	009
012	2F	009
013	2F	---
014	2F	013
015	2F	013
016	2F	---
018	2F	---

* Form 2C submitted without analysis for "radioactivity"

Data provided for Outfalls H01 and I01 is from previous sampling events intended to characterize a discharge that were obtained during a "simulated" event. These two outfalls are for management of storm water from the Closed Ash Pond 2 during maintenance activities that would necessitate strategic cutting of the berm structures.

No samples of Outfall F01 were obtained as there is insufficient flow to characterize the effluent quality.

Sampling was not performed during storm events for Outfalls 001, 020, 021, 022, C01, E01, 001, and 002 per prior agreement with the Agency. The IEPA has determined that treatment of storm water in Outfall 002 constitutes BAT/BCT. As storm water is a minor constituent of the influent flow to these outfalls, sampling during storm events was not necessary.

A series of grab samples representative of Coffeen Lake was obtained and is used for the "intake" constituents listed on Form 2C.

Following on-site analysis of temperature, pH, and total residual chlorine by Coffeen Power Station staff; samples were preserved and subsequently analyzed in accordance with 40 CFR Part 136. A contract laboratory, PDC Laboratories Incorporated, conducted the remaining analyses except for Fecal Coliforms which was analyzed by Prairie Analytical Systems Incorporated, and Mercury which was analyzed by Microbac Laboratories Incorporated.

Station electrical generation during each of the process discharge sampling events was as follows:

Sample Date	MWH, total	% Plant Capacity
March 2, 2012	5458	23.9
March 6, 2012	0	0
March 14, 2012	0	0

Note: MWH = Megawatt Hours

Attachment D
Chemical Usage

Commercial chemical products used at the Coffeen Power Station can be categorized in three categories of usage, as they relate to wastewater discharges.

Bulk Usage

This is a group of chemicals that are used in plant systems for chemical treatment at some regular rate or interval. Table 1 lists these additives with pertinent data including approximate quantity stored on site, annual rate of use of the chemical, and the outfalls from which each is discharged.

Laboratory Reagents

This group consists of chemicals stored and used in the plant laboratory. The main characteristic of this group is the low relative usage quantity. At the request of the Agency, Ameren Energy Generating Company will provide an inventory of these chemicals.

Other Chemical Products

This grouping includes other chemical compounds, which may be discharged and are not included in the previous two groups.

Various solvents are sparingly used for equipment maintenance and/or lubrication. These waste solvents are disposed of in accordance with waste management rules and regulations. Some of these solvents may contain the following volatile compounds:

Chemical	CAS Number
Dichlorodifluoromethane	75-71-8
Toluene	108-88-3
Tetrachloroethane	127-18-4
Naphtha	8080-30-6
Methyl Ethyl Ketone	1338-23-4

Other chemical products, which may be discharged, include other miscellaneous maintenance and household cleaning products. Ameren Energy Generating Company will provide an inventory of these, at the Agency's request.

Freeze conditioning agents may be applied to coal (at the point of shipment) during severe winter weather. These agents typically consist of various mixtures of ethylene glycol, diethylene glycol, propylene glycol, calcium chloride, magnesium chloride and sodium chloride. When used, freeze-conditioning agents are applied at a rate of approximately 2 pints per ton of coal. Freeze conditioning agents may also be used at the coal receiving area located in the coal handling system at Coffeen Power Station. Freeze conditioning agent residuals may be present in coal pile runoff. In addition, coal belt deicing agents are applied as necessary during severe winter conditions. As explained in Attachment J, coal pile runoff is routed to the Coal Yard Settling Pond (Outfall 002).

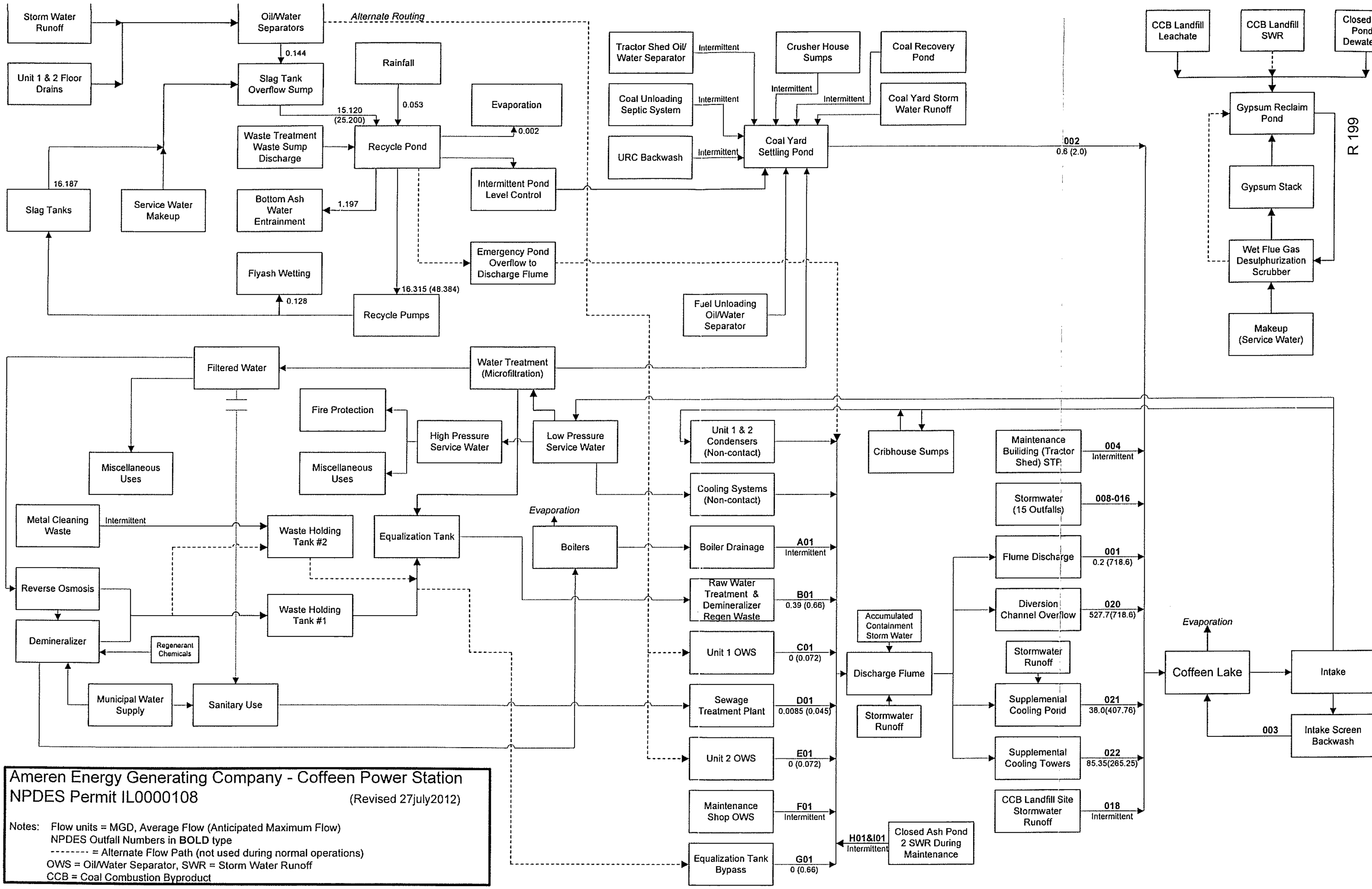
Dust suppression agents may also be applied to coal. The Coffeen Power Station currently utilizes two Benetech products: BT-415 and BT100F2. A small amount of these products may be discharged from the Coal Yard Settling Pond, Outfall 002.

Coffeen Power Station boilers are chemically cleaned, approximately every ten years. The spent chemical cleaning solutions are not discharged but are thermally treated at the plant by injecting them into an operating boiler, as permitted by the Station Boiler Operating Permit. Thermally treating these cleaning chemicals is the preferred management method. Evaporation of the chemical cleaning wastewater vaporizes the aqueous fraction and would destroy any residual organic cleaning agent. Research was conducted by the Electric Power Research Institute (EPRI) on discharges from utility boilers during thermal treatment of these wastestreams. EPRI's analysis concluded that emissions of most metal compounds from the cleaning wastes were insignificant compared to the normal plant emissions. In fact, emissions associated with boiler cleaning waste evaporation were small compared to the normal fluctuations in coal composition and ash content. Alternatively, boiler chemical cleaning wastewater rinses may be placed on an active portion of the coal pile, as provided in the current NPDES permit.

Table 1 – Bulk Chemical Usage

1.	Ammonium Hydroxide (30%) Maximum quantity on site: 7,000 gallons. Used as a boiler water treatment chemical. Usage: 223,860 pounds/year. Discharged to the boiler draining wastewater (Outfall A01).
2.	Sodium Hypochlorite (10% w/v) Maximum quantity on site: 300 gallons. Used as a water treatment chemical. Usage: 2,090 pounds/year. Discharged to Outfalls B01 or alternatively G01.
3.	Sodium Hydroxide (50% solution) Maximum quantity on site: 15,000 gallons. Used for regeneration of the Station demineralizers. Usage: 380,000 pounds/year. Discharged to Outfall B01 or alternatively G01.
4.	Sulfuric Acid (93%) Maximum quantity on site: 84,420 pounds. Used to regenerate the Station demineralizers and as a water treatment chemical. Usage: 450,000 pounds/year. Discharged to Outfall B01 or alternatively G01.
5.	Chlorine gas Maximum quantity on site: 32,000 pounds. Used as a biocide for the main condensers. Usage: 112,000 pounds/year. Discharged to the condenser cooling water flume (Outfalls 001/020/021/022).
6.	Citric acid Maximum quantity on site: 600 gallons. Used as a water treatment chemical. Usage: 400 gallons/year. Discharged to Outfall 002.
7.	Sodium bisulfite Maximum quantity on site: 600 gallons. Used as a water treatment chemical. Usage: 400 gallons/year. Discharged to Outfall B01 or alternatively G01.

8.	Antiscalant Maximum quantity on site: 600 gallons. Used as a water treatment chemical. Usage: 1,400 gallons/year. Discharged to Outfall B01 or alternatively G01.
9.	Corrosion inhibitor (GEBetz Corrshield or equivalent) Maximum quantity on site: 500 gallons. Used as a corrosion inhibitor in the closed bearing cooling water system for various Station components. Usage: 11,200 pounds/year. Discharged to the Recycle Pond.
10.	Surfactants: Used as dust suppression agents for coal. Benetech BT-415 (or equivalent) Maximum quantity on site: 6,000 gallons Estimated Usage: 35,000 gallons/year Benetech BT-100F2 (or equivalent) Maximum quantity on site: 12,000 gallons Estimated Usage: 76,000 gallons/year Although most of the product would be consumed during combustion in the Station boilers, storm water runoff may cause residual surfactants to be discharged to the coal yard settling pond (Outfall 002).



Ameren Energy Generating Company - Coffeen Power Station
NPDES Permit IL0000108 (Revised 27july2012)

Notes: Flow units = MGD, Average Flow (Anticipated Maximum Flow)
NPDES Outfall Numbers in **BOLD** type
-------- = Alternate Flow Path (not used during normal operations)
OWS = Oil/Water Separator, SWR = Storm Water Runoff
CCB = Coal Combustion Byproduct

Coffeen Power Station NPDES Permit IL0000108 – Map SW1

(approximate, revised 2012july25)

Coffeen Power Station NPDES Permit IL0000108 – Map SW2
Primary Herbicide Application Areas (approximate, revised July 27, 2012)

Attachment E
CWA Section 311 and CERCLA (Superfund) Reporting Exemptions

The chemicals listed below are used in water treatment processes in amounts exceeding their "reportable quantities" under 40 CFR Part 117.

Chemical	Average Usage (lbs/day)	Reportable Quantity (lbs)
Sodium hydroxide	1,050	1,000
Sulfuric acid	1,250	1,000

Ameren Energy Generating Company requests exclusion under the NPDES exemptions from Section 311 and Superfund reporting for these two compounds and all others that are, as reported in this application, present in continuous or anticipated intermittent discharges. The discharge of sulfuric acid and sodium hydroxide listed above is through the cooling water discharge flume (Outfalls 001, 020, 021, and/or 021). Monitoring for pH is performed in the cooling water discharge flume (specifically at Outfall 021). These and the other discharges for which exclusion is requested are exempt from section 311 liability by 40 CFR §117.12(a)(1) if they are in compliance with the permit and by §117.12(a)(2) or (3) if they are not. Discharges that are excluded from Section 311 are also excluded from Superfund. Any discharges other than those resulting from on-site spills would either result from circumstances identified in this application (see §117.12(c)) or would be a continuous or anticipated intermittent discharge originating within the operating or treatment systems at the plant (see §117.12(d)). These discharges are therefore excluded from Section 311 and Superfund reporting and liability.

Note that even though the daily use of these chemicals exceeds the Reportable Quantity, the discharge would not comprise the total amount used. This is due to acid-base and other reactions, which occur during the use of these chemicals.

Attachment F
Thermal Limitations, Section 316(a)

The Coffeen Power Station cooling water discharge and the thermal plume it creates was initially studied extensively during the 1970s. The discharge is an outlet to Coffeen Lake. The Illinois Pollution Control Board approved Coffeen Power Station's 316(a) demonstration on November 16, 1978 via Order Number 77-158. This demonstration established site specific standards for thermal discharges to Coffeen Lake per 35 IAC 302.211(j)(5).

The Station constructed a supplemental perched cooling pond in 2000 and supplemental cooling towers in 2002 to further reduce thermal loading to the lake. Continuous thermal monitoring of the condenser cooling water flume is conducted at the edge of a 26-acre mixing zone. In light of the addition of supplemental cooling systems and the absence of any adverse environmental impacts, we request that the Agency reaffirm the previous 316(a) demonstration.

We believe that this request is wholly substantiated by the Illinois Pollution Control Board in Order 2009-038 which granted a site-specific rule change for the months of May and October for thermal discharges on Coffeen Lake.

<u>IPCB 2009-038 Thermal Demonstration</u>

It should be noted that Coffeen Lake is very unique in that there is a rather exhaustive fishery database. Comprehensive fish studies are available for the 1978-1981, 1997-2006, and 2010-2011 periods, in addition to those periodically conducted by the Illinois Department of Natural Resources. Fishery studies continue during 2012 in accordance with the IPCB 2009-038 ruling.

Coffeen Lake continues to support an abundant and diverse wildlife including muskrat, turtles, and heron. It also supports a very robust fishery, comprised of 22 species of fish, and is well known as the home of numerous competitive sport-fishing tournaments.

Ameren demonstrated to the Illinois Pollution Control Board (IPCB) that modified thermal discharges to Coffeen Lake would be "environmentally acceptable and within the intent of the Act". This demonstration that resulted in IPCB Order 2009-038 consisted of several components including a retrospective and prospective assessment of the three Representative Important Species (largemouth bass, bluegill, and channel catfish), Total Phosphorus, Methylmercury, and Dissolved Oxygen.

The selection of Representative Important Species (RIS) is performed after evaluation of those fish that are (1) are important due to their societal or ecological value, and (2) can represent those species which cannot be studied to the same extent. The selected RIS are primary components of the Coffeen Lake recreational fishery. These RIS are objectives of the Illinois Department of Conservation (IDOC) Lake Management Plan for Coffeen Lake. The IDOC states that the health and abundance of largemouth bass is directly related to the quality of the existing Coffeen Lake fish population – including forage fish necessary for predators such as largemouth bass.

The retrospective RIS assessment examined Coffeen Lake fishery studies conducted during the 1997-2006 period. This retrospective survey provides the strongest evidence of the long-term effects of water temperatures as it integrates all aspects of the thermal environment on the life cycle for the fish species and the lower trophic levels in the lake such as phytoplankton, epiphyton, macrophytes, zooplankton, and benthos. The retrospective survey concluded that the survival and growth of the early life stages, the eggs and the larvae, are improved by the stable warmer temperatures that occur in the late winter and early spring, and are improved by the prolonged growth season that results from the thermal discharge to the lake.

The prospective (or predictive) assessment evaluated any potential impacts that the proposed Coffeen Lake thermal standards would have on the RIS. The prospective review concluded that the proposed thermal standards would more realistically reflect the natural environment where temperatures change more gradually than with the abrupt changes inherit in the standards per IPCB Order 77-158.

The IPCB concurred with Ameren's expert testimony the requested thermal standards would not have any detrimental impact to Coffeen Lake's capability to support shellfish, fish, wildlife, and recreational uses, as required by Sections 106.202(b)(1)(A) and 302.2011(j)(3)(A).

The IPCB Order 2009-038 required Ameren to conduct additional fish studies for Coffeen Lake annually for three years beginning in 2010. The report conducted for the 2011 season (April – October) concluded that largemouth bass were in excellent condition, bluegill were in average condition, black and white crappie were in excellent condition, redear sunfish were in average condition, and channel catfish were in average condition.

Attachment G
Intake Structure Requirements, Section 316(b)

The Agency approved the Coffeen Power Station 316(b) final report on April 27, 1982, effectively determining that the intake structure reflects "best technology available" in compliance with Section 316(b) of the Clean Water Act.

The intake structure continues to operate as described in the approved final report. There have been no significant physical changes to the intake pumps, the traveling screens, or other relevant components. Therefore, Ameren Energy Generating Company requests renewal of the "best available technology" approval under 316(b).

316(b) Phase II Actions

Several actions were taken in accordance with the currently suspended USEPA 316(b) Phase II rulemaking. A "Proposal for Information Collection" was submitted to the Illinois Environmental Protection Agency for conducting an updated assessment of impingement mortality at the Coffeen Power Station cooling water intake structure. This new data collected served to reaffirm historic impingement mortality studies. The 2006-2007 study exhibited extremely low impingement rates with an estimated annual total impingement of 1,277 fish. The 2006-2007 further concluded that of the 86 total impinged fish collected, about ½ of the organisms were gizzard and threadfin shad. The 1979-1980 study concluded that nearly 92.3% of the organisms collected were gizzard shad. A summary of the 2006-2007 data collection effort, including estimated annual impingement, is provided in Table G1.

The Phase II rulemaking also required submittal of a "Comprehensive Demonstration Study" that would provide the measures to be used for compliance with the currently suspended Phase II rulemaking performance standards. These measures were to include an appropriate range of technologies, operational, and /or restoration components; subject to cost-cost and/or cost-benefit criteria and the potential procurement of a site-specific standard, in accordance with the Phase II rulemaking. Due to the suspension of the Phase II rulemaking, the impingement mortality study was the only task completed as all other activities associated with the Comprehensive Demonstration Study were terminated.

Table G1
Coffeen Station 2006-2007 Impingement Data

Species	Total Number Collected	%	Total Weight Collected (grams)	%	Estimated Annual Number
Threadfin shad	33	38.4	41	0.6	450
Bluegill	22	25.6	272	4.3	385
Channel catfish	12	14.0	945	14.9	165
Gizzard shad	10	11.6	689	10.9	128
Largemouth bass	4	4.6	1,415	22.4	50
Striped bass	3	3.5	2,768	43.8	43
White crappie	1	1.2	73	1.9	14
Yellow bass	1	1.2	73	1.2	41
TOTAL	**86**		**6,324**		**1,277**

Attachment H
Environmental Projects

The following is a summary of current projects at Coffeen Power Station, which have an environmental component. Federal, State, or local authorities are requiring none of the projects described. Rather, they are being supplied as optional information as noted in Form C, Item 2.60 B.

Beneficial Ash Usage

Coffeen Power Station generates approximately 110,000 tons of fly ash and 180,000 tons of bottom ash each year. Fly ash is conveyed dry to silos and used beneficially in mine reclamation or is landfilled. Bottom ash is used beneficially as a feed stock for use as asphalt shingle aggregate or blasting grit. It is also used as a winter traction material or temporarily stored on site until recovered for beneficial use projects. Water Pollution Control Permit 2003-EB-2573 was issued by the Agency, authorizing the construction and operation of facilities to allow sluicing of bottom ash to the recycle pond for more efficient beneficial use recovery.

We will continue to pursue existing and additional beneficial uses for fly ash and bottom ash, including structural fill projects.

Coffeen Lake

Coffeen Lake is comprised of 1,100 acres at a pool elevation of 590.0 feet (MSL). The lake was constructed to provide cooling water to support the Coffeen Power Station.

Coffeen Lake and its shoreline are currently leased to the Illinois Department of Natural Resources (IDNR) as a day use conservation area. Coffeen Lake provides a diverse fishery that supports species such as largemouth bass, white bass, channel catfish, crappie, and gizzard shad.

Coffeen Lake and surrounding land provides habitat for other aquatic and terrestrial organisms such as birds, deer, coyotes, and turtles. Areas are available for hunting, picnics, and hiking.

Attachment I
Macroinvertebrate & Biofouling Control

Coffeen Power Station has a monitoring program to detect both biofouling formation and the settlement and growth of macroinvertebrates, such as zebra mussels, within systems vulnerable to fouling by these organisms. Chlorine is used to control the formation of biofoulants, as necessary.

As part of this NPDES Permit reapplication, the Coffeen Power Station is requesting continued authorization to treat circulating and service water systems with the following type of molluscicide:

- GE Betz ClamTrol CT-2 (Spectrus CT-1300), CT-4, or similar molluscicide.

Treatment using a molluscicide such as Spectrus CT-1300 or CT-4 will typically consist of isolating the targeted intake cells and shutting off the respective intake pumps. The molluscicide is then added to the water in the intake cell to achieve the targeted dosage (5.0mg/L for Spectrus CT-1300). This target concentration is maintained for a period between six and nine hours, adding product as necessary, while the cell remains isolated. The residual biocide will be detoxified with a bentonite clay product (such as GE Betz DTG), at an approximate ratio of 6.3:1 bentonite to Spectrus CT-1300. The detoxicant would be added to each point where the residual biocide could be directly discharged to Coffeen Lake. When treatment is complete, the intake cell and associated pumps would be restored to service.

When necessary, auxiliary water distribution systems (low and high pressure raw water, and service water) would also treated to avoid pipe pluggage. These systems would be treated by pumping the molluscicide into the suction of the low and high pressure raw water pumps and maintaining the target dosage (see above) for a period between six and nine hours. A detoxicant would be added to each point where the residual biocide could be directly discharged to Coffeen Lake.

WET (Whole Effluent Toxicity) tests during these operations at our other plants have demonstrated that the discharges are non-toxic.

If monitoring indicates that further controls are necessary to be implemented at the Coffeen Power Station for molluscicide management, we will provide appropriate notice, consistent with permit standard conditions and applicable regulations.

Attachment J
Activities, Materials and Management Practices with the Potential to Impact Storm Water Quality

Significant Materials

Twenty-three (23) significant materials have been identified at the Coffeen Power Station as being in contact with storm water currently, or in the last three years. Each significant material is numbered and described below. Note that Chemical usage is also described in Attachment D.

1. Coal is located outside, in an uncovered pile. Storm water runoff from the coal pile is routed to the coal yard settling pond (Outfall 002) for treatment. The coal is delivered by rail and is unloaded at the coal receiving area.

2. Numerous oil filled transformers are located on site. The oil is used for cooling and insulation. They can be grouped generally by size; each group is described below.

   There are 27 large power transformers; these are primarily the main power, auxiliary, and other major Station transformers. All of these are located within excavated areas containing a two-foot layer of crushed stone to retain any spillage or engineered concrete containment structures. The quantities of oil in each are as follows:

Unit 1 Main Power Transformer	13,500 gallons
Unit 2 Main Power Transformer	18,100 gallons
Unit 1 Reserve Transformer	5,170 gallons
Unit 2 Reserve Transformer	15,200 gallons
Unit 1 Main Auxiliary Transformers (2)	4,184 gallons, total
Unit 2 Main Auxiliary Transformers (2)	5,120 gallons, total
Locker Room Supply Transformer	240 gallons
Tractor Shed Transformer	471 gallons
Slag Tank Overflow Pump House Transformers (2)	209 gallons, total
Coal Unloader Transformers (3)	991 gallons, total
East Coffeen Substation Transformer	2,925 gallons
Southwest Coffeen Substation Transformer	1,774 gallons
Cooling Pond/Tower Main Transformer	2,472 gallons
Cooling Tower Fan Transformers (3)	900 gallons, total
Station Service Transformers (4)	15,300 gallons, total
Reserve Auxiliary Transformers (2)	35,840 gallons, total

   There are several transformers associated with the electrostatic precipitators. They contain a total of 3,865 gallons of transformer oil.

   A group of smaller transformers (of varying size) are located primarily within the plant substation and switchyard.

3. Bottom ash is sluiced to the recycle pond prior to beneficial use. Storm water runoff from this area would primarily be contributory to Outfall 002. Bottom ash may also be placed in the on-site landfill as dictated by plant operations.

4. Fly ash is dry-handled for beneficial use, mine reclamation, or disposal in the on-site landfill.

5. #2 Fuel oil for boiler ignition is stored in a two above ground tanks, with a total capacity of 200,000 gallons and two day tanks with a maximum capacity of 45,000 gallons. The main tanks are located within a concrete secondary containment and the day tanks are located within a dike. Containment areas are designed to contain the entire contents of the respective tank(s), including incidental precipitation. Manual attended draining of these containments is conducted as necessary. Fuel oil is received by truck and the truck driver and a qualified Coffeen employee are present during each unloading event.

6. Diesel fuel oil for mobile equipment and other purposes is stored in an above ground tank with a capacity of 10,000 gallons. The tank is double-walled with integral containment/leak detection and situated inside a concrete secondary containment. Manual attended draining of the secondary containment area to an oil/water separator occurs as necessary. The truck driver and a qualified Coffeen employee are present during every unloading.

7. Used oil, including non-electrical and electrical waste oil is stored in three tanks. Two 3,000 gallon double walled tanks are located within a concrete secondary containment area that will contain the entire contents of the tank, including incidental precipitation. Manual attended draining of this containment area through the tractor shed oil/water separator occurs as necessary.

8. Unleaded gasoline is stored in an above ground double-walled tank with a capacity of 500 gallons.

9. Periodically, the boilers are cleaned with a solution of ethylene diamine tetraacetic acid (EDTA). Approximately 9,000 gallons of the chemical is brought on site in a tank trailer. The boiler cleaning wastewater is stored in an on-site tank, until it is preferentially thermally treated in an operating boiler.

10. Sodium hydroxide (50%) is stored in a 15,000 gallon above ground tank. There is no secondary containment for this tank. If released to the environment, the tank contents would soak into nearby rock and soil. The truck driver and a qualified Coffeen employee are present during every unloading.

11. Sulfuric acid (93%) is stored in a 10,000 gallon above ground tank. There is secondary containment for this tank, including incidental precipitation. Sulfuric acid is loaded directly into the tank from a tanker truck. The truck driver and a qualified Coffeen employee are present during every unloading. Accumulated storm water is drained from this containment as necessary.

12. Hydrogen gas is stored in 12 containers with a capacity of 51 ft^3 in each (612 ft^3 total). The hydrogen gas is used for cooling the Station generators.

13. Carbon dioxide gas is stored in a tank with a 10 ton capacity and is used for purging the Station generators.

14. Nitrogen gas is stored in a 1,600 gallon tank. The nitrogen gas may be used to blanket the feedwater heaters and other boiler components during extended non-operating periods.

15. Two coal dust suppression products (Benetech BT-415 and BT-100F2) are used on-site in separate tanks or totes located at the dumper house, transfer house, sample house, and the tripper room.

16. Winter Storm "Ice Melt" containing potassium chloride is stored at several Station areas during winter months. It is spread on roadways, sidewalks and parking lots for deicing, as needed.

17. Anhydrous ammonia is stored on-site in two 50,000 gallon tanks and is used for flue gas emission control.

18. Miscellaneous piping and plant equipment is stored on the Station site in designated areas.

19. Limestone is stored outside, in an uncovered pile. Storm water runoff from the limestone pile is routed to a HDPE-lined impoundment for use by the wet flue gas desulfurization system or alternatively discharged to the coal yard settling pond (Outfall 002).

20. Molten sulfur is stored in an 80 ton tank and was used for coal combustion; however this system (and tank) is abandoned in place.

21. Ammonium hydroxide (30%) is stored in two tanks with a total capacity of 7,000 gallons and is used for boiler water treatment.

22. Ethylene glycol is stored in a 500-gallon tote and is used as an anti-slip agent on coal belt conveyors. A maximum of 27,500 gallons of a 50% solution is used as a heat exchange medium in the air preheaters.

23. As necessary, a covered metal dumpster is used as a temporary collection point for asbestos. When asbestos is removed from plant equipment, it is properly bagged per 40CFR61 and stored in the dumpster until it is transported off site for disposal.

24. Gypsum from the wet flue gas desulfurization system (WFGD) is located in a HDPE lined impoundment. Decant water is reclaimed in an adjacent HDPE impoundment and reused in the WFGD.

Accumulated storm water may be discharged from other diked or containment areas. As appropriate, the accumulated storm water is visually examined for any oil sheens and/or tested for pH, prior to discharge.

Hazardous Wastes

Coffeen Power Station is classified as a small quantity hazardous waste generator. The accumulated waste is shipped off site in accordance with federal regulations.

Bulk Materials Loading Areas

Coal is received at the Station by rail in unit trains, typically consisting of 100 high-capacity bottom dump cars. The unit train slowly moves across a track hopper into which the coal is unloaded. In the receiving system, a series of conveyors is used to transfer the coal from the track hopper, via the stacker tower, onto a live storage pile. A long-term coal storage pile is adjacent to the live storage pile. Dozers and scrapers transport the coal between the two piles. The reclaim system is a series of feeders and conveyors, which transport coal from the live storage pile to a surge bin located inside the Station.

Dry fly ash is conveyed to a silo for loading into trucks for beneficial reuse or disposal in a landfill.

Bottom ash may be stored for beneficial use or conveyed to an on-site processing facility for beneficial use.

Limestone is received by truck and managed in a live storage pile via heavy equipment (such as dozers and/or scrapers) for use by the wet flue gas desulfurization system.

Outdoor Vehicle Maintenance and Cleaning Areas

The Coffeen Power Station has one area where outdoor vehicle maintenance and cleaning activities routinely occur. The coal equipment garage is located near the coal storage site. Station equipment, such as coal handling equipment is routinely washed in this area. Fork trucks, cranes, and other mobile miscellaneous equipment may also be cleaned at the Station. All washing is performed using only water with no detergents. Runoff from areas where washing would take place is directed to the coal yard settling pond (Outfall 002) via yard drains.

Fertilizers, Pesticides, Herbicides and Soil Conditioners

Currently, the following liquid herbicides are spray applied to various areas in and around the site by a licensed outside contractor:

Herbicide	CAS Number
Roundup	1071-83-6
Diuron	330-54-1
Krovar	314-40-9 & 330-54-1
SEE 2-4D	94-75-7
Embark	53780-34-0
Arsenal	81334-34-1

No other products are currently used for weed control. Also, no fertilizers, pesticides, or soil conditioners are applied.

In conformance with the "General NPDES Permit for Pesticide Application Point Source Discharges", we are providing the following additional information:

- The licensed applicator applies the selected herbicide(s) using equipment that functions properly.
- Herbicide application is focused on areas such as the electrical switchyard, the Station rail spur, and other selected areas. Areas containing water that may be contributory to Coffeen Lake are avoided as much as practicable.
- Selected areas with standing water may be treated with a larvicide to preclude nuisance mosquitoes that may affect the health of Station employees.
- All applications are performed in accordance with label directions and FIFRA requirements.

All appropriate records required by the General NPDES Permit for Pesticide Application Point Source Discharges are retained at the Station site and available for Agency inspection upon request. It is our position that no additional permit requirements are necessary in the reissued NPDES permit for continued application of any herbicides or pesticides.

Management Practices

The Coffeen Power Station relies on numerous routine management practices to 1) help prevent contamination of storm water runoff and 2) ensure appropriate and timely responses to spills and other unanticipated events.

The Station has a Spill Prevention, Control and Countermeasure (SPCC) Plan. It describes various management practices to minimize oil spills/releases and their contact with storm water runoff. The SPCC Plan also designates a Station spill coordinator who is available to provide technical assistance and advice related to spill prevention, clean-up, waste management, and reporting.

Written emergency procedures are also in place to provide guidance in addressing chemical spills and releases. Designated Station employees receive periodic training to instruct them on the proper response to such incidents.

Preventive maintenance activities include routine inspections of above ground storage tanks, valves, pipelines, flange joints, and associated equipment. Station staff conducts many of these daily, while making their rounds.

Routine inspections for storm water concerns are periodically performed. An annual formal inspection conducted by Station and Corporate staff serves to augment the periodic inspections. Some of the best management practices (BMPs) that are in place include:

- Periodic inspections of Station drainage areas, to initiate maintenance as may be necessary to prevent the creation of storm water outfalls;

- Discriminant use of herbicides to avoid complete loss of vegetation and excessive erosion within drainage areas;

- Maintenance, regrading, and/or revegetation of Station road surfaces, drainage swales, and perimeter yards to avoid excessive erosion and/or creation of new point source discharges of storm water;

- Case-by-case evaluation of non-routine projects within drainage areas, to prevent unauthorized discharges, assess the potential for any storm water outfalls, and implement appropriate protective measures.

Attachment K
Significant Leaks or Spills

Based on a review of our records, no spill has occurred in the last three years at the Coffeen Power Station that would be considered "significant" per the regulatory criteria.

Attachment L
Reissued Permit Revision Requests

Based on a review of the current Coffeen Power Station NPDES permit, recently submitted analytical data, and facility needs, we respectfully request continuing Agency authorization of the following:

Temporary Supplemental Cooling Tower Authorization

We are requesting that the Agency continue to provide a provision in the reissued permit to authorize the construction and operation of temporary supplemental cooling towers for attenuation of the condenser cooling water discharge flume effluent temperature, as necessary to comply with the existing temperature limitations. We currently anticipate a maximum flow of 105,000 gpm (151.2 MGD) through temporary supplemental cooling towers that would serve to augment the existing permanent supplemental cooling pond and permanent supplemental cooling towers. The temporary supplemental cooling towers would potentially be similar in design to the "Aggreko Industrial Cooling Towers", as approved by the Agency in permit 2000-EA-0967.

The requested provision would serve to allow the expeditious deployment of additional cooling capacity as necessary. Rapid placement of temporary supplemental cooling towers would serve to minimize any thermal impacts on Coffeen Lake and meet electrical generation demand during periods of adverse unanticipated weather conditions.

Temporary pumps would draw water from the cooling water discharge flume, pass it through the temporary supplemental towers, and discharge via a combined header back into the flume. Operation of the temporary towers would not create any new outfalls.

Chemical Metal Cleaning Wastewater

The current Station practice is to evaporate chemical metal cleaning rinses in an operating boiler, as afforded by the facility air permits. However, we would like to retain the option to place chemical metal cleaning rinses on an active portion of the coal pile, as provided by the existing NPDES permit. Following is data from recent boiler chemical cleaning conducted at the Coffeen Power Station:

Analyte	Coffeen U1 10/28/1998	Coffeen U2 5/30/1996
Arsenic, total	< 1 mg/L	< 1 mg/L
Barium, total	< 0.5 mg/L	0.007 mg/L
Cadmium, total	< 0.02 mg/L	< 0.02 mg/L
Chromium, total	4.3 mg/L	3.02 mg/L
Lead, total	< 0.5 mg/L	< 0.5 mg/L
Selenium, total	< 0.7 mg/L	< 0.8 mg/L
Silver, total	< 0.01 mg/L	< 0.02 mg/L
Mercury, total	< 0.005 mg/L	< 0.003 mg/L
Nickel, total	2 mg/L	0.6 mg/L
Thallium, total	< 2 mg/L	0.4 mg/L

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

1021 NORTH GRAND AVENUE EAST, P.O. BOX 19276, SPRINGFIELD, ILLINOIS 62794-9276 • (217) 782-3397
PAT QUINN, GOVERNOR JOHN J. KIM, INTERIM DIRECTOR

IEPA EXHIBIT No. 5

RECEIVED
OCT 31 2012
ILLINOIS ENVIRONMENTAL PROTECTION AGENCY
BOW/WPC/PERMIT SECTION

Memorandum

Date: October 30, 2012

To: Shu-Mei Tsai

From: Bob Mosher RM

Subject: Ameren Coffeen Power Station Water Quality Based Effluent Limit Evaluation
NPDES No. IL0000108 Montgomery County

This facility discharges effluents from a variety of sources to Coffeen Lake. Monitoring data are available from Outfalls 002, 008 and 018 for water quality parameters for metals, chloride and sulfate. Coffeen Lake (segment code ROG) is listed as impaired on the draft 2010 Illinois Integrated Water Quality Report and Section 303(d) List for fish consumption and aesthetic quality uses. The cause given for fish consumption use impairment is mercury while the causes given for aesthetic quality use are aquatic plants, total phosphorus and total suspended solids. Aquatic life use is fully supported. In the draft 2012 Report, aesthetic quality use impairment is removed and the only remaining use impairment is fish consumption with cause given as mercury. A TMDL has been completed for Coffeen Lake. Coffeen Lake is not given an integrity rating in the 2008 Illinois Department of Natural Resources Publication *Integrating Multiple Taxa in a Biological Stream Rating System*. Coffeen Lake is not designated as an enhanced water pursuant to the dissolved oxygen water quality standard.

Outfall 002 (coal yard pond), Outfall 008 (stormwater from rail spur) and Outfall 018 (stormwater from ash landfill) have had data collected. All data is from the applicant. Values are given in mg/L except for mercury which is in ng/L. Hardness (174 mg/L) and chloride (28.4 mg/L) used to calculate the sulfate water quality standard were obtained from AWQMN Station OI-07, Shoal Creek 1.5 miles NW Panama.

Substance	Max. Eff. Conc.	No. of Samples	Multiply by	95% Potential	302.208(g) or (h) Standard	Further Analysis?
Boron (002)	1.6	56	1.0	1.6	1.0	Yes
Manganese (002)	0.068	56	1.0	0.068	1.0	No RP*
Mercury* (002)	10	11	1.7	17	12	Yes
Boron (018)	0.083	16	1.5	0.125	1.0	No RP*
Chloride (018)	110	12	1.6	176	500	No RP*
Mercury* (018)	1.1	1	6.4	7.0	12	No RP*
Sulfate (018)	22	12	1.6	35	1426	No RP*
Mercury* (008)	5	10	1.7	8.5	12	No RP*

*The human health standard is given.

Further Analysis

The average of the 11 mercury samples from Outfall 002 is 3.9 ng/L. After applying the multiplier, the value is 6.6 ng/L, which is well below the water quality standard. No reasonable potential exists to exceed the human health water quality standard.

Boron in Outfall 002 exceeds the water quality standard. However, a mixing zone is recognized in the permit for boron. None of the 56 samples exceeded the permit limit of 1.8 mg/L.

Conclusions and Recommendations

None of the monitored parameters from any outfall has reasonable potential to exceed water quality standards. Water quality standards are changing for boron and manganese with a final rule expected from the Illinois Pollution Control Board early next year. Limits for boron will be unnecessary after the change. Even with the existing manganese water quality standard, no reasonable potential exists and the limit for Outfall 002 should be removed. If the reissuance of the permit may be delayed until after the Board changes the standards, boron should also be removed as a regulated parameter for Outfall 002. There is no longer a water quality standard for total dissolved solids. This limit should also be removed immediately from Outfall 002. All other references to TDS monitoring in the permit should be removed. There is no evidence that dissolved solids are high, so no sulfate or chloride limits are appropriate.

Outfalls 018 is to have stormwater monitored when discharges occur to Coffeen Lake. Outfall 018 shows no sign of having high concentrations of the monitored parameters. I suggest that this outfall, along with Outfall 002 have an annual monitoring condition that would include the metals and other substances (with the addition of chloride and sulfate) typically required of municipal effluents. Low concentrations of monitored substances justify the reduced frequency of monitoring. Likewise, the mercury monitoring for Outfall 008 could be reduced to annual given the lack of reasonable potential to exceed the mercury water quality standards.

I reviewed monitoring results for other outfalls included with the NPDES permit renewal application. There were no parameters that had concentrations exceeding water quality standards or which require further monitoring.

These recommendations reflect a water quality standards perspective only and should not be construed as indicative of all factors that must be taken into consideration by the permit writer.

cc: FOS Region 5 Manager
Bill Ettinger