

Exhibit E

Sanitary District of Decatur

Second Interim Report

June 18, 2008

Sanitary District of Decatur

501 DIPPER LANE • DECATUR, ILLINOIS 62522 • 217/422-6931 • FAX: 217/423-8171

June 18, 2008

Illinois Environmental Protection Agency
Attn.: Michael S. Garretson
Bureau of Water Compliance Assurance Section, MC #19
1021 North Grand Avenue East
P.O. Box 19276
Springfield, Illinois 62794-9276

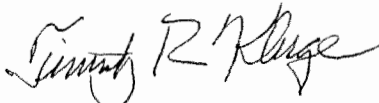
Re: NPDES Permit IL0028321
Compliance Schedule Interim Report

Dear Mr. Garretson:

Enclosed is the Interim Report regarding compliance with nickel and zinc limits required by Special Condition 18 of the Sanitary District of Decatur's NPDES Permit.

Please contact me at 422-6931 ext. 214 or at timk@sdd.dst.il.us if you have any questions regarding this report.

Sincerely,



Timothy R. Kluge, P.E.
Technical Director

cc: Bob Mosher, DWPC Standards
Rick Pinneo, DWPC Permits

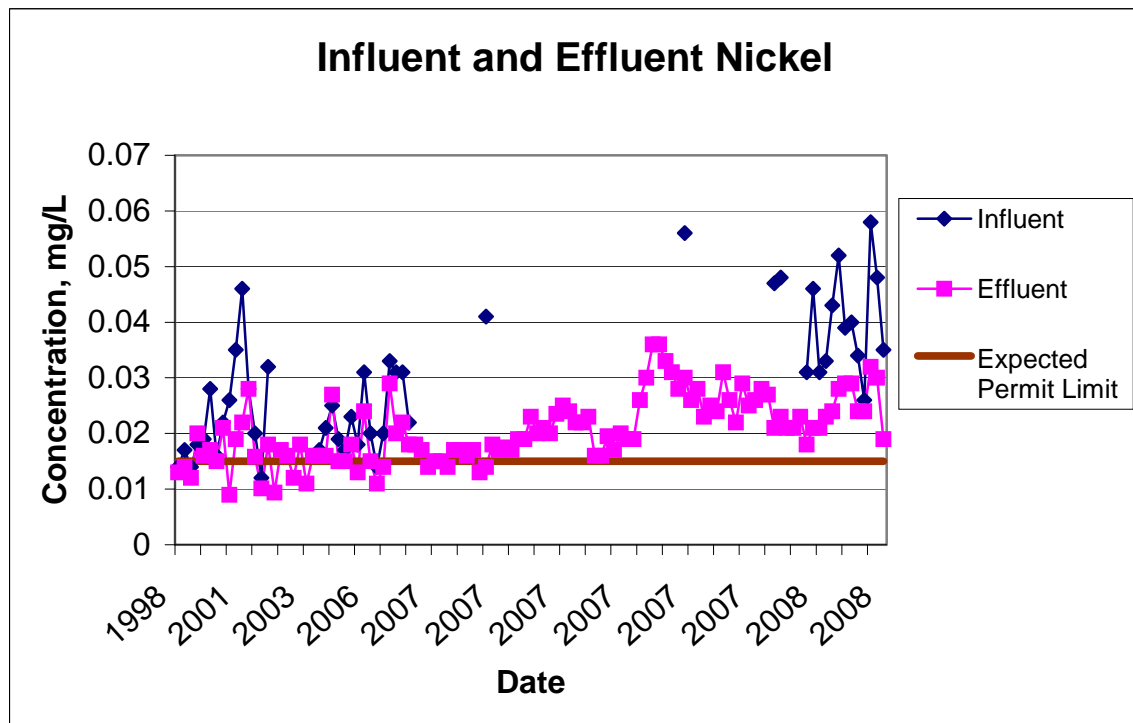
**Sanitary District of Decatur
Nickel and Zinc Limits
June 2008 Interim Report**

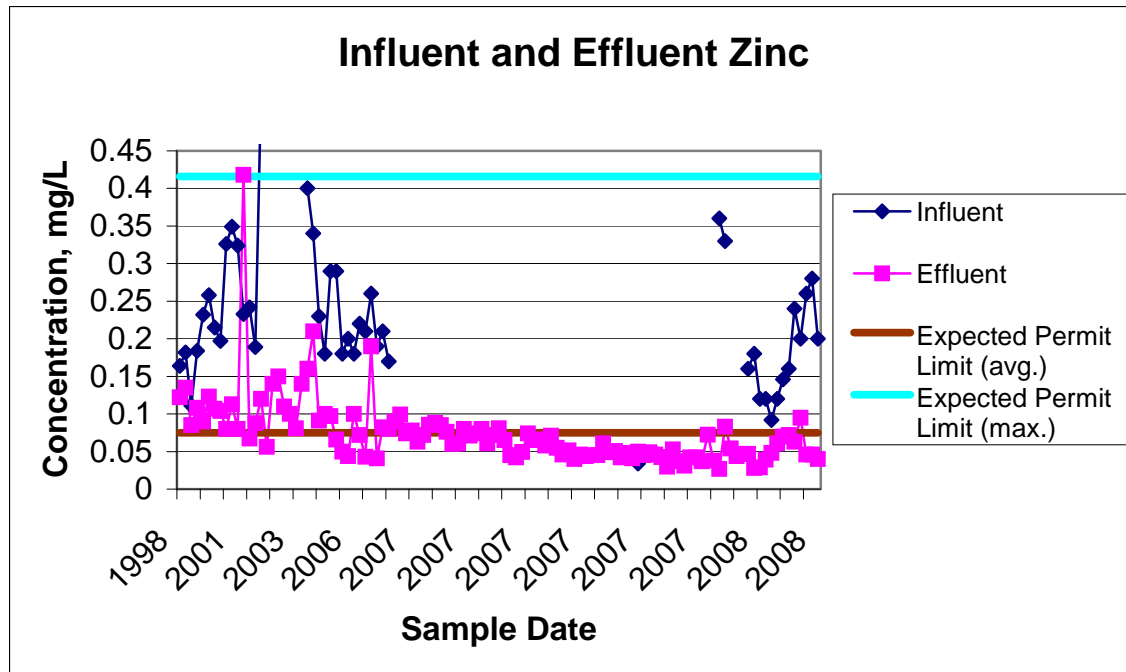
The reissued NPDES permit for the Sanitary District of Decatur that became effective July 1, 2007 contains new limits for nickel and zinc and a two-year compliance schedule for meeting the limits. Special Condition 18 requires that an interim progress report be submitted to Illinois EPA by July 1, 2008. A summary of information gathered and activities since the January 1, 2008 report is provided below.

Plant Influent and Effluent Sampling

Nickel and zinc have been included in quarterly plant influent and effluent sampling for many years. During 2007, effluent sampling frequency increased to twice weekly as part of the translator study. Ongoing influent and effluent sampling for nickel and zinc is planned to continue at a frequency of twice monthly. The District is investigating purchase of an ICP instrument to perform metals analysis in-house.

An updated summary of influent and effluent values is shown below. Review of past data shows that the plant discharge would not be able to consistently meet the expected nickel limit calculated on a hardness of 359 mg/L (per 1/2/08 email from Scott Twait of Illinois EPA). Recent zinc concentrations appear to be near the expected limit with a few exceptions.





Industrial Source Sampling

Analyses for metals including nickel and zinc have been performed semi-annually as part of the District's industrial pretreatment program. Sampling of the major industries (ADM and Tate & Lyle) has been increased to monthly and other industries discharging metals are now sampled quarterly.

Receiving Stream Sampling

Upstream and downstream sampling at the locations described in the translator study will be continued at a twice monthly frequency to provide a more complete picture of nickel and zinc in the Sangamon River.

Chronic WET Testing

Chronic toxicity tests were conducted in July and September 2007. An additional chronic toxicity test using EDTA to chelate metals in the samples was conducted in December 2007. The EDTA treated tests showed more chronic toxicity than the untreated effluent, which the laboratory attributed to the possibility that EDTA itself was causing toxicity. No additional toxicity testing is currently planned.

Industrial Source Investigations

Tentative pretreatment local limits have been calculated based on the expected permit limits for nickel and zinc. The District's two major industrial users have been made aware of the tentative limits and several meetings have been held with each to review treatment options. Both industries utilize zinc as part of their cooling tower treatment

programs, and sampling has not identified any other significant zinc sources at the two facilities. Each of the industries has been consulting with their cooling tower treatment supplier, and both expect to be able to achieve the tentative pretreatment limit through reduced zinc usage and better control of cooling tower operation. Both also have the option of switching to either a phosphate or a silicate-based treatment program in the event that zinc control alone is not sufficient.

ADM is the only significant industrial source of nickel, which is used as a catalyst in hydrogenation processes. Two potential changes to reduce nickel discharges are being investigated. In one area, improved housekeeping procedures are being implemented to prevent nickel from entering the wastewater stream. The improved housekeeping will be followed with testing to determine success. In the second area, dissolved nickel is proposed to be recovered using a combination of ion exchange to concentrate the nickel, followed by an electroplating process for removal. While both processes are relatively common, ADM reports that they have not been used together in this application. They still anticipate a reasonable probability of success and are currently beginning bench testing.

Several other industrial users would also be impacted by reduced pretreatment limits for nickel and zinc. While their concentrations are a concern, they discharge a very small volume of wastewater relative to the two large users and have an insignificant impact on concentrations in the plant influent. Use of mass rather than concentration pretreatment limits is being considered for these small users.

Compliance Plan

Based on current information, the measures necessary to comply with final nickel and zinc limitations will include a combination of the following:

1. Continued effluent and stream monitoring to determine whether further adjustment of NPDES permit limits may be justified.
2. Finalization of local pretreatment limits for nickel and zinc, and ongoing discussions with industrial users to verify that they will be able to meet the limits by the compliance deadline of July 1, 2009.
3. Ongoing review and analysis of technical information that would be needed to support a site-specific water quality standard.

The next interim report will be submitted by January 1, 2009 as required by our NPDES permit.

Exhibit F

Sanitary District of Decatur

Third Interim Report

December 29, 2008

Sanitary District of Decatur

501 DIPPER LANE • DECATUR, ILLINOIS 62522 • 217/422-6931 • FAX: 217/423-8171

December 29, 2008

Illinois Environmental Protection Agency
Attn.: Michael S. Garretson
Bureau of Water Compliance Assurance Section, MC #19
1021 North Grand Avenue East
P.O. Box 19276
Springfield, Illinois 62794-9276

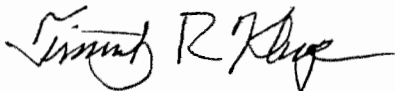
Re: NPDES Permit IL0028321
Compliance Schedule Interim Report

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Please contact me at 422-6931 ext. 214 or at timk@sdd.dst.il.us if you have any questions regarding this report.

Sincerely,



Timothy R. Kluge, P.E.
Technical Director

cc: Bob Mosher, DWPC Standards
Rick Pinneo, DWPC Permits
Joe Koronkowski, Champaign Region

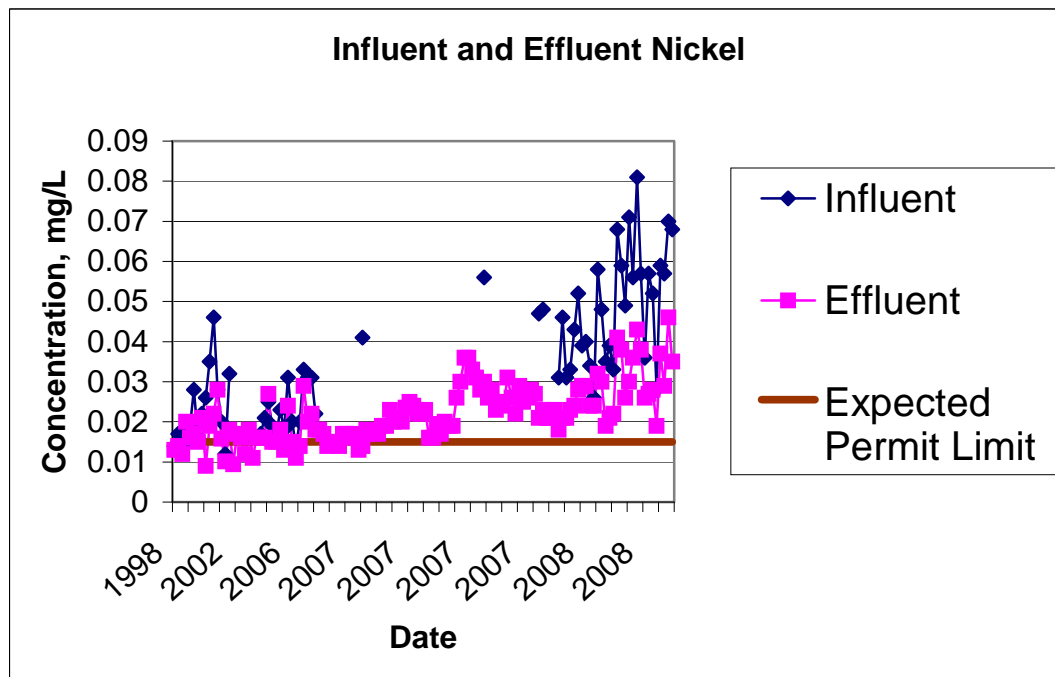
**Sanitary District of Decatur
Nickel and Zinc Limits
December 2008 Interim Report**

The reissued NPDES permit for the Sanitary District of Decatur that became effective July 1, 2007 contains new limits for nickel and zinc and a two-year compliance schedule for meeting the limits. Special Condition 18 requires that an interim progress report be submitted to Illinois EPA by January 1, 2009. A summary of information gathered and activities since the July 1, 2008 report is provided below.

Plant Influent and Effluent Sampling

Nickel and zinc have been included in quarterly plant influent and effluent sampling for many years. During 2007, effluent sampling frequency increased to twice weekly as part of the translator study. Ongoing influent and effluent sampling for nickel and zinc is planned to continue at a frequency of twice monthly. The District will begin performing metals analysis in-house in early 2009.

An updated summary of influent and effluent values is shown below. Review of past data shows that the plant discharge would not be able to consistently meet the expected nickel limit calculated on a hardness of 359 mg/L (per 1/2/08 email from Scott Twait of Illinois EPA). Recent zinc concentrations appear to be below the expected limit.



formerly utilized zinc as part of their cooling tower treatment programs, and both have eliminated or greatly reduced zinc in their towers. At this time, both industries are meeting the expected zinc pretreatment limit. ADM is continuing to investigate the possible impact of the zinc limit on their planned wasting of solids from the pretreatment system to the District.

ADM is by far the most significant industrial source of nickel. While it is primarily used as a catalyst in hydrogenation processes, investigations have found that even very small amounts that exist in other plant waste streams become important when pretreatment limits are very low. Incoming grain and sodium hydroxide used in the plant contain small but significant amounts of nickel. Production swings and changes in product mix present sampling challenges. A summary of ADM's investigations and findings to date is attached. A meeting with ADM early in January 2009 is planned to further review their investigations and plans for compliance.

Several other industrial users would also be impacted by reduced pretreatment limits for nickel and zinc. While their concentrations are a concern, they discharge a very small volume of wastewater relative to the two large users and have an insignificant impact on concentrations in the plant influent. Use of mass rather than concentration pretreatment limits is being considered for these small users.

Water Quality Standard Investigations

The year 2008 was unusually wet, and did not present the opportunity to gather additional data related to a translator for nickel and zinc under critical low flow conditions. Following consultation with Illinois EPA, the District is continuing to investigate approaches to a water quality standard adjustment including the biotic ligand model and the water effect ratio approach. An initial contact has been made with a consultant that seems to be very familiar with these approaches, and information is being gathered to evaluate their possible application. In addition, the District has begun to consider what information might be needed to justify a standard based on a different level of water quality protection, as allowed for by state and federal regulations.

Compliance Plan

During the next reporting period, the District will continue to work toward compliance with final nickel and zinc limitations by means of the following activities:

1. Request a modification of the District's NPDES permit extending the compliance schedule for meeting the nickel and zinc limits. In spite of ongoing investigations by the District and ADM, it appears that the current nickel limit cannot be achieved without changes to treatment processes, operations (in particular, operations at industrial users), a site-specific adjustment of the water quality standard, or some combination of these three actions.

2. Continued effluent and stream monitoring to determine whether further adjustment of NPDES permit limits may be justified.
3. Finalization of local pretreatment limits for nickel and zinc, and ongoing discussions with industrial users regarding pollution prevention or control measures to enable reductions of nickel and zinc.
4. Ongoing review and analysis of technical information that would be needed to support a site-specific water quality standard. This information includes both biological and toxicity data related to the standard, and economic data that would also be required for a legal proceeding.

The next report will be submitted by July 1, 2009 as required by our NPDES permit.

Electronic Filing - Received, Clerk's Office, June 15, 2009

CURRENT ADM DECATUR COMPLEX BALANCE - 11/2008

	<u>Lbs / day</u> * <u>MGD</u>	<u>ppm Ni</u>	<u>Lbs Ni / day</u> * <u>ppm Zn</u>	<u>Lbs Zn / day</u>	<u>% of Ni from Grain</u>	<u>Ni from Grain, Lbs / day</u>
IN						
ALL Water into Complex		18.5	0	0		
50% Sodium Hydroxide	215,000		1.7	0.4		
ALL Grains into Complex	36,500,000			57		1300
TO ADM WWTP						
Corn Plant		5.1	0.040	1.70	0.40	16.9
East Plant		2.5	0.20	4.15	0.80	16.6
Biochem		1.65	0.030	0.41	0.30	4.1
West Plant		0.9	0.090	0.67	0.40	3.0
TOTAL to ADM WWTP				6.9		40.6
EFFLUENT						
Clarifier Carryover - Bugs	35,000		100	3.5	800	28.0
Effluent, Soluble Portion		9.3	0.091	7.0	0.11	8.5
C. Twr Blowdown Residual		2.7	0.020	0.45	0.15	3.4
FINAL EFFLUENT to SDD	35,000	12.0	0.11	11.0	0.40	39.8
SDD Avg Limit (Proposed)		0.0365	3.588	0.352	34.605	

These numbers represent our best estimates of the current balance however these numbers may not take into account various factors including:

- Storm Water
- Glycol Plant Start-up (Ni Catalyst)
- Complex Variability:
 - Fructose Production swings
 - New Ion Exchange product, Feb09
 - Changes in IX / Non-IX balance
- Future Soy Expansion
- 50% NaOH contains nickel & Soda Ash availability
- Future In-plant Water Re-use efforts, reduced Effluent flow

A**SOURCES**

	<u>ppm Nickel Dry Basis</u>	<u>ppm Zinc Dry Basis</u>	<u>Bushels / day</u>	<u>Lbs Dry Grain / day</u>	<u>Lbs Nickel / day</u>	<u>Lbs Zinc / day</u>
Corn:	0.53	32	550,000	26,026,000	14	833
Soybeans:	4.1	46	200,000	10,440,000	43	480
TOTAL with GRAIN				36,466,000	57	1,313
Effluent, Lbs / day Max @ 12 MGD					3.6	34.6

Additional Nickel & Zinc Sources:

-- Nickel Catalysts used at Corn and West Plants.

-- Residual nickel & zinc at Corn Plant Towers, residual zinc at Bio Products Towers.

B

THESE STREAMS ARE OK

<u>Co-gen:</u>	Boiler Blowdown RO Reject water IX Waste Neutralization #6 Cooling Tower
<u>East Plant:</u>	Refinery (low salt)
<u>Biochem:</u>	Bio Condensate (low salt) Cooling Tower Blowdowns
<u>Corn Plant:</u>	Mill Hotwell condensate Feed Scrubber discharge Waste Heat condensate Alcohol waste Cooling Tower Blowdowns
<u>West Plant:</u>	Greasy Tower Split Box Car Washer (?) Bean & Germ Plant Split Boxes SFI

C* * * * **STREAMS** that have shown **HIGH LEVELS**

<u>Co-gen:</u>	None	
<u>East Plant:</u>	8" & 12" Isolate (high salt) 0.2 to 0.3 ppm Ni and 1 ppm Zn.	
<u>Biochem:</u>	Biochem Waste (high salt) Nickel at 0.02 - 0.04ppm. Zinc in 0.3 - 0.6 ppm range.	
<u>Corn Plant:</u>	Refinery Fructose & Sorbitol IX regen waste High Ni and Zn, varies with batch IX operation Average Ni is 0.15ppm and zinc is 0.14 ppm	
<u>West Plant:</u>	24 hour composite at Corn Plant Periods of high Ni and Zn.	1st DAF, 2nd DAF and Primary Skimmer Periods of high nickel.
	Packaging Plant Zinc excursions > 1ppm.	SSL waste Zinc excursions > 1ppm.
	Vitamin E Nickel as high as 0.2 ppm.	Storm Water Nickel excursions > 0.1ppm.

Nickel & Zinc Chronology

***** PCB 2009-125 *****

2006-2007

- ▶ Investigated nickel recovery by electroplating...cost savings.

Jan-08

- ▶ New SDD specs on nickel and zinc: 0.17 to 0.037ppm Ni and 0.45ppm Zn.
- ▶ Effluent was 0.06 to 0.10 ppm Ni at that time.
- ▶ Nickel found in West Plant stream & CP Cooling Towers.

Mar - Apr 2008

- ▶ Hired nickel consultant at Corn Plant.
- ▶ Ran West Plant High Salt trial.

May-08

- ▶ Met with SDD representatives.
- ▶ Began sampling program throughout Corn Plant & Sewer Plant.
- ▶ Ceased all zinc addition to Cooling Towers.
- ▶ West Plant in-process sampling began.
- ▶ Identified zinc analysis issues.

June - July 2008

- ▶ Opened dialog with nickel catalyst supplier.
- ▶ Nickel precipitation problems surfaced...nickel-gluconate complex.
- ▶ Hydrogenation pH looked at again.
- ▶ SDD changed testing basis.

Aug-08

- ▶ Widened scope of sampling.
- ▶ Began sharing samples with EPA lab.
- ▶ Streams of interest confirmed by EPA lab.
- ▶ Pursuing nickel-gluconate oxidation.
- ▶ Sought participation by ADM Research & GE Betz

Sept - Nov 2008

- ▶ Turned Complex-wide sampling over to individual plants.
- ▶ Each plant responsible for determining reduction methods.
- ▶ Determined degree of Sludge nickel and zinc levels.
- ▶ Learned of lower nickel limit...3.7 lbs / day to 2.3 lbs / day.
- ▶ Began calculations on effect of Sludge wasting on effluent nickel & zinc.
- ▶ Ran bench and plant trials on nickel removal methods at Corn Plant.
- ▶ Determined approx % reduction necessary at each plant to reach nickel limit.
- ▶ Chemistry change on #4 Tower lowered zinc ppm to <0.5 ppm.

***** PCB 2009-125 *****

- ▶ Incoming Water (SWTP, NWTP and Well Water) not an issue.
- ▶ Zinc analysis had issues through mid-summer 2008.
- ▶ ADM ICP method will under-report nickel vs. EPA lab --- use multiplier.
- ▶ Both nickel & zinc will bleed from Cooling Tower systems.
- ▶ Streams with significant zinc-containing suspended solids are very difficult to filter.
- ▶ Nickel reclamation via electroplating has many issues in facilities of our kind.
Chelating IX resins are not food grade. Expect high Acid / Base usage for any IX system.
Nickel will precipitate at ~9.5 - 10.5 pH if it is not complexed with organic material.
Organic matter can be oxidized with ozone and H₂O₂ to allow nickel precipitation. Very high ozone usage.
- ▶ In some plants, there are intermittent processes & discharges which complicate discovery of sources.
- ▶ Short-term, select streams can be sent to a Co-product, given FDA and quality compliance.
- ▶ Zinc can be brought under the limit by wasting sludge by removal from the effluent.
Clarifier operation will be critical and may require additional drying equipment with significant capital expenditure.
- ▶ If all Corn Plant acid IX waste is treated, approx 2.5MM lbs of 35% HCl per month must be raised to 10pH.
- ▶ Soy-based operation will need to find a feed / fertilizer outlet to reduce nickel & zinc.
- ▶ Oil refining operation believes that moving the entire catalyst handling system may significantly reduce nickel.

2008

BASIC WASTE WATER TREATMENT LAYOUT

*** ** PCB 2009-125 *** **

LOW SALT ANAEROBIC & AEROBIC TREATMENT

POND & ZEEWEED

CORN PLANT TOWERS

HIGH SALT ANAEROBIC & AEROBIC TREATMENT

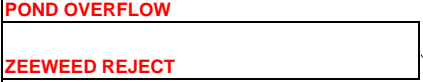
FRONT PUMP STATION

DAMON PUMP STATION

DECATUR SANITARY DISTRICT

WEST PLT STORM WATER

- CORN PLT MILL COND
1.2 MGD
- CORN PLT WASTE HEAT
2.0 MGD
- WEST PLANT + VITAMIN E
0.9 MGD
- BIOCHEM CONDENSATE
0.4 MGD
- EAST PLANT REFINERY
0.35 MGD
- EAST COMPLEX STORM WTR
0.5 MGD
- BIOCHEM STORM WATER
0.35 MGD
- CORN PLT COOLING TOWER BD
2.2 MGD
- BIOCHEM #4 / #5 TOWER BD
0.65 MGD



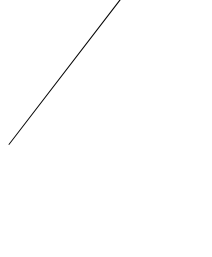
POND OVERFLOW

ZEEWEED REJECT

CO-GEN #6 TOWER BD
0.1 MGD

CO-GEN NEUT TO CITY
0.15 MGD

POTABLE AS SANITARY
0.5 MGD

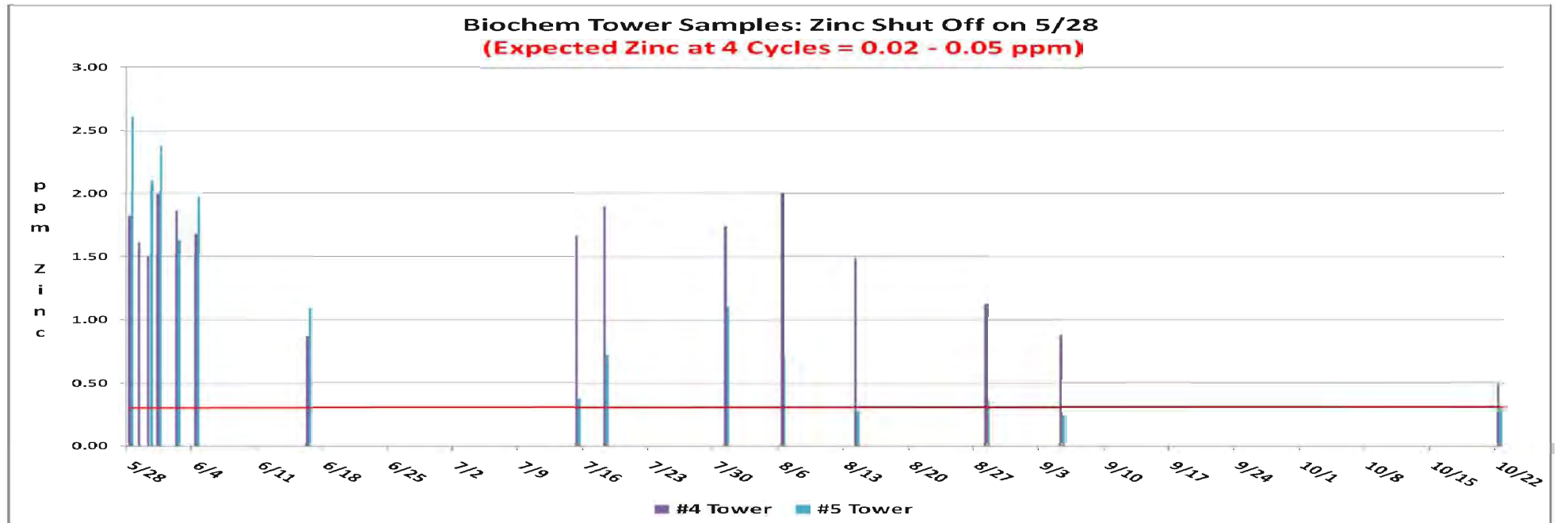
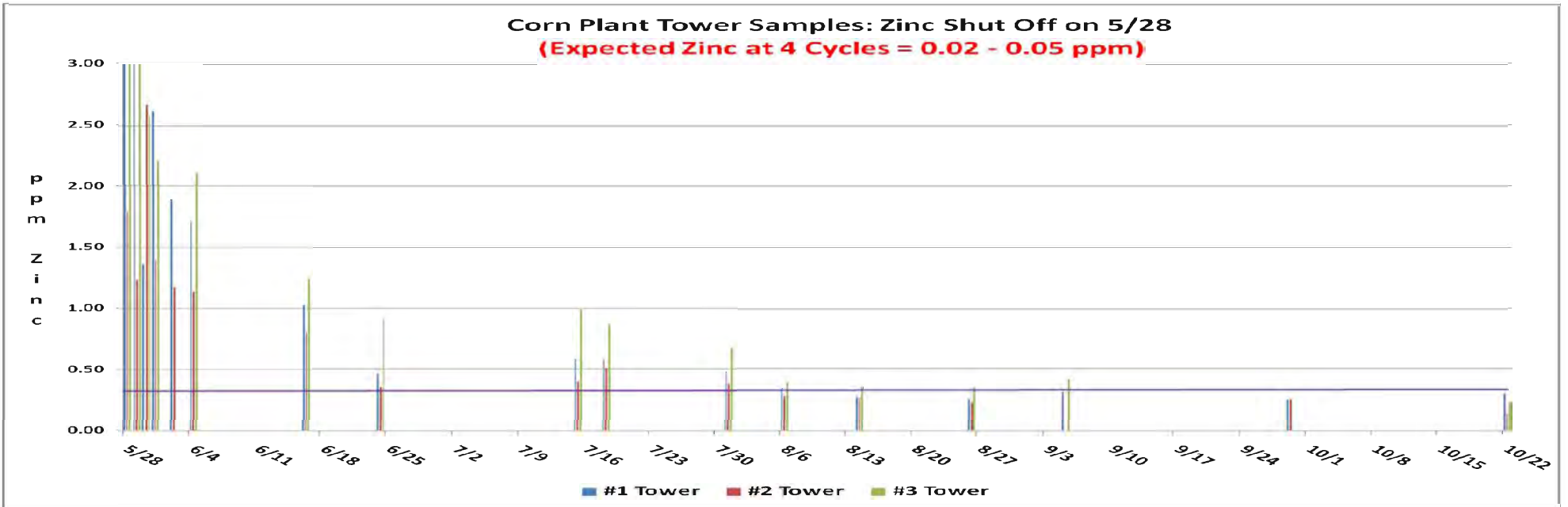


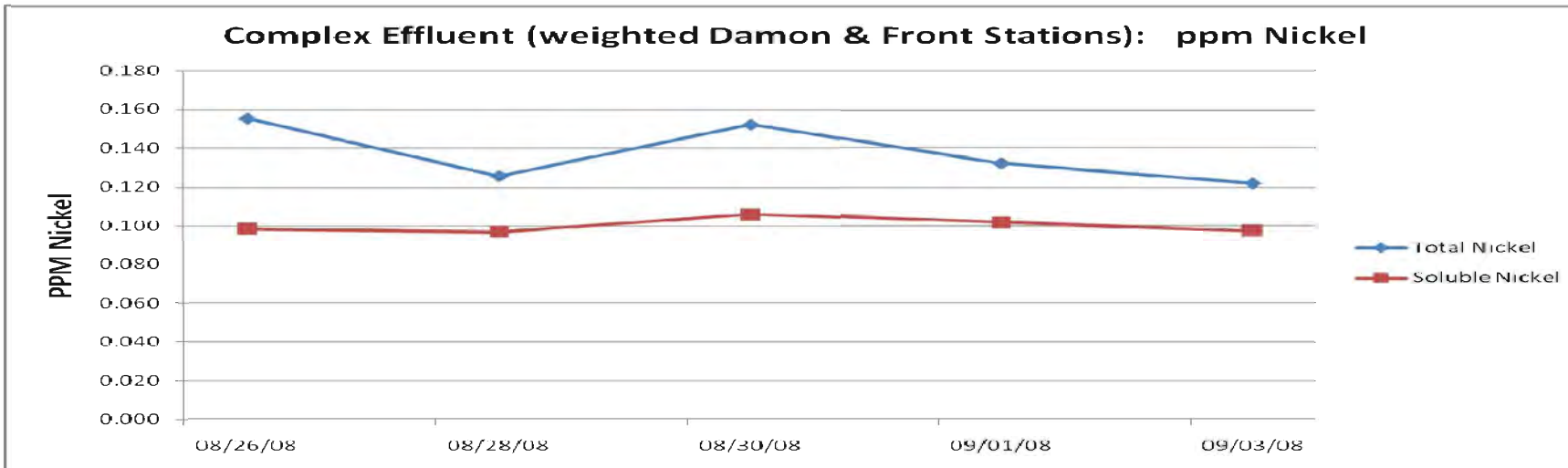
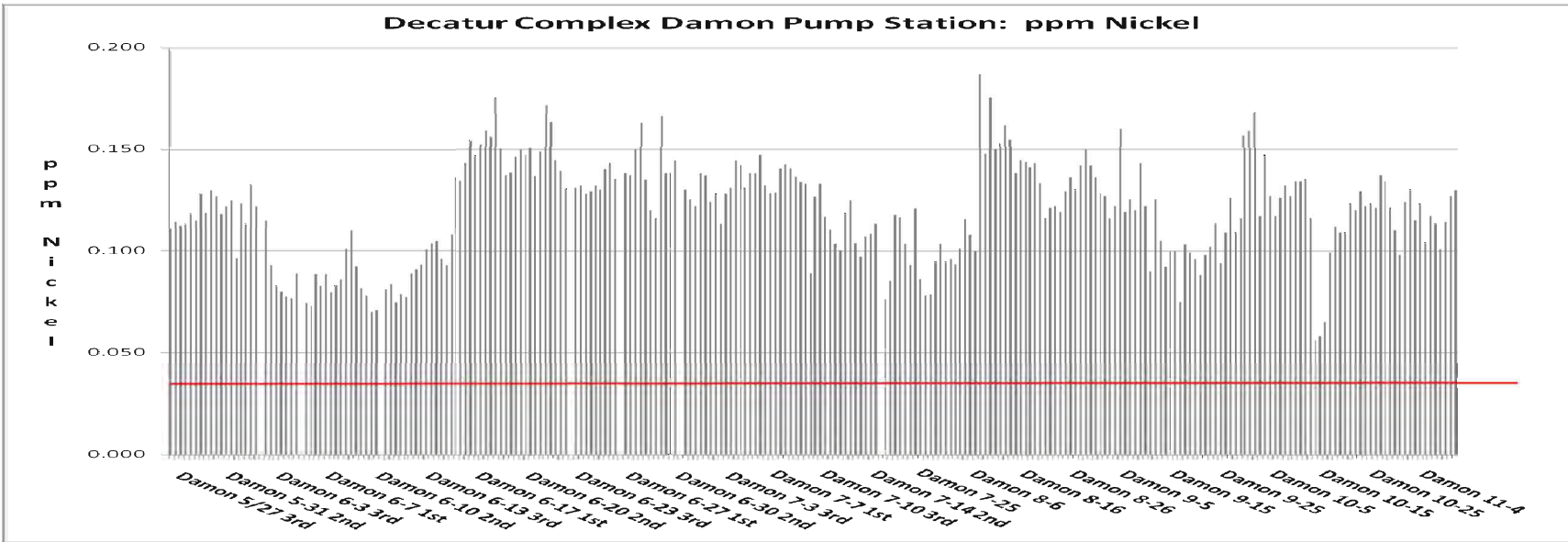
TO LOW SALT

- CORN PLT ALCOHOL
0.03 MGD
- CORN PLT FEED HOUSE
0.6 MGD
- CORN PLT REFINERY
1.25 MGD
- TRUCK WASH
MGD
- EAST PLT 8" & 12" ISOLATE
1.6 MGD
- POLYOL
MGD
- BIOCHEM WASTE
1.3 MGD
- CO-GEN NEUT WATER
0.1 MGD



11.5 MGD





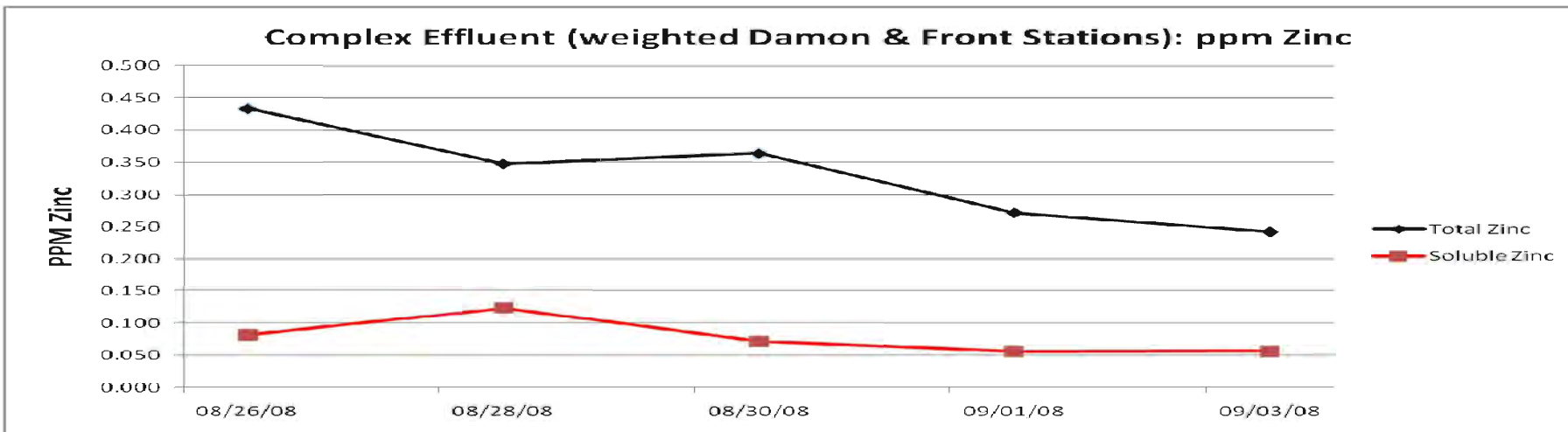
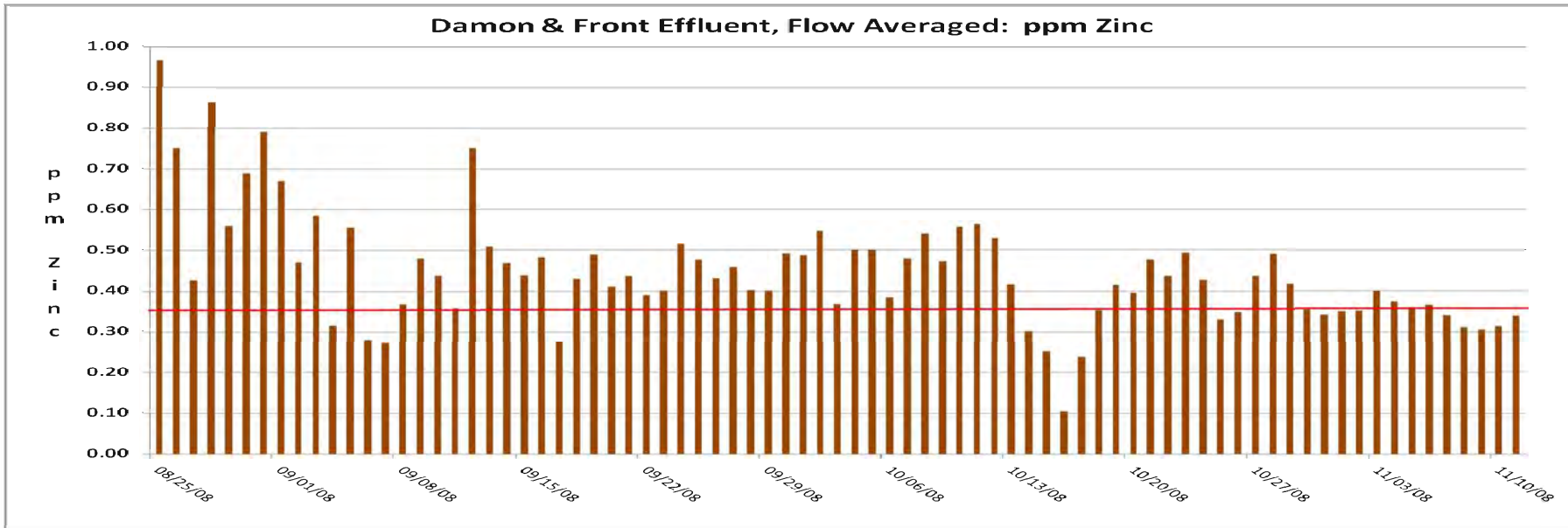


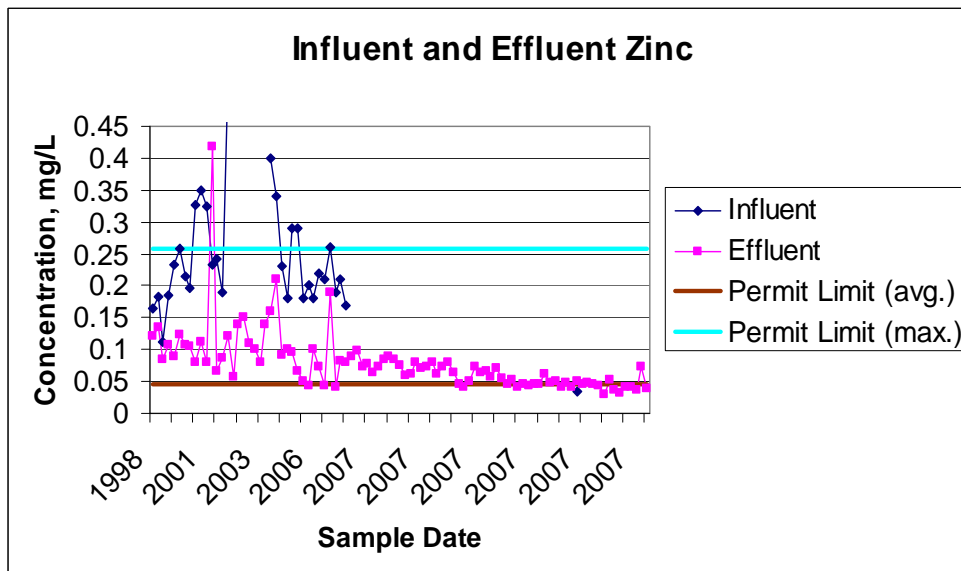
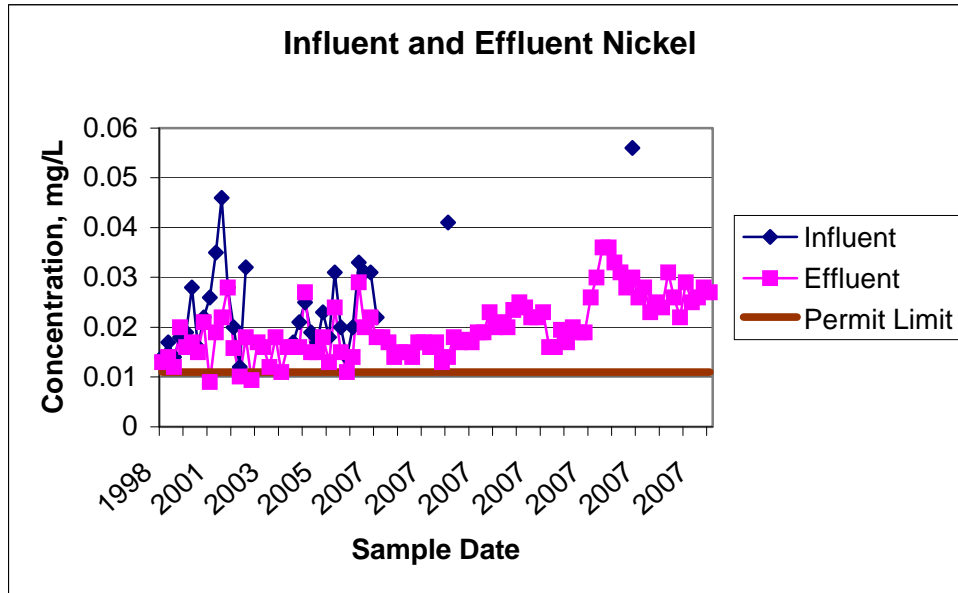
Exhibit G

Sanitary District of Decatur

Summary of Sample Data

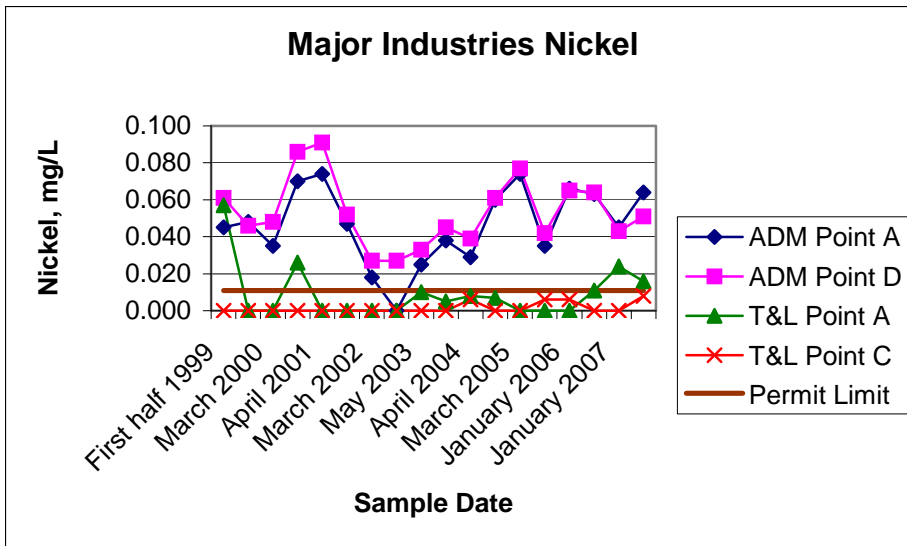
Presented to Illinois EPA on October 30, 2007

SDD Nickel & Zinc Limits

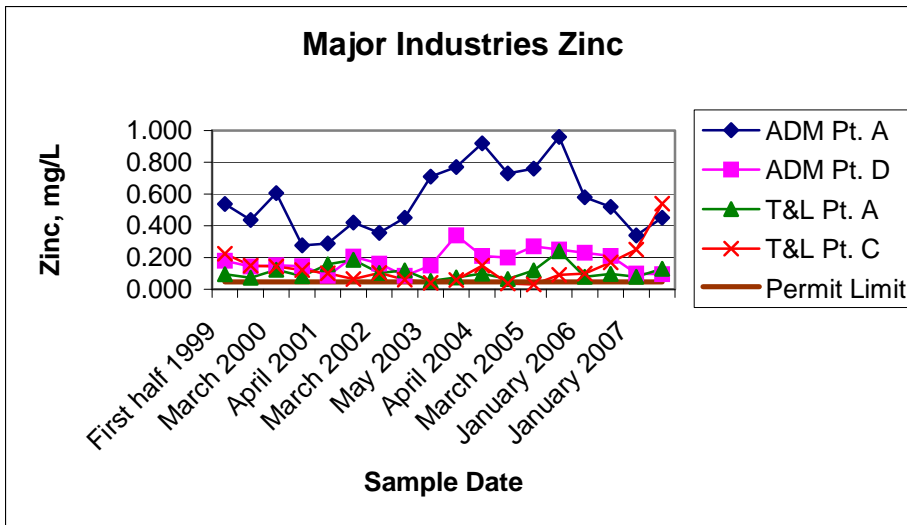


“Domestic” wastewater concentrations
 Nickel – below detection limit
 Zinc – approximately 0.066 mg/L

Drinking water supply concentrations
 Nickel – below detection limit
 Zinc – approximately 0.011 mg/L



(ADM permit limit for Ni is 0.17 mg/L)



Ongoing information gathering

- Influent, effluent, stream sampling
- Industrial and domestic wastewater sampling
- Chronic toxicity testing
- EIU stream biosurveys

Calculation options

- Translator study
- Hardness
- Biotic ligand model

Questions

- Other dischargers affected?
- Any federal updates on Ni and Zn criteria scheduled?
- Relief options potentially available – site-specific standards, use designation?
- Others? Which could IEPA support?
- Other information needed?
- Five day/week monitoring?

Exhibit H

Public Notice / Fact Sheet of
Draft Modified NPDES Permit for the Sanitary District of Decatur
Posted on Illinois EPA's Website on May 5, 2009

NPDES Permit No. IL0028321
Notice No. REP:06120503.bah

Public Notice Beginning Date: **May 7, 2009**

Public Notice Ending Date: **June 8, 2009**

National Pollutant Discharge Elimination System (NPDES)
Permit Program

PUBLIC NOTICE/FACT SHEET
of
Draft Modified NPDES Permit to Discharge into Waters of the State

Public Notice/Fact Sheet Issued By:

Illinois EPA
Division of Water Pollution Control
Permit Section
1021 North Grand Avenue East
Post Office Box 19276
Springfield, Illinois 62794-9276
217/782-0610

Name and Address of Discharger:

Sanitary District of Decatur
501 Dipper Lane
Decatur, Illinois 62522

Name and Address of Facility:

Sanitary District of Decatur Main STP
501 Dipper Lane
Decatur, Illinois
(Macon County)

The Illinois Environmental Protection Agency (IEPA) has made a tentative determination to issue a NPDES Permit to discharge into the waters of the state and has prepared a draft Permit and associated fact sheet for the above named discharger. The Public Notice period will begin and end on the dates indicated in the heading of this Public Notice/Fact Sheet. All comments on the draft Permit and requests for hearing must be received by the IEPA by U.S. Mail, carrier mail or hand delivered by the Public Notice Ending Date. Interested persons are invited to submit written comments on the draft Permit to the IEPA at the above address. Commentors shall provide his or her name and address and the nature of the issues proposed to be raised and the evidence proposed to be presented with regards to those issues. Commentors may include a request for public hearing. Persons submitting comments and/or requests for public hearing shall also send a copy of such comments or requests to the Permit applicant. The NPDES Permit and notice numbers must appear on each comment page.

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

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

The following water quality and effluent standards and limitations were applied to the discharge:

Title 35: Environmental Protection, Subtitle C: Water Pollution, Chapter I: Pollution Control Board and the Clean Water Act were applied in determining the applicable standards, limitations and conditions contained in the draft Permit.

The applicant is engaged in treating domestic and industrial wastewater for the City of Decatur and the Villages of Forsyth and Mt. Zion.

The length of the Permit is approximately 3 years.

The main discharge number is 001. The seven day once in ten year low flow (7Q10) of the receiving stream, Sangamon River, is 0 cfs.

Electronic Filing - Received, Clerk's Office, June 15, 2009

* * * * * PCB 2009-125 * * * * *

Public Notice/Fact Sheet -- Page 2 -- NPDES Permit No. IL0028321

The design average flow (DAF) for the facility is 41.0 million gallons per day (MGD) and the design maximum flow (DMF) for the facility is 125.0 MGD. Treatment consists of screening, grit removal, primary clarification, two-stage activated sludge, secondary clarification, disinfection, discharge to surface water, anaerobic digestion, flotation thickening, land application of sludge.

This treatment works has an approved pretreatment program. There are 16 noncategorical SIUs and 7 CIUs.

This modified NPDES Permit does not increase the facility's DAF, DMF, concentration limits, and/or load limits.

The following modifications are proposed:

1. Extend the existing compliance schedule for nickel and zinc from two years to three years. This extension is necessary because work performed to date has not allowed achievement of numeric limitations for nickel or zinc. Work performed includes a translator study, source investigation and source elimination or reduction including change of cooling water additives containing zinc, housekeeping practices, pH addition and other investigations. The additional time will be used to investigate other treatment techniques that would include electro-coagulation and methods to break the glutin nickel chealating bond.
2. To place outfall 006 back in the permit since it was inadvertently removed.
3. To add seven (7) existing stormwater discharges to the permit and place stormwater requirements as a Special Condition.
4. Removal of Special Condition 8 because a reasonable potential to exceed analysis was performed showing no potential existed to exceed water quality standards for fluoride and dichlorobromomethane.
5. To change nickel and zinc limits based on the metals translator.

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

Outfall	Receiving Stream	Latitude	Longitude	Stream Classification	Biological Stream Characterization
001	Sangamon River	39E 49' 56" North	89E 0' 7" West	General Use	C
002	Sangamon River	39E 50' 6" North	88E 59' 47" West	General Use	C
003 & A03	Sangamon River	39E 49' 54" North	88E 58' 22" West	General Use	C
004 & A04	Sangamon River	39E 49' 49" North	88E 57' 44" West	General Use	C
008 & A08	Sangamon River	39E 49' 60" North	88E 59' 30" West	General Use	C
007 & A07	Unnamed tributary of Spring Creek	39E 52' 12" North	88E 57' 55" West	General Use	Not Rated
A06	Stevens Creek	39E 50' 58" North	89E 59' 32" West	General Use	C

The permit authorizes the discharge of stormwater at six locations and stormwater and groundwater at one location. Stormwater and groundwater discharges are directed to the Sangamon River, tributaries of the Sangamon River, Stevens Creek or tributaries of Stevens Creek.

This permit authorizes discharge from 5 CSOs in accordance with 35 Ill. Adm. Code 306.305 and PCB Order AS 91-7, dated June 23, 1992 into the following waters:

Sangamon River, Unnamed tributary of Spring Creek and Stevens Creek.

CSO controls consist of first flush storage and primary treatment utilizing vortex separators (for up to 10 times the average dry weather flow).

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

Electronic Filing - Received, Clerk's Office, June 15, 2009

* * * * * PCB 2009-125 * * * * *

Public Notice/Fact Sheet -- Page 3 -- NPDES Permit No. IL0028321

The stream segment(s) receiving the discharge from outfall(s) 001, 002, 003, A03, 004, A04, 008 and A08 is (are) on the 303 (d) list of impaired waters.

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

Potential Causes	Designated Use Impairments
Manganese, nitrogen (total), dissolved oxygen, PCBs and fecal coliform	Aquatic Life, Fish Consumption, Primary Contact Recreation

The stream segment receiving the discharge from outfalls 007 and A07 is not on the 303(d) list of impaired streams.

The stream segment receiving the discharge from outfall A06 is on the 303(d) list of impaired streams.

Potential Causes	Designated Use Impairments
Methoxychlor	Aquatic Life

The discharge(s) from the facility is (are) proposed to be monitored and limited at all times as follows:

Discharge Number(s) and Name(s): 001 STP Outfall

Load limits computed based on a design average flow (DAF) of 41.0 MGD (design maximum flow (DMF) of 125.0 MGD).

The effluent of the above discharge(s) shall be monitored and limited at all times as follows:

Parameter	LOAD LIMITS lbs/day*			CONCENTRATION LIMITS mg/L			Regulation
	Monthly Average	Weekly Average	Daily Maximum	Monthly Average	Weekly Average	Daily Maximum	
CBOD ₅	6,839 (20,850)	13, 678 (41,700)		20	40		35 IAC 304.120 40 CFR 133.102
Suspended Solids	8,549 (26,063)	15,387 (46,913)		25	45		35 IAC 304.120 40 CFR 133.102
Dissolved Oxygen	Shall not be less than 6 mg/L						35 IAC 302.206
pH	Shall be in the range of 6 to 9 Standard Units						35 IAC 304.125
Fecal Coliform	Daily Maximum shall not exceed 400 per 100 mL (May through October)						35 IAC 304.121
Chlorine Residual						0.05	35 IAC 302.208
Ammonia Nitrogen: March-May/Sept.-O ct. June-August Nov.-Feb.	513 (1,564) 445 (1,355) 513 (1,564)		1,026 (3,128) 1,026 (3,128) 1,026 (3,128)	1.5 1.3 1.5		3.0 3.0 3.0	35 IAC 355 and 35 IAC 302
Zinc	26 (78)		142 (434)	0.075		0.416	35 IAC 302.208(e)
Nickel	5.1 (16)			0.015			35 IAC 302.208(e)

*Load Limits are calculated by using the formula: 8.34 x (Design Average and/or Maximum Flow in MGD) x (Applicable Concentration in mg/L).

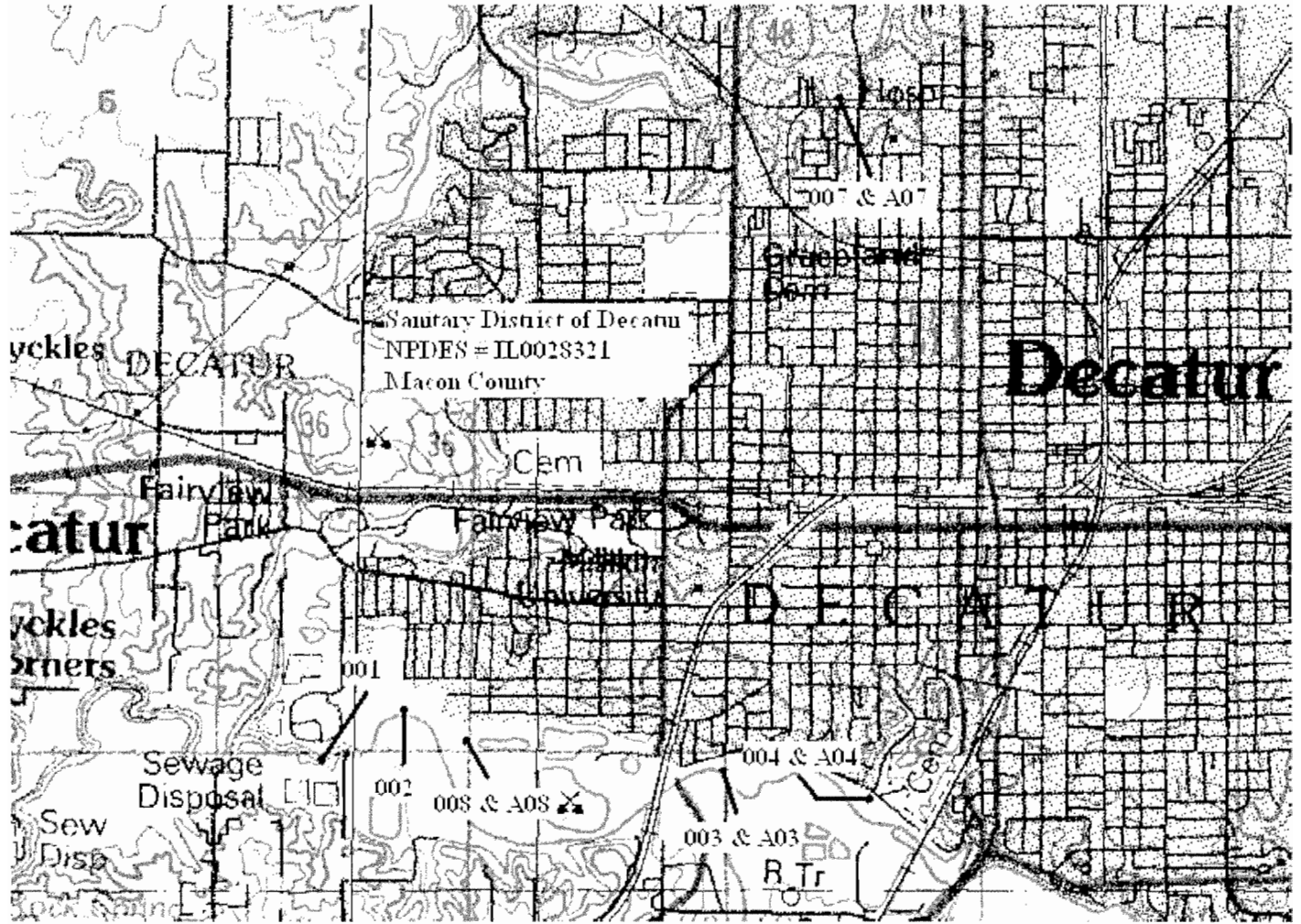
This Permit contains an authorization to treat and discharge excess flow as follows:

Discharge Number(s) and Name(s): 003 Oakland Avenue Treated Combined Sewage Outfall
 004 South Edward Street Treated Combined Sewage Outfall
 007 McKinley Avenue Treated Combined Sewage Outfall
 008 Seventh Ward Treated Combined Sewage Outfall

Parameter	CONCENTRATION LIMITS mg/L		Regulation
		Monthly Average	
BOD ₅			40 CFR 133.102
Suspended Solids			40 CFR 133.102
pH	Shall be in the range of 6 to 9 Standard Units		35 IAC 304.125

This draft Permit also contains the following requirements as special conditions:

1. Reopening of this Permit to include different final effluent limitations.
2. Operation of the facility by or under the supervision of a certified operator.
3. Submission of the operational data in a specified form and at a required frequency at any time during the effective term of this Permit.
4. More frequent monitoring requirement without Public Notice in the event of operational, maintenance or other problems resulting in possible effluent deterioration.
5. Prohibition against causing or contributing to violations of water quality standards.
6. Effluent sampling point location.
7. Seasonal fecal coliform limits.
8. The Permittee implements and administers an industrial pretreatment program pursuant to 40 CFR §403.
9. Burden reduction.
10. Submission of annual fiscal data.
11. A requirement for biomonitoring of the effluent.
12. Conditional authorization to discharge from high level emergency bypass(es) based on 40 CFR.
13. Submission of semi annual reports indicating the quantities of sludge generated and disposed.
14. An authorization of combined sewer and treatment plant discharges.
15. Recording the monitoring results on Discharge Monitoring Report Forms using one such form for each outfall each month and submitting the forms to IEPA each month.
16. Compliance schedule for nickel and zinc.
17. Stormwater pollution prevention plan requirements.



NPDES Permit No. IL0028321

Illinois Environmental Protection Agency

Division of Water Pollution Control

1021 North Grand Avenue East

Post Office Box 19276

Springfield, Illinois 62794-9276

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM

Modified (NPDES) Permit

Expiration Date: June 30, 2012

Issue Date: April 20, 2007

Effective Date: July 1, 2007

Modification Date:

Name and Address of Permittee:

Facility Name and Address:

Sanitary District of Decatur
501 Dipper Lane
Decatur, Illinois 62522

Sanitary District of Decatur Main STP
501 Dipper Lane
Decatur, Illinois
(Macon County)

Receiving Waters: Sangamon River

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

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

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

SAK:REP:06120503.bah

NPDES Permit No. IL0028321

Effluent Limitations, Monitoring, and Reporting

FINAL

Discharge Number(s) and Name(s): 001 STP Outfall

Load limits computed based on a design average flow (DAF) of 41.0 MGD (design maximum flow (DMF) of 125.0 MGD).

Excess flow facilities (if applicable) shall not be utilized until the main treatment facility is receiving its maximum practical flow.

From the modification date of this Permit until the expiration date, the effluent of the above discharge(s) shall be monitored and limited at all times as follows:

Parameter	LOAD LIMITS lbs/day DAF (DMF)*			CONCENTRATION LIMITS MG/L			Sample Frequency	Sample Type
	Monthly Average	Weekly Average	Daily Maximum	Monthly Average	Weekly Average	Daily Maximum		
Flow (MGD)							Continuous	
CBOD ₅ **	6,839 (20,850)	13,678 (41,700)		20	40		2 days/week	Composite
Suspended Solids	8,549 (26,063)	15,387 (46,913)		25	45		2 days/week	Composite
Dissolved Oxygen	Shall not be less than 6 mg/L						2 days/week	Grab
pH	Shall be in the range of 6 to 9 Standard Units						2 days/week	Grab
Fecal Coliform***	Daily Maximum shall not exceed 400 per 100 mL (May through October)						2 days/week	Grab
Chlorine Residual***						0.05	2 days/week	Grab
Ammonia Nitrogen as (N)								
March-May/Sept.-Oct.	513 (1,564)		1,026 (3,128)	1.5		3.0	2 days/week	Composite
June-August	445 (1,355)		1,026 (3,128)	1.3		3.0	2 days/week	Composite
Nov.-Feb.	513 (1,564)		1,026 (3,128)	1.5		3.0	2 days/week	Composite
Zinc ****	26 (78)		142 (434)	0.075		0.416	5 days/week	Composite
Nickel ****	5.1 (16)			0.015			5 days/week	Composite

*Load limits based on design maximum flow shall apply only when flow exceeds design average flow.

**Carbonaceous BOD₅ (CBOD₅) testing shall be in accordance with 40 CFR 136.

***See Special Condition 7.

****See Special Condition 17.

Flow shall be reported on the Discharge Monitoring Report (DMR) as monthly average and daily maximum.

Fecal Coliform shall be reported on the DMR as daily maximum.

pH shall be reported on the DMR as a minimum and a maximum.

Chlorine Residual shall be reported on DMR as daily maximum.

Dissolved oxygen shall be reported on DMR as minimum.

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Effluent Limitations, Monitoring, and Reporting

FINAL

Discharge Number(s) and Name(s): 003 Oakland Avenue Treated Combined Sewage Outfall
 004 South Edward Street Treated Combined Sewage Outfall
 007 McKinley Avenue Treated Combined Sewage Outfall
 008 Seventh Ward Treated Combined Sewage Outfall

These flow facilities shall not be utilized until the main treatment facility is receiving its maximum practical flow.

From the modification date of this Permit until the expiration date, the effluent of the above discharge(s) shall be monitored and limited at all times as follows:

Parameter		CONCENTRATION LIMITS mg/L		Sample Frequency	Sample Type
			Monthly Average		
Total Flow (MG)	See Below			Daily When Discharging	Continuous
BOD ₅				Daily When Discharging	Grab
Suspended Solids				Daily When Discharging	Grab
pH	Shall be in the range of 6 to 9 Standard Units			Daily When Discharging	Grab

Total flow in million gallons shall be reported on the Discharge Monitoring Report (DMR) in the quantity maximum column.

Report the number of days of discharge in the comments section of the DMR.

pH shall be reported on the DMR as a minimum and a maximum.

BOD₅ and Suspended Solids shall be reported on the DMR as a monthly average concentration.

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Influent Monitoring, and Reporting

The influent to the plant shall be monitored as follows:

Parameter	Sample Frequency	Sample Type
Flow (MGD)	Continuous	*RIT
BOD ₅	2 days/week	Composite
Suspended Solids	2 days/week	Composite

Influent samples shall be taken at a point representative of the influent.

Flow (MGD) shall be reported on the Discharge Monitoring Report (DMR) as monthly average and daily maximum.

BOD₅ and Suspended Solids shall be reported on the DMR as a monthly average concentration.

*Recording, Indicating, Totalizing.

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Special Conditions

SPECIAL CONDITION 1. This Permit may be modified to include different final effluent limitations or requirements which are consistent with applicable laws, regulations, or judicial orders. The IEPA will public notice the permit modification.

SPECIAL CONDITION 2. The use or operation of this facility shall be by or under the supervision of a Certified Class 1 operator.

SPECIAL CONDITION 3. The IEPA may request in writing submittal of operational information in a specified form and at a required frequency at any time during the effective period of this Permit.

SPECIAL CONDITION 4. The IEPA may request more frequent monitoring by permit modification pursuant to 40 CFR § 122.63 and Without Public Notice in the event of operational, maintenance or other problems resulting in possible effluent deterioration.

SPECIAL CONDITION 5. The effluent, alone or in combination with other sources, shall not cause a violation of any applicable water quality standard outlined in 35 Ill. Adm. Code 302.

SPECIAL CONDITION 6. Samples taken in compliance with the effluent monitoring requirements shall be taken at a point representative of the discharge, but prior to entry into the receiving stream.

SPECIAL CONDITION 7. Fecal Coliform limits for Discharge Number 001 are effective May thru October. Sampling of Fecal Coliform is only required during this time period.

The total residual chlorine limit is applicable at all times. If the Permittee is chlorinating for any purpose during the months of November through April, sampling is required on a daily grab basis. Sampling frequency for the months of May through October shall be as indicated on effluent limitations, monitoring and reporting page of this Permit.

SPECIAL CONDITION 8.A. Publicly Owned Treatment Works (POTW) Pretreatment Program General Provisions

1. The Permittee shall implement and enforce its approved Pretreatment Program which was approved on September 3, 1985 and all approved subsequent modifications thereto. The Permittee shall maintain legal authority adequate to fully implement the Pretreatment Program in compliance with Federal (40 CFR 403), State, and local laws. The Permittee shall:
 - a. Carry out independent inspection and monitoring procedures at least once per year, which will determine whether each significant industrial user (SIU) is in compliance with applicable pretreatment standards;
 - b. Perform an evaluation, at least once every two (2) years, to determine whether each SIU needs a slug control plan. If needed, the SIU slug control plan shall include the items specified in 40 CFR § 403.8 (f)(2)(v);
 - c. Update its inventory of Industrial Users (IUs) at least annually and as needed to ensure that all SIUs are properly identified, characterized, and categorized;
 - d. Receive and review self monitoring and other IU reports to determine compliance with all pretreatment standards and requirements, and obtain appropriate remedies for noncompliance by any IU with any pretreatment standard and/or requirement;
 - e. Investigate instances of noncompliance, collect and analyze samples, and compile other information with sufficient care as to produce evidence admissible in enforcement proceedings, including judicial action;
 - f. Require development, as necessary, of compliance schedules by each industrial user for the installation of control technologies to meet applicable pretreatment standards; and,
 - g. Maintain an adequate revenue structure for continued operation of the Pretreatment Program.
2. The Permittee shall issue/reissue permits or equivalent control mechanisms to all SIUs prior to expiration of existing permits or prior to commencement of discharge in the case of new discharges. The permits at a minimum shall include the elements listed in 40 CFR § 403.8(f)(1)(iii).
3. The Permittee shall develop, maintain, and enforce, as necessary, local limits to implement the prohibitions in 40 CFR § 403.5 which prohibit the introduction of specific pollutants to the waste treatment system from any source of nondomestic discharge.

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Special Conditions

4. In addition to the general limitations expressed in Paragraph 3 above, applicable pretreatment standards must be met by all industrial users of the POTW. These limitations include specific standards for certain industrial categories as determined by Section 307(b) and (c) of the Clean Water Act, State limits, or local limits, whichever are more stringent.
5. The USEPA and IEPA individually retain the right to take legal action against any industrial user and/or the POTW for those cases where an industrial user has failed to meet an applicable pretreatment standard by the deadline date regardless of whether or not such failure has resulted in a permit violation.
6. The Permittee shall establish agreements with all contributing jurisdictions, as necessary, to enable it to fulfill its requirements with respect to all IUs discharging to its system.
7. Unless already completed, the Permittee shall within six (6) months of the effective date of this Permit submit to USEPA and IEPA a proposal to modify and update its approved Pretreatment Program to incorporate Federal revisions to the general pretreatment regulations. The proposal shall include all changes to the approved program and the sewer use ordinance which are necessary to incorporate the regulations commonly referred to as PIRT and DSS, which were effective November 16, 1988 and August 23, 1990, respectively. This includes the development of an Enforcement Response Plan (ERP) and a technical re-evaluation of the Permittee's local limits.
8. The Permittee's Pretreatment Program has been modified to incorporate a Pretreatment Program Amendment approved on February 6, 1995. The amendment became effective on the date of approval and is a fully enforceable provision of your Pretreatment Program.

Modifications of your Pretreatment Program shall be submitted in accordance with 40 CFR § 403.18, which established conditions for substantial and nonsubstantial modifications.

B. Reporting and Records Requirements

1. The Permittee shall provide an annual report briefly describing the permittee's pretreatment program activities over the previous calendar year. Permittees who operate multiple plants may provide a single report providing all plant-specific reporting requirements are met. Such report shall be submitted no later than April 28 of each year, and shall be in the format set forth in IEPA's POTW Pretreatment Report Package which contains information regarding:
 - a. An updated listing of the Permittee's industrial users.
 - b. A descriptive summary of the compliance activities including numbers of any major enforcement actions, (i.e., administrative orders, penalties, civil actions, etc.), and the outcome of those actions. This includes an assessment of the compliance status of the Permittee's industrial users and the effectiveness of the Permittee's Pretreatment Program in meeting its needs and objectives.
 - c. A description of all substantive changes made to the Permittee's Pretreatment Program. Changes which are "substantial modifications" as described in 40 CFR § 403.18(c) must receive prior approval from the Approval Authority.
 - d. Results of sampling and analysis of POTW influent, effluent, and sludge.
 - e. A summary of the findings from the priority pollutants sampling. As sufficient data becomes available the IEPA may modify this Permit to incorporate additional requirements relating to the evaluation, establishment, and enforcement of local limits for organic pollutants. Any permit modification is subject to formal due process procedures pursuant to State and Federal law and regulation. Upon a determination that an organic pollutant is present that causes interference or pass through, the Permittee shall establish local limits as required by 40 CFR § 403.5(c).
2. The Permittee shall maintain all pretreatment data and records for a minimum of three (3) years. This period shall be extended during the course of unresolved litigation or when requested by the IEPA or the Regional Administrator of USEPA. Records shall be available to USEPA and the IEPA upon request.

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Special Conditions

3. The Permittee shall establish public participation requirements of 40 CFR 25 in implementation of its Pretreatment Program. The Permittee shall at least annually, publish the names of all IU's which were in significant noncompliance (SNC), as defined by 40 CFR § 403.8(f)(2)(vii), in the largest daily paper in the municipality in which the POTW is located or based on any more restrictive definition of SNC that the POTW may be using.
4. The Permittee shall provide written notification to the Deputy Counsel for the Division of Water Pollution Control, IEPA, 1021 North Grand Avenue East, P.O. Box 19276, Springfield, Illinois 62794-9276 within five (5) days of receiving notice that any Industrial User of its sewage treatment plant is appealing to the Circuit Court any condition imposed by the Permittee in any permit issued to the Industrial User by Permittee. A copy of the Industrial User's appeal and all other pleadings filed by all parties shall be mailed to the Deputy Counsel within five (5) days of the pleadings being filed in Circuit Court.

C. Monitoring Requirements

1. The Permittee shall monitor its influent, effluent and sludge and report concentrations of the following parameters on monitoring report forms provided by the IEPA and include them in its annual report. Samples shall be taken at quarterly (four times per year) intervals at the indicated reporting limit or better and consist of a 24-hour composite unless otherwise specified below. Sludge samples shall be taken of final sludge and consist of a grab sample reported on a dry weight basis.

<u>STORET CODE</u>	<u>PARAMETER</u>	<u>Minimum reporting limit</u>
01097	Antimony	0.07 mg/L
01002	Arsenic	0.05 mg/L
01007	Barium	0.5 mg/L
01012	Beryllium	0.005 mg/L
01027	Cadmium	0.001 mg/L
01032	Chromium (hex - grab not to exceed 24 hours)*	0.01 mg/L
01034	Chromium (total)	0.05 mg/L
01042	Copper	0.005 mg/L
00718	Cyanide (grab) (weak acid dissociable)*	5.0 ug/L
00720	Cyanide (grab) (total)	5.0 ug/L
00951	Fluoride*	0.1 mg/L
01045	Iron (total)	0.5 mg/L
01046	Iron (Dissolved)*	0.5 mg/L
01051	Lead	0.05 mg/L
01055	Manganese	0.5 mg/L
71900	Mercury (effluent grab using USEPA Method 1631 or equivalent)***	1.0 ng/L**
01067	Nickel	0.005 mg/L
00556	Oil (hexane soluble or equivalent) (Grab Sample only)*	5.0 mg/L
32730	Phenols (grab)	0.005 mg/L
01147	Selenium	0.005 mg/L
01077	Silver (total)	0.003 mg/L
01059	Thallium	0.3 mg/L
01092	Zinc	0.025 mg/L

* Influent and effluent only

**1 ng/L = 1 part per trillion.

*** Other approved methods may be used for influent (composite) and sludge

Unless otherwise indicated, concentrations refer to the total amount of the constituent present in all phases, whether solid, suspended or dissolved, elemental or combined including all oxidation states. Where constituents are commonly measured as other than total, the phase is so indicated.

2. The Permittee shall conduct an analysis for the one hundred and ten (110) organic priority pollutants identified in 40 CFR 122 Appendix D, Table II as amended. This monitoring shall be done once per year and reported on monitoring report forms provided by the IEPA and shall consist of the following:
 - a. The influent and effluent shall be sampled and analyzed for the one hundred and ten (110) organic priority pollutants. The sampling shall be done during a day when industrial discharges are expected to be occurring at normal to maximum levels.

NPDES Permit No. IL0028321

Special Conditions

Samples for the analysis of acid and base/neutral extractable compounds shall be 24-hour composites.

Five (5) grab samples shall be collected each monitoring day to be analyzed for volatile organic compounds. A single analysis for volatile pollutants (Method 624) may be run for each monitoring day by compositing equal volumes of each grab sample directly in the GC purge and trap apparatus in the laboratory, with no less than one (1) mL of each grab included in the composite.

Wastewater samples must be handled, prepared, and analyzed by GC/MS in accordance with USEPA Methods 624 and 625 of 40 CFR 136 as amended.

- b. The sludge shall be sampled and analyzed for the one hundred and ten (110) organic priority pollutants. A sludge sample shall be collected concurrent with a wastewater sample and taken as final sludge.

Sampling and analysis shall conform to USEPA Methods 624 and 625 unless an alternate method has been approved by IEPA.

- c. Sample collection, preservation and storage shall conform to approved USEPA procedures and requirements.

3. In addition, the Permittee shall monitor any new toxic substances as defined by the Clean Water Act, as amended, following notification by the IEPA.
4. Permittee shall report any noncompliance with effluent or water quality standards in accordance with Standard Condition 12(e) of this Permit.
5. Analytical detection limits shall be in accordance with 40 CFR 136. Minimum detection limits for sludge analyses shall be in accordance with 40 CFR 503.

SPECIAL CONDITION 9. The Permittee has undergone a Monitoring Reduction review and the influent and effluent sample frequency has been reduced for CBOD₅, BOD₅, suspended solids, dissolved oxygen, pH, fecal coliform, chlorine residual and ammonia nitrogen due to sustained compliance. The IEPA will require that the influent and effluent sampling frequency for these parameters be increased to 5 days/week if effluent deterioration occurs due to increased wasteload, operational, maintenance or other problems. The increased monitoring will be required Without Public Notice when a permit modification is received by the Permittee from the IEPA.

SPECIAL CONDITION 10. During January of each year the Permittee shall submit annual fiscal data regarding sewerage system operations to the Illinois Environmental Protection Agency/Division of Water Pollution Control/Compliance Assurance Section. The Permittee may use any fiscal year period provided the period ends within twelve (12) months of the submission date.

Submission shall be on forms provided by IEPA titled "Fiscal Report Form For NPDES Permittees".

SPECIAL CONDITION 11. The Permittee shall conduct biomonitoring of the effluent from Discharge Number(s) 001.

Biomonitoring

1. Acute Toxicity - Standard definitive acute toxicity tests shall be run on at least two trophic levels of aquatic species (fish, invertebrate) representative of the aquatic community of the receiving stream. Testing must be consistent with Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms (Fifth Ed.) EPA/821-R-02-012. Unless substitute tests are pre-approved; the following tests are required:
- a. Fish - 96 hour static LC₅₀ Bioassay using fathead minnows (*Pimephales promelas*).
- b. Invertebrate 48-hour static LC₅₀ Bioassay using *Ceriodaphnia*.
2. Testing Frequency - The above tests shall be conducted using 24-hour composite samples unless otherwise authorized by the IEPA. Samples must be collected in the 18th, 15th, 12th, and 9th month prior to the expiration date of this Permit.

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Special Conditions

3. Reporting - Results shall be reported according to EPA/821-R-02-012, Section 12, Report Preparation, and shall be submitted to IEPA, Bureau of Water, Compliance Assurance Section within one week of receipt from the laboratory. Reports are due to the IEPA no later than the 16th, 13th, 10th, and 7th month prior to the expiration date of this Permit.
4. Toxicity Reduction Evaluation - Should the results of the biomonitoring program identify toxicity, the IEPA may require that the Permittee prepare a plan for toxicity reduction evaluation and identification. This plan shall be developed in accordance with Toxicity Reduction Evaluation Guidance for Municipal Wastewater Treatment Plants, EPA/833B-99/002, and shall include an evaluation to determine which chemicals have a potential for being discharged in the plant wastewater, a monitoring program to determine their presence or absence and to identify other compounds which are not being removed by treatment, and other measures as appropriate. The Permittee shall submit to the IEPA its plan for toxicity reduction evaluation within ninety (90) days following notification by the IEPA. The Permittee shall implement the plan within ninety (90) days or other such date as contained in a notification letter received from the IEPA.

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

SPECIAL CONDITION 12. Discharge Number 002 is an emergency high level bypass. Discharges from this overflow are subject to the following conditions:

- (1) Definitions
 - (i) ABypass \equiv means the intentional diversion of waste streams from any portion of a treatment facility.
 - (ii) ASevere property damage \equiv means substantial physical damage to property, damage to the treatment facilities which causes them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.
- (2) Bypass not exceeding limitations. The Permittee may allow any bypass to occur which does not cause effluent limitations to be exceeded, but only if it also is for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions of paragraphs (3) and (4) of this section.
- (3) Notice
 - (i) Anticipated bypass. If the Permittee knows in advance of the need for a bypass, it shall submit prior notice, if possible at least ten days before the date of the bypass.
 - (ii) Unanticipated bypass. The Permittee shall submit notice of an unanticipated bypass as required in Standard Condition 12(e) of this Permit (24-hour notice).
- (4) Prohibition of bypass. Bypass is prohibited, and the IEPA may take enforcement action against a Permittee for bypass, unless:
 - (i) Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage;
 - (ii) There was no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance; and
 - (iii) The Permittee submitted notices as required under Standard Condition 12(e) of this Permit.
- (5) Emergency Bypass when discharging, shall be monitored daily by grab sample for BOD₅ and Suspended Solids. The Permittee shall submit the monitoring results on Discharge Monitoring Report forms using one such form for each month in which bypassing occurs. The Permittee shall specify the number of discharges per month that occur and shall report this number in the quantity daily maximum column. The Permittee shall report the highest concentration value of BOD₅ and Suspended Solids discharged in the concentration daily maximum column.

NPDES Permit No. IL0028321

Special Conditions

SPECIAL CONDITION 13. For the duration of this Permit, the Permittee shall determine the quantity of sludge produced by the treatment facility in dry tons or gallons with average percent total solids analysis. The Permittee shall maintain adequate records of the quantities of sludge produced and have said records available for IEPA inspection. The Permittee shall submit to the IEPA, at a minimum, a semi-annual summary report of the quantities of sludge generated and disposed of, in units of dry tons or gallons (average total percent solids) by different disposal methods including but not limited to application on farmland, application on reclamation land, landfilling, public distribution, dedicated land disposal, sod farms, storage lagoons or any other specified disposal method. Said reports shall be submitted to the IEPA by January 31 and July 31 of each year reporting the preceding January thru June and July thru December interval of sludge disposal operations.

Duty to Mitigate. The Permittee shall take all reasonable steps to minimize any sludge use or disposal in violation of this Permit.

Sludge monitoring must be conducted according to test procedures approved under 40 CFR 136 unless otherwise specified in 40 CFR 503, unless other test procedures have been specified in this Permit.

Planned Changes. The Permittee shall give notice to the IEPA on the semi-annual report of any changes in sludge use and disposal.

The Permittee shall retain records of all sludge monitoring, and reports required by the Sludge Permit as referenced in Standard Condition 23 for a period of at least five (5) years from the date of this Permit.

If the Permittee monitors any pollutant more frequently than required by the Sludge Permit, the results of this monitoring shall be included in the reporting of data submitted to the IEPA.

Monitoring reports for sludge shall be reported on the form titled "Sludge Management Reports" to the following address:

Illinois Environmental Protection Agency
 Bureau of Water
 Compliance Assurance Section
 Mail Code #19
 1021 North Grand Avenue East
 Post Office Box 19276
 Springfield, Illinois 62794-9276

SPECIAL CONDITION 14.

AUTHORIZATION OF
 COMBINED SEWER AND TREATMENT PLANT DISCHARGES

The IEPA has determined that at least a portion of the collection system consists of combined sewers. References to the collection system and the sewer system refer only to those parts of the system which are owned and operated by the Permittee unless otherwise indicated. The Permittee is authorized to discharge from the overflow(s)/bypass(es) listed below provided the diversion structure is located on a combined sewer and the following terms and conditions are met:

<u>Discharge Number</u>	<u>Location</u>	<u>Receiving Water</u>
A03	Oakland Avenue CSO Treatment Bypass	Sangamon River
A04	South Edward Street CSO Treatment Bypass	Sangamon River
A06	Fairview Park CSO	Stevens Creek
A07	McKinley Avenue CSO Treatment Bypass	Unnamed tributary of Spring Creek
A08	Seventh Ward CSO Treatment Bypass	Sangamon River

Treatment Requirements

1. All combined sewer overflows and treatment plant bypasses shall be given sufficient treatment to prevent pollution and the violation of applicable water quality standards. Sufficient treatment shall consist of the following:
 - a. Treatment as described in PCB AS 91-7 and dated June 23, 1992 shall be provided. The terms and conditions of this Board Order are hereby incorporated by reference as if fully set forth herein; and,

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- b. Any additional treatment, necessary to comply with applicable water quality standards and the federal Clean Water Act, including any amendments made by the Wet Weather Water Quality Act of 2000.
2. All CSO discharges authorized by this Permit shall be treated, in whole or in part, to the extent necessary to prevent accumulations of sludge deposits, floating debris and solids in accordance with 35 Ill. Adm. Code 302.203 and to prevent depression of oxygen levels below the applicable water quality standards.
3. Overflows during dry weather are prohibited. Dry weather overflows shall be reported to the IEPA pursuant to Standard Condition 12(e) of this Permit (24 hour notice).
4. The collection system shall be operated to optimize transport of wastewater flows and to minimize CSO discharges.
5. The treatment system shall be operated to maximize treatment of wastewater flows.

Nine Minimum Controls

6. The Permittee shall comply with the nine minimum controls contained in the National CSO Control Policy published in the Federal Register on April 19, 1994. The nine minimum controls are:
 - a. Proper operation and maintenance programs for the sewer system and the CSOs (Compliance with this Item shall be met through the requirements imposed by Paragraph 8 of this Special Condition);
 - b. Maximum use of the collection system for storage (Compliance with this Item shall be met through the requirements imposed by Paragraphs 1, 4, and 8 of this Special Condition);
 - c. Review and modification of pretreatment requirements to assure CSO impacts are minimized (Compliance with this Item shall be met through the requirements imposed by Paragraph 9 of this Special Condition);
 - d. Maximization of flow to the POTW for treatment (Compliance with this Item shall be met through the requirements imposed by Paragraphs 4, 5, and 8 of this Special Condition);
 - e. Prohibition of CSOs during dry weather (Compliance with this Item shall be met through the requirements imposed by Paragraph 3 of this Special Condition);
 - f. Control of solids and floatable materials in CSOs (Compliance with this Item shall be met through the requirements imposed by Paragraphs 2 and 8 of this Special Condition);
 - g. Pollution prevention programs which focus on source control activities (Compliance with this Item shall be met through the requirements imposed by Paragraph 6 of this Special Condition, **See Below**);
 - h. Public notification to ensure that citizens receive adequate information regarding CSO occurrences and CSO impacts (Compliance with this Item shall be met through the requirements imposed by Paragraph 12 of this Special Condition); and,
 - i. Monitoring to characterize impacts and efficiency of CSO controls (Compliance with this Item shall be met through the requirements imposed by Paragraphs 10 and 11 of this Special Condition).

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A pollution prevention plan (PPP) shall be developed by the Permittee unless one has already been prepared for this collection system. Any previously-prepared PPP shall be reviewed, and revised if necessary, by the Permittee to address the items contained in Chapter 8 of the U.S. EPA guidance document, Combined Sewer Overflows, Guidance For Nine Minimum Controls, and any items contained in previously-sent review documents from the IEPA concerning the PPP. Combined Sewer Overflows, Guidance For Nine Minimum Controls is available on line at <http://www.epa.gov/NPDES/pubs/owm0030.pdf>. The PPP (or revised PPP) shall be presented to the general public at a public information meeting conducted by the Permittee within nine (9) months of the effective date of this Permit. The Permittee shall submit documentation that the pollution prevention plan complies with the requirements of this Permit and that the public information meeting was held. Such documentation shall be submitted to the IEPA within twelve (12) months of the effective date of this Permit and shall include a summary of all significant issues raised by the public, the Permittee's response to each issue, and two (2) copies of the "CSO Pollution Prevention Plan Certification" one (1) with original signatures. This certification form is available online at <http://www.epa.state.il.us/water/permits/waste-water/forms/cso-pol-prev.pdf>. Following the public meeting, the Permittee shall implement the pollution prevention plan within one (1) year and shall maintain a current pollution prevention plan, updated to reflect system modifications, on file at the sewage treatment works or other acceptable location and made available to the public. The pollution prevention plan shall be submitted to the IEPA upon written request.

Sensitive Area Considerations

7. Pursuant to Section II.C.3 of the federal CSO Control Policy of 1994, sensitive areas are any water likely to be impacted by a CSO discharge which meet one or more of the following criteria: (1) designated as an Outstanding National Resource Water; (2) found to contain shellfish beds; (3) found to contain threatened or endangered aquatic species or their habitat; (4) used for primary contact recreation; or, (5) within the protection area for a drinking water intake structure.

The IEPA has tentatively determined that none of the outfalls listed in this Special Condition discharge to sensitive areas. However, if information becomes available that causes the IEPA to reverse this determination, the IEPA will notify the Permittee in writing. Within three (3) months of the date of notification, or such other date contained in the notification letter, the Permittee shall submit two (2) copies of either a schedule to relocate, control, or treat discharges from these outfalls. If none of these options are possible, the Permittee shall submit adequate justification at that time as to why these options are not possible. Such justification shall be in accordance with Section II.C.3 of the National CSO Control Policy.

Operational and Maintenance Plans

8. The IEPA reviewed and accepted a CSO operational and maintenance plan "CSO O&M plan" on February 1, 2000 prepared for this sewerage system. The Permittee shall review and revise, if needed, the CSO O&M plan to reflect system changes.

The CSO O&M plan shall be presented to the general public at a public information meeting conducted by the Permittee within nine (9) months of the effective date of this Permit. The Permittee shall submit documentation that the CSO O&M plan complies with the requirements of this Permit and that the public information meeting was held. Such documentation shall be submitted to the IEPA within twelve (12) months of the effective date of this Permit and shall include a summary of all significant issues raised by the public, the Permittee's response to each issue, and two (2) copies of the "CSO Operational Plan Checklist and Certification", one (1) with original signatures. Copies of the "CSO Operational Plan Checklist and Certification" are available online at <http://www.epa.state.il.us/water/permits/waste-water/forms/cso-checklist.pdf>. Following the public meeting, the Permittee shall implement the CSO O&M plan within one (1) year and shall maintain a current CSO O&M plan, updated to reflect system modifications, on file at the sewage treatment works or other acceptable location and made available to the public. The CSO O&M plan shall be submitted to the IEPA upon written request.

The objectives of the CSO O&M plan are to reduce the total loading of pollutants and floatables entering the receiving stream and to ensure that the Permittee ultimately achieves compliance with water quality standards. These plans, tailored to the local governments's collection and waste treatment systems, shall include mechanisms and specific procedures where applicable to ensure:

- a. Collection system inspection on a scheduled basis;
- b. Sewer, catch basin, and regulator cleaning and maintenance on a scheduled basis;
- c. Inspections are made and preventive maintenance is performed on all pump/lift stations;
- d. Collection system replacement, where necessary;
- e. Detection and elimination of illegal connections;

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- f. Detection, prevention, and elimination of dry weather overflows;
- g. The collection system is operated to maximize storage capacity and the combined sewer portions of the collection system are operated to delay storm entry into the system; and,
- h. The treatment and collection systems are operated to maximize treatment.

Sewer Use Ordinances

9. The Permittee, within six (6) months of the effective date of this Permit, shall review and where necessary, modify its existing sewer use ordinance to ensure it contains provisions addressing the conditions below. If no ordinance exists, such ordinance shall be developed and implemented within six (6) months from the effective date of this Permit. Upon completion of the review of the sewer use ordinance(s), the Permittee shall submit two (2) copies of a completed "Certification of Sewer Use Ordinance Review", one (1) with original signatures. Copies of the certification form can be obtained on line at <http://www.epa.state.il.us/water/permits/waste-water/forms/sewer-use.pdf>. The Permittee shall submit copies of the sewer use ordinance(s) to the IEPA upon written request. Sewer use ordinances are to contain specific provisions to:
- a. prohibit introduction of new inflow sources to the sanitary sewer system;
 - b. require that new construction tributary to the combined sewer system be designed to minimize and/or delay inflow contribution to the combined sewer system;
 - c. require that inflow sources on the combined sewer system be connected to a storm sewer, within a reasonable period of time, if a storm sewer becomes available;
 - d. provide that any new building domestic waste connection shall be distinct from the building inflow connection, to facilitate disconnection if a storm sewer becomes available;
 - e. assure that CSO impacts from non-domestic sources are minimized by determining which non-domestic discharges, if any, are tributary to CSOs and reviewing, and, if necessary, modifying the sewer use ordinance to control pollutants in these discharges; and,
 - f. notify the owners of all publicly owned systems with combined sewers tributary to the Permittee's collection system of their obligations to have procedures in place adequate to ensure that the objectives, mechanisms, and specific procedures given in Paragraph 8 of this Special Condition are achieved.

The Permittee shall enforce the applicable sewer use ordinances.

Long-Term Control Planning and Compliance with Water Quality Standards

10. a. Pursuant to Section 301 of the federal Clean Water Act, 33 U.S.C. § 1311 and 40 CFR § 122.4, discharges from the CSOs, including the outfalls listed in this Special Condition and any other outfall listed as a "Treated Combined Sewage Outfall", shall not cause or contribute to violations of applicable water quality standards or cause use impairment in the receiving waters. In addition, discharges from CSOs shall comply with all applicable parts of 35 Ill. Adm. Code 306.305(a), (b), (c), and (d).

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- b. Based on available information, it appears that the CSOs authorized in this Permit meet the criteria of Section II.C.4.a.i of the federal CSO Control Policy of 1994 (Policy), not more than four overflow events per year, and are presumed to meet the water quality-based requirements of the federal Clean Water Act. Pursuant to Section I.C.1 and Section II.C.9 of the Policy, the Permittee shall develop a post-construction water quality monitoring program adequate to verify compliance with water quality standards and to verify protection of designated uses in the receiving water(s) and to ascertain the effectiveness of CSO controls. This program shall contain a plan that details the monitoring protocols to be followed, including any necessary effluent and ambient monitoring, and if appropriate, other monitoring protocols such as biological assessments, whole effluent toxicity testing, and sediment sampling. This plan shall be presented to the public at an informational meeting within nine (9) months of the effective date of this Permit. Within twelve (12) months of the effective date of this Permit, the Permittee shall submit a summary of all significant issues raised by the public, the Permittee's response to each issue, and two (2) copies of the final plan (revised following the public meeting, if necessary) implementing the post-construction monitoring program. The post-construction monitoring plan shall be implemented within six (6) months of the date of IEPA approval. The Permittee shall respond to an IEPA review letter in writing within ninety (90) days of the date of such an initial review letter and within thirty (30) days of any subsequent review letter(s), if any. Within thirty (30) months of the approval of the plan, the results shall be submitted to the IEPA along with recommendations and conclusions as to whether or not the discharges from any of the CSOs (treated or untreated) authorized by this Permit are causing or contributing to violations of applicable water quality standards or causing use impairment in the receiving water(s).
- c. Should the results of the post-construction water quality monitoring plan or if information becomes available that causes IEPA to conclude that the discharges from any of the CSOs (treated or untreated) authorized to discharge under this Permit are causing or contributing to violations of water quality standards or are causing use impairment in the receiving water(s), the IEPA will notify the Permittee in writing. Upon receiving such notification, the Permittee shall develop and implement a CSO Long-Term Control Plan (LTCP) for assuring that the discharges from the CSOs (treated or untreated) authorized in this Permit comply with the provisions of Paragraph 10.a above. The LTCP shall contain all applicable elements of Paragraph 10.d below including a schedule for implementation and provisions for re-evaluating compliance with applicable standards and regulations after complete implementation. Two (2) copies of the LTCP shall be submitted to the IEPA within twelve (12) months of receiving the IEPA written notice. The LTCP shall be:
1. Consistent with Section II.C.4.a.i of the Policy; or,
 2. Consistent with either Section II.C.4.a.ii, Section II.C.4.a.iii, or Section II.C.4.b of the Policy and be accompanied by data sufficient to demonstrate that the LTCP, when completely implemented, will be sufficient to meet water quality standards.
- d. Pursuant to the Policy, the required components of the LTCP include the following:
1. Characterization, monitoring, and modeling of the Combined Sewer System (CSS);
 2. Consideration of Sensitive Areas;
 3. Evaluation of alternatives;
 4. Cost/Performance considerations;
 5. Revised CSO Operational Plan;
 6. Maximizing treatment at the treatment plant;
 7. Implementation schedule;
 8. Post-Construction compliance monitoring program; and
 9. Public participation.

Following submittal of the LTCP, the Permittee shall respond to any initial IEPA review letter in writing within ninety (90) days of the date of such a review letter, and within thirty (30) days of any subsequent review letter(s), if any. Implementation of the LTCP shall be as indicated by IEPA in writing or other enforceable mechanism.

Monitoring, Reporting and Notification Requirements

11. The Permittee shall monitor the frequency of discharge (number of discharges per month) and estimate the duration (in hours) of each discharge from each outfall listed in this Special Condition. Estimates of storm duration and total rainfall shall be provided for each storm event.

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For frequency reporting, all discharges from the same storm, or occurring within 24 hours, shall be reported as one. The date that a discharge commences shall be recorded for each outfall. Reports shall be in the form specified by the IEPA and on forms provided by the IEPA. These forms shall be submitted to the IEPA monthly with the DMRs and covering the same reporting period as the DMRs. Parameters (other than flow frequency), if required in this Permit, shall be sampled and reported as indicated in the transmittal letter for such report forms.

12. A public notification program in accordance with Section II.B.8 of the federal CSO Control Policy of 1994 shall be developed employing a process that actively informs the affected public. The program shall include at a minimum public notification of CSO occurrences and CSO impacts, with consideration given to including mass media and/or Internet notification. The Permittee shall also consider posting signs in waters likely to be impacted by CSO discharges at the point of discharge and at points where these waters are used for primary contact recreation. Provisions shall be made to include modifications of the program when necessary and notification to any additional member of the affected public. The program shall be presented to the general public at a public information meeting conducted by the Permittee. The Permittee shall conduct the public information meeting within nine (9) months of the effective date of this Permit. The Permittee shall submit documentation that the public information meeting was held, shall submit a summary of all significant issues raised by the public and the Permittee's response to each issue and shall identify any modifications to the program as a result of the public information meeting. The Permittee shall submit the public information meeting documentation to the IEPA and implement the public notification program within twelve (12) months of the effective date of this Permit. The Permittee shall submit copies of the public notification program to the IEPA upon written request.
13. If any of the CSO discharge points listed in this Special Condition are eliminated, or if additional CSO discharge points, not listed in this Special Condition, are discovered, the Permittee shall notify the IEPA in writing within one (1) month of the respective outfall elimination or discovery. Such notification shall be in the form of a request for the appropriate modification of this NPDES Permit.

Summary of Compliance Dates in this CSO Special Condition

14. The following summarizes the dates that submittals contained in this Special Condition are due at the IEPA (unless otherwise indicated):

Submission of CSO Monitoring Data (Paragraph 11)	15th of every month
Elimination of a CSO or Discovery of Additional CSO Locations (Paragraph 13)	1 month from discovery or elimination
Control (or Justification for No Control) of CSOs to Sensitive Areas (Paragraph 7)	3 months from IEPA notification
Certification of Sewer Use Ordinance Review (Paragraph 9)	6 months from the effective date of this Permit
Implement Post-Construction Monitoring Plan (Paragraph 10) No Submittal Due with this Milestone	6 months from the date of IEPA plan approval
Conduct Pollution Prevention, OMP, Post-Construction Monitoring Plan and PN Public Information Meeting (Paragraphs, 6, 8, 10 and 12) No Submittal Due with this Milestone	9 months from the effective date of this Permit
Submit Pollution Prevention Certification, OMP Certification, Post-Construction Monitoring Plan and PN Information Meeting Summary (Paragraphs, 6, 8, 10 and 12)	12 months from the effective date of this Permit
Submit CSO Long-Term Control Plan (Paragraph 10)	12 months from the date of IEPA notification
Submit Results of Post-Construction Monitoring Plan (Paragraph 10)	30 months from the date of IEPA plan approval

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All submittals listed in this Special Condition can be mailed to the following address:

Illinois Environmental Protection Agency
Division of Water Pollution Control
1021 North Grand Avenue East
Post Office Box 19276
Springfield, Illinois 62794-9276

Attention: CSO Coordinator, Compliance Assurance Section

All submittals hand carried shall be delivered to 1021 North Grand Avenue East.

Reopening and Modifying this Permit

15. The IEPA may initiate a modification for this Permit at any time to include requirements and compliance dates which have been submitted in writing by the Permittee and approved by the IEPA, or other requirements and dates which are necessary to carry out the provisions of the Illinois Environmental Protection Act, the Clean Water Act, or regulations promulgated under those Acts. Public Notice of such modifications and opportunity for public hearing shall be provided.

SPECIAL CONDITION 15. The Permittee shall record monitoring results on Discharge Monitoring Report (DMR) Forms using one such form for each outfall each month.

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

The Permittee may choose to submit electronic DMRs (eDMRs) instead of mailing paper DMRs to the IEPA. More information, including registration information for the eDMR program, can be obtained on the IEPA website, <http://www.epa.state.il.us/water/edmr/index.html>.

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

Permittees not using eDMRs shall mail Discharge Monitoring Reports with an original signature to the IEPA at the following address:

Illinois Environmental Protection Agency
Division of Water Pollution Control
1021 North Grand Avenue East
Post Office Box 19276
Springfield, Illinois 62794-9276

Attention: Compliance Assurance Section, Mail Code # 19

SPECIAL CONDITION 16. The Permittee has collected data in support of developing a site-specific metals translator for nickel and zinc. The IEPA has reviewed the sample data and has revised effluent limitations for these parameters based on the metal translator determined from the collected data.

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Project Description: Compliance with Nickel and Zinc Water Quality Standards

Thirty-six (36) months from the effective date of this Permit the following nickel and zinc limits and monitoring requirements found on page two of this permit shall become effective:

	Load Limits lbs/day <u>DAF (DMF)*</u>		Concentration <u>Limits mg/L</u>	
	Monthly Avg.	Daily Max.	Monthly Avg.	Daily Max.
Zinc	26 (78)	142 (434)	0.075	0.416
Nickel	5.1 (16)		0.015	

*Load limits based on design maximum flow shall apply only when flow exceeds the design average flow.

The Permittee shall complete the project described above in accordance with the following schedule:

(1)	Interim Report on effluent and stream sampling to date and what measures are necessary to comply with Final Nickel and Zinc Limitations	6 months from the effective date of this Permit
(2)	Interim Report	12 months from the effective date of this Permit
(3)	Interim Report	18 months from the effective date of this Permit
(4)	Interim Report	24 months from the effective date of this Permit
(5)	Interim Report	30 months from the effective date of this Permit
(6)	Permittee Achieves Compliance with Final Nickel and Zinc Effluent Limitations	36 months from the effective date of this Permit

This Permit may be modified, with Public Notice, to include revised compliance dates set out in this Permit that are superseded or supplemented by compliance dates in judicial orders, Pollution Control Board orders or grant agreements. Prior to such permit modification, the revised dates in the appropriate orders or grant agreements shall govern the Permittee's compliance.

In addition, the IEPA may initiate a modification of the construction schedule set forth in this Permit at any time, to include other dates which are necessary to carry out the provisions of the Illinois Environmental Protection Act, the Federal Clean Water Act or regulations promulgated under those Acts or compliance dates which have been submitted in writing by the Permittee and approved by the IEPA. Public Notice of such modifications and opportunity for public hearing shall be provided consistent with 40 CFR § 122.63.

REPORTING

The Permittee shall submit a report no later than fourteen (14) days following the completion dates indicated for each numbered item in the compliance schedule, indicating, a) the date the item was completed, or b) that the item was not completed. All reports shall be submitted to IEPA at the following address:

Illinois Environmental Protection Agency
Division of Water Pollution Control
1021 North Grand Avenue East
Post Office box 19276
Springfield, Illinois 62794-9276

Attention: Compliance Assurance Section, Mail Code # 19

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1. A storm water pollution prevention plan shall be developed by the permittee and submitted to the Agency for each facility covered by this permit. The plan shall identify potential sources of pollution which may be expected to affect the quality of storm water discharges associated with the industrial activity at the facility. In addition, the plan shall describe and ensure the implementation of practices which are to be used to reduce the pollutants in storm water discharges associated with industrial activity at the facility and to assure compliance with the terms and conditions of this permit. An electronic copy of the plan shall be submitted to the Agency at the following email address: epa.indlr00swppp@illinois.gov. The permittee shall submit any modified plan to the Agency, when such modification includes substantive changes to the plan or modification is made to the plan for compliance with this permit.
 - a. Waters not classified as Impaired pursuant to Section 303(d) of the Clean Water Act

Unless otherwise specified by federal regulation, the storm water pollution prevention plan shall be designed for a storm event equal to or greater than a 25-year 24-hour rainfall event.
 - b. Waters classified as Impaired pursuant to Section 303(d) of the Clean Water Act

For any site which discharges directly to an impaired water identified in the Agency's 303(d) listing, and if any parameter in the subject discharge has been identified as the cause of impairment, the storm water pollution prevention plan shall be designed for a storm event equal to or greater than a 25-year 24-hour rainfall event. If required by federal regulations, the storm water pollution prevention plan shall adhere to a more restrictive design criteria.
2. Plans for new facilities shall be completed prior to submitting an NOI to be covered under this permit. An electronic copy of the storm water pollution prevention plan shall be submitted to the Agency at the following email address: epa.indlr00swppp@illinois.gov. Plans shall provide for compliance with the terms of this permit prior to operation of any industrial activity to be covered under this permit. [Note: If the plan has already been required to be developed under a previous permit it shall be maintained in accordance with all requirements of this special condition.]. The owner or operator of an existing facility with storm water discharges covered by this permit shall make a copy of the plan available to the Agency at any reasonable time upon request.

Facilities which discharge to a municipal separate storm sewer system shall also make a copy available to the operator of the municipal system at any reasonable time upon request.
3. The permittee may be notified by the Agency at any time that the plan does not meet the requirements of this permit. After such notification, the permittee shall make changes to the plan and shall submit a revised plan to the Agency, with the requested changes that have been made. Unless otherwise provided, the permittee shall have 30 days after such notification to make the changes.
4. The discharger shall amend the plan whenever there is a change in construction, operation, or maintenance which may affect the discharge of significant quantities of pollutants to the waters of the State or if a facility inspection required by paragraph E.8. of this permit indicates that an amendment is needed. The plan should also be amended if the discharger is in violation of any conditions of this permit, or has not achieved the general objectives of controlling pollutants in storm water discharges. Amendments to the plan shall be made within 30 days of any proposed construction or operational changes at the facility, and shall be submitted to the Agency.
5. The plan shall provide a description of potential sources which may be expected to add significant quantities of pollutants to storm water discharges, or which may result in non-storm water discharges from the facility. The plan shall include, at a minimum, the following items:
 - a. A topographic map extending one-quarter mile beyond the property boundaries of the facility, showing: the facility, surface water bodies, wells (including injection wells), seepage pits, infiltration ponds, and the discharge points where the facility's storm water discharges to a municipal storm drain system or other water body. The requirements of this paragraph may be included on the site map if appropriate. Any map or portion of map may be withheld for security reasons.

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- b. A site map showing:
 - i. The storm water conveyance and discharge structures;
 - ii. An outline of the storm water drainage areas for each storm water discharge point;
 - iii. Paved areas and buildings;
 - iv. Areas used for outdoor manufacturing, storage, or disposal of significant materials, including activities that generate significant quantities of dust or particulates;
 - v. Location of existing or future storm water structural control measures/practices (dikes, coverings, detention facilities, etc.);
 - vi. Surface water locations and/or municipal storm drain locations;
 - vii. Areas of existing and potential soil erosion;
 - viii. Vehicle service areas;
 - ix. Material loading, unloading, and access areas;
 - x. Areas under Items iv and ix above may be withheld from the site map for security reasons.
 - c. A narrative description of the following:
 - i. The nature of the industrial activities conducted at the site, including a description of significant materials that are treated, stored or disposed of in a manner to allow exposure to storm water;
 - ii. Materials, equipment, and vehicle management practices employed to minimize contact of significant materials with storm water discharges;
 - iii. Existing or future structural and non-structural control measures/practices to reduce pollutants in storm water discharges;
 - iv. Industrial storm water discharge treatment facilities;
 - v. Methods of onsite storage and disposal of significant materials.
 - d. A list of the types of pollutants that have a reasonable potential to be present in storm water discharges in significant quantities. Also provide a list of any pollutant that is listed as impaired in the most recent 303(d) report.
 - e. An estimate of the size of the facility in acres or square feet, and the percent of the facility that has impervious areas such as pavement or buildings.
 - f. A summary of existing sampling data describing pollutants in storm water discharges.
6. The plan shall describe the storm water management controls which will be implemented by the facility. The appropriate controls shall reflect identified existing and potential sources of pollutants at the facility. The description of the storm water management controls shall include:
- a. Storm Water Pollution Prevention Personnel - Identification by job titles, direct telephone numbers and email addresses of the individuals who are responsible for developing, implementing, and revising the plan.
 - b. Preventive Maintenance - Procedures and frequencies for inspection and maintenance of storm water conveyance system devices such as oil/water separators, catch basins, etc., and inspection and testing of plant equipment and systems that could fail and result in discharges of pollutants to storm water.

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- c. Good Housekeeping - Good housekeeping requires the maintenance of clean, orderly facility areas that discharge storm water. Material handling areas shall be inspected and cleaned to reduce the potential for pollutants to enter the storm water conveyance system.
- d. Spill Prevention and Response - Identification of areas where significant materials can spill into or otherwise enter the storm water conveyance systems and their accompanying drainage points. Specific material handling procedures, storage requirements, spill cleanup equipment and procedures should be identified, as appropriate. Internal notification procedures for spills of significant materials should be established.
- e. Storm Water Management Practices - Storm water management practices are practices other than those which control the source of pollutants. They include measures such as installing oil and grit separators, diverting storm water into retention basins, etc. Based on assessment of the potential of various sources to contribute pollutants, measures to remove pollutants from storm water discharge shall be implemented. In developing the plan, the following management practices shall be considered:
 - i. Containment - Storage within berms or other secondary containment devices to prevent leaks and spills from entering storm water runoff. To the maximum extent practicable, storm water discharged from any area where material handling equipment or activities, raw materials, intermediate products, final products, waste materials, by-products, or industrial machinery are exposed to storm water should not enter vegetated areas or surface waters or infiltrate into the soil unless adequate treatment is provided.
 - ii. Oil & Grease Separation - Oil/water separators, booms, skimmers or other methods to minimize oil contaminated storm water discharges.
 - iii. Debris & Sediment Control - Screens, booms, sediment ponds or other methods to reduce debris and sediment in storm water discharges.
 - iv. Waste Chemical Disposal - Waste chemicals such as antifreeze, degreasers and used oils shall be recycled or disposed of in an approved manner and in a way which prevents them from entering storm water discharges.
 - v. Storm Water Diversion - Storm water diversion away from materials manufacturing, storage and other areas of potential storm water contamination. Minimize the quantity of storm water entering areas where material handling equipment or activities, raw materials, intermediate products, final products, waste materials, by-products, or industrial machinery are exposed to storm water using green infrastructure techniques where practicable in the areas outside the exposure area, and otherwise divert storm water away from the exposure area.
 - vi. Covered Storage or Manufacturing Areas - Covered fueling operations, materials manufacturing and storage areas to prevent contact with storm water.
 - vii. Mercury Switch Removal and Recycling - Mercury-containing convenience lighting switches and anti-lock brake assemblies shall be removed from vehicles, and recycled in an approved manner, in a way which prevents mercury from entering the storm water discharges.
 - viii. Storm Water Reduction - Install vegetation on roofs of buildings within and adjacent to the exposure area to detain and evapotranspire runoff where the precipitation falling on the roof is not exposed to contaminants, to minimize storm water runoff; capture storm water in devices that minimize the amount of storm water runoff and use this water as appropriate based on quality.
- f. Sediment and Erosion Prevention - The plan shall identify areas which due to topography, activities, or other factors, have a high potential for significant soil erosion. The plan shall describe measures to limit erosion.
- g. Employee Training - Employee training programs shall inform personnel at all levels of responsibility of the components and goals of the storm water pollution prevention plan. Training should address topics such as spill response, good housekeeping and material management practices. The plan shall identify periodic dates for such training.

NPDES Permit No. IL0028321

Special Conditions

- h. Inspection Procedures - Qualified plant personnel shall be identified to inspect designated equipment and plant areas. A tracking or follow-up procedure shall be used to ensure appropriate response has been taken in response to an inspection. Inspections and maintenance activities shall be documented and recorded.
7. Non-Storm water Discharges - The plan shall include a certification that the discharge has been tested or evaluated for the presence of non-storm water discharges. The certification shall include a description of any tests for the presence of non-storm water discharges, the methods used, the dates of the testing, and any onsite drainage points that were observed during the testing. Any facility that is unable to provide this certification must describe the procedure of any test conducted for the presence of non-storm water discharges, the test results, potential sources of non-storm water discharges to the storm sewer, and why adequate tests for such storm sewers were not feasible. Except as provided in C.1. b., discharges not comprised entirely of storm water are not authorized by this permit.
 8. Quarterly Visual Observation of Discharges – The requirements and procedures for quarterly visual observations are applicable to all facilities covered under this permit, regardless of your sector of industrial activity.
 - a. You must perform and document a quarterly visual observation of a storm water discharge associated with industrial activity from each outfall. The visual observation must be made during daylight hours. If no storm event resulted in runoff during daylight hours from the facility during a monitoring quarter, you are excused from the visual observation requirement for that quarter, provided you document in your records that no runoff occurred. You must sign and certify the documentation.
 - b. Your visual observation must be made on samples collected as soon as practical, but not to exceed 1 hour of when the runoff or snowmelt begins discharging from your facility. All samples must be collected from a storm event discharge that is greater than 0.1 inch in magnitude and that occurs at least 72 hours from the previously measurable (greater than 0.1 inch rainfall) storm event. The observation must document: color, odor, clarity, floating solids, settled solids, suspended solids, foam, oil sheen, and other obvious indicators of storm water pollution. If visual observations indicate any unnatural color, odor, turbidity, floatable material, oil sheen or other indicators of storm water pollution, the permittee shall obtain a sample and monitor for the parameter or the list of pollutants in Part E.5.d.
 - c. You must maintain your visual observation reports onsite with the SWPPP. The report must include the observation date and time, inspection personnel, nature of the discharge (i.e., runoff or snow melt), visual quality of the storm water discharge (including observations of color, odor, clarity, floating solids, settled solids, suspended solids, foam, oil sheen, and other obvious indicators of storm water pollution), and probable sources of any observed storm water contamination.
 - d. You may exercise a waiver of the visual observation requirement at a facility that is inactive and unstaffed, as long as there are no industrial materials or activities exposed to storm water. If you exercise this waiver, you must maintain a certification with your SWPPP stating that the site is inactive and unstaffed, and that there are no industrial materials or activities exposed to storm water.
 - e. Representative Outfalls – If your facility has two or more outfalls that you believe discharge substantially identical effluents, based on similarities of the industrial activities, significant materials, size of drainage areas, and storm water management practices occurring within the drainage areas of the outfalls, you may conduct visual observation of the discharge at just one of the outfalls and report that the results also apply to the substantially identical outfall(s).
 - f. The visual observation documentation shall be made available to the Agency and general public upon written request.
 9. The permittee shall conduct an annual facility inspection to verify that all elements of the plan, including the site map, potential pollutant sources, and structural and non-structural controls to reduce pollutants in industrial storm water discharges are accurate. Observations that require a response and the appropriate response to the observation shall be retained as part of the plan. Records documenting significant observations made during the site inspection shall be submitted to the Agency in accordance with the reporting requirements of this permit.
 10. This plan should briefly describe the appropriate elements of other program requirements, including Spill Prevention Control and Countermeasures (SPCC) plans required under Section 311 of the CWA and the regulations promulgated thereunder, and Best Management Programs under 40 CFR 125.100.
 11. The plan is considered a report that shall be available to the public_at any reasonable time upon request.

NPDES Permit No. IL0028321

Special Conditions

12. The plan shall include the signature and title of the person responsible for preparation of the plan and include the date of initial preparation and each amendment thereto.
13. Facilities which discharge storm water associated with industrial activity to municipal separate storm sewers may also be subject to additional requirements imposed by the operator of the municipal system.

REPORTING

1. The facility shall submit an electronic copy of the annual inspection report to the Illinois Environmental Protection Agency. The report shall include results of the annual facility inspection which is required by Part 9 of the Storm Water Pollution Prevention Plan of this permit. The report shall also include documentation of any event (spill, treatment unit malfunction, etc.) which would require an inspection, results of the inspection, and any subsequent corrective maintenance activity. The report shall be completed and signed by the authorized facility employee(s) who conducted the inspection(s). The annual inspection report is considered a public document that shall be available to the public at any reasonable time upon request.
2. The first report shall contain information gathered during the one year time period beginning with the effective date of coverage under this permit and shall be submitted no later than 60 days after this one year period has expired. Each subsequent report shall contain the previous year's information and shall be submitted no later than one year after the previous year's report was due.
3. If the facility performs inspections more frequently than required by this permit, the results shall be included as additional information in the annual report.
4. The permittee shall retain the annual inspection report on file at least 3 years. This period may be extended by request of the Illinois Environmental Protection Agency at any time.

Annual inspection reports shall be submitted to the following email and office addresses: epa.indannualinsp@illinois.gov

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

5. Any permittee shall notify any regulated small municipal separate storm water system owner (MS4 Community) that they have received coverage of a general ILR00 permit. The permittee shall submit any SWPPP or any annual inspection to the MS4 community upon request by the MS4 community.

Exhibit I

Sanitary District of Decatur
NPDES Permit Modification Request Application
January 12, 2009

Sanitary District of Decatur

501 DIPPER LANE • DECATUR, ILLINOIS 62522 • 217/422-6931 • FAX: 217/423-8171

January 12, 2009

VIA CERTIFIED MAIL
(Return Receipt Requested)

Mr. Alan Keller, Manager
Permit Section
Division of Water Pollution Control
Illinois Environmental Protection Agency
1021 North Grand Avenue East
P.O. Box 19276
Springfield, Illinois 62794-9276

Re: NPDES Permit Modification Request
Permit No. IL0028321

Dear Mr. Keller:

The Sanitary District of Decatur requests the following modifications to our current NPDES Permit IL0028321:

1. Revision of the compliance schedule contained in Special Condition 18 of the permit, as follows:

(1) Interim Report on effluent and stream sampling to date and what measures are necessary to comply with Final Nickel and Zinc Limitations	6 months from the effective date of this Permit (Completed)
(2) Interim Report	12 months from the effective date of this Permit (Completed)
(3) Interim Report	18 months from the effective date of this Permit (Completed)
(4) Interim Report	July 1, 2009
(5) Interim Report	January 1, 2010
(6) Interim Report	July 1, 2010
(7) Interim Report	January 1, 2011
(8) Interim Report	July 1, 2011
(9) Interim Report	January 1, 2012
(10) Permittee Achieves Compliance with Final Nickel and Zinc Effluent Limitations	July 1, 2012

Since the July 1, 2007 reissuance of our permit, the District has diligently pursued compliance with the nickel and zinc effluent limits. Our efforts are detailed in interim reports submitted on December 20, 2007, June 18, 2008, and December 29, 2008 and were reviewed in our December 4, 2008 meeting with Illinois EPA personnel. A metals translator study, results from extensive sampling at our plant and industrial users, and related information have been provided to Illinois EPA.

Regarding nickel, currently available information shows that we cannot meet the permit limit without changes to treatment processes, operations (in particular, operations at industrial users), or a site-specific adjustment of the water quality standard. Several industrial users have the potential to discharge nickel, but by far the largest contribution is from ADM. Despite extensive good faith efforts, changes in operations or treatment processes at ADM that would meet the nickel limit have yet to be identified. A summary of ADM's investigations is enclosed. We have calculated pretreatment local limits that would enable our discharge to meet our permit limit; ADM's local limit for nickel would be approximately 3.6 lb./day, or approximately one-third of their current discharge.

Regarding zinc, blowdown from cooling towers was the largest source of zinc in our wastewater at the time the permit was reissued. Zinc-containing cooling tower treatment additives were in use at both ADM and at Tate & Lyle. Both industrial users have eliminated zinc from their cooling tower treatment programs. This change has greatly reduced zinc usage; however, the impact of a reduced zinc limit on the industrial discharges is still being evaluated. One particular area still being investigated is the impact on sludge wasting from ADM's pretreatment system.

The District is also investigating the possibility of additional adjustments to the current permit limits. We are continuing efforts to determine whether the biotic ligand model or other means of calculating a different water quality standard might be feasible. In addition, we have obtained a very preliminary capital cost estimate for reverse osmosis, one potentially feasible means of treatment to remove nickel. This estimate is four to eight dollars per gallon of treatment capacity, not including the cost of any additional pretreatment required or the cost of brine management. Determining the point where treatment is best applied would require much further engineering analysis. However, treatment of a significant fraction of either ADM's 12 mgd flow or the District's 41 mgd flow would likely be needed.

The requested additional compliance time would be utilized to continue all of the investigations described above, as well as possibly others yet to be identified. Our best judgment at this time is that compliance will require some combination of source reduction, treatment, and regulatory relief. We believe that an extension of three additional years would be required to develop and implement a compliance plan for nickel and zinc.

Recent United States Environmental Protection Agency ("USEPA") guidance indicates that the following factors should be analyzed to determine whether a compliance

schedule is appropriate: how much time the discharger has already had to meet the Water Quality Based Effluent Limits ("WQBELs") under prior permits; the extent to which the discharger has made good faith efforts to comply with WQBELs and other requirements in its prior permits; whether there is any need for modifications to treatment facilities, operations or measures to meet the WQBELs and if so, how long would it take to implement the modifications to treatment, operations or other measures; or whether the discharger would be expected to use the same treatment facilities, operations or other measures to meet the WQBEL as it would have used to meet the WQBEL in its prior permit. Memorandum from James A. Hanlon, Office of Wastewater Management, USEPA, regarding Compliance Schedules for Water Quality-Based Effluent Limitations in NPDES Permits (May 10, 2007). Additionally, Illinois does not impose an explicit time limit on compliance schedules. 35 Ill. Admin. Code § 309.148.


As discussed above, the Sanitary District of Decatur has made good-faith efforts to comply with all effluent limits by investigating compliance concerns and researching potential solutions. However, since compliance may require changes to processes or modifications to facilities, we request an extension to our compliance schedule. Additionally, it should be noted that the water quality standards at the root of this request were only recently incorporated into this NPDES permit, and there is no history of previous compliance issues in prior permits.

2. Include authorization for discharges of storm water from the District's main treatment plant site. A Storm Water Pollution Prevention Plan is enclosed.

3. Reinstate CSO Outfall 006. This outfall discharges to Stevens Creek and is similar to Outfalls A03 - A08 in that it would only discharge during extreme rainfall events when the CSO treatment facilities are operating at their maximum design capacity. We request that this outfall be added to the list of discharge points in Special Condition 15. A copy of EPA Form 3510-2A (Supplemental Application Information) for this outfall is enclosed.

We appreciate your consideration of these requested permit modifications. If there are any questions regarding this request or if additional information is needed, please feel free to contact me at (217) 422-6931 ext. 214 or by email at timk@sdd.dst.il.us.

Sincerely,



Timothy R. Kluge, P.E.
Technical Director

Enclosures: ADM Investigation Summary
Storm Water Pollution Prevention Plan
EPA Form 3510-2A

Archer Daniels Midland Company – Decatur, IL Complex

Summary of Ni & Zn Reduction Efforts

In January 2008, the Sanitary District of Decatur (SDD) notified ADM of tightened nickel (Ni) and Zinc (Zn) water quality limits included in its reissued NPDES permit for its Decatur Complex. Based on sampling conducted by the SDD, ADM was identified as a significant contributor of both Ni and Zn. The SDD required ADM to comply with the new limits by July 2009.

The Decatur Complex consists of multiple, separate processing plants which discharge their wastewater to an on-site pre-treatment facility operated by the Corn Plant. These processing plants consist of a Wet Corn Mill, BioProducts, Cogeneration, two Soybean Processing plants, Vitamin E, Corn Germ Processing and Polyols. Each of these unique plants produces multiple products, using both batch and continuous processes, and creates wastewaters which generally are reused multiple times prior to being discharged to the onsite treatment plant. The wastewater treatment plant (WWTP) treats approximately 11 million gallons per day through a newer anaerobic treatment system followed by aerobic treatment prior to discharge to the SDD.

Due to the high wastewater flow and very low concentrations of Ni and Zn in the final effluent, ADM concluded that reductions in Ni and Zn would need to be accomplished at the source. Thus, in January 2008 ADM began identifying possible sources of the metals through Complex-wide sampling and a preliminary inventory of chemicals and processes that contained the metals. Through testing ADM was able to eliminate the incoming raw water as a source. Further, based on process knowledge, ADM initially believed that the only source of nickel was from the sorbitol process (nickel-catalyzed hydrogenation) and the zinc was from cooling tower water chemical additives.

During early 2008, a number of complications arose. First, sampling conducted through May was performed based on ADM's understanding that the final limits would be on a 'soluble' basis. In May, however, the SDD informed ADM that the limits would be on a 'total' rather than 'soluble' basis. That change is significant since the insoluble portion of Ni and Zn in the final effluent is approximately 25% and 75%, respectively. This change in measurement basis meant much of the sampling completed was inadequate to reach appropriate conclusions and could not be used for data comparisons with future data collections on a 'total' basis.

Second, ADM encountered a problem with its sample analysis procedures. ADM became concerned that its zinc data was not making sense. Upon investigation ADM's research laboratory learned that the lab syringe filters used in the zinc analysis contained zinc themselves which was leaching into the filtrate. This issue took several weeks to identify and confirm the filters as the problem. It then took several additional weeks to find suitable filters to meet the testing requirements. Periodic split samples are now also taken for both Ni and Zn to confirm results with an EPA approved laboratory.

Third, in addition to known chemical and processing aids that contained these metals, ADM learned that there are major sources of Ni and Zn that had not initially been considered. Soybeans can contain approximately 4.1 ppm Ni and approximately 46 ppm Zn, while corn can contain approximately 0.53 ppm Ni and approximately 32 ppm Zn. Given that the Complex processes approximately 550,000 bushels of corn and 200,000 bushels of soybeans per day, this means that 15 times more Ni and 25 times more Zn than ADM would be allowed to discharge comes into the Complex just through its raw materials. Other "non-traditional" sources were also identified such as the 50% Sodium Hydroxide (NaOH) which is used in various processes in

the Complex. This material contains small concentrations of Ni but since the Decatur Complex uses nearly 6 million pounds of NaOH per month, the contribution of additional Ni to the plant wastewater system is significant.

While the first half of 2008 focused on the identification of nickel and zinc sources, during this time ADM also began evaluating various means to reduce or eliminate sources of the metals. Over time, the emphasis began transitioning from sampling and identification to identifying and trialing potential methods to reduce or eliminate the metals. Following are discussions of these activities to date for both Ni and Zn.

Zinc

The chemicals used in the cooling tower water treatment program were identified as the largest source of Zn in the complex. Beginning in May 2008 ADM worked with its chemical vendor to change the treatment program to eliminate the addition of Zn to the towers. Unfortunately, the Zn did not decrease as hydraulics would suggest even though no new Zn was being added to the towers. ADM learned that the Zn continues to leach from the system for months after the addition of Zn containing materials is ceased. Since one of the BioProducts towers continued to show elevated Zn levels even after the others had improved, ADM initiated a higher pH program in August which reduced the amount of Zn leaching from the system and thereby lowered the Zn in discharge. However, it was still well into the fall before all the towers were generally below the Zn targets.

To date, ADM has reduced the Zn going to the onsite treatment to levels that are generally less than the target. Further, some of the upcoming Ni reduction strategies discussed below should also provide some additional reduction in Zn levels. However, there are still two issues which concern ADM regarding its ability to consistently achieve the Zn limits going forward. First, the product mixes produced in the Complex during the recent sampling are ones which would be expected to result in expected lower Zn concentrations than other potential product mixes. Thus, as product mixes change (e.g., production of more fructose), the Zn concentration may again increase. Therefore, additional ongoing monitoring of the effluent will be necessary to determine the impact of these process variations. The second outstanding issue for Zn is the formation of metal sulfides in the anaerobic system, which is discussed in more detail below.

Nickel

ADM had identified early on that the use of Ni catalysts in the Corn Plant's sorbitol process and in the West Plant were contributors. ADM had previously looked at Ni recovery from the sorbitol process by electroplating in 2006-2007. However, that evaluation was put on hold due to technical and economic issues. In March 2008 the Corn Plant hired a Ni consultant to look specifically at Ni recovery at Sorbitol, primarily to revisit electroplating. Unfortunately, a number of problems became apparent: low Ni concentration, very high sodium and chloride levels, chelating resins which are non-food grade, and the presence of various other cations and anions which all led to the conclusion that electroplating was not a feasible option.

Next, the Corn Plant began investigation of a high pH precipitation for the Sorbitol stream. However, it was discovered that gluconic acid forms a complex with Ni which prevents it from coming out of solution. While the organic material could be oxidized with ozone and hydrogen peroxide prior to the precipitation, that would necessitate the addition of extreme amounts of additional chemicals and additional processing steps which make it infeasible. ADM also opened a dialog with the catalyst supplier who was unable to provide any other options.

To learn more about the Ni losses in the Sorbitol process, testing continued throughout the year. One of the consultants ADM had involved in this project identified a potential process change to reduce the Ni through a combination of water capture and redirection. A trial of this option was completed in November 2008 with positive results. ADM is proceeding with making the necessary changes to implement the option which involves considerable piping installations and modifications. Completion is expected by the end of 1st quarter of 2009 with testing to determine reductions achieved during the 2nd quarter.

As noted previously, Sorbitol is not the only Ni source in the Corn Plant; the incoming corn also contains significant amounts of Ni and Zn. Testing has shown that after the corn milling process, the resulting starch slurry contains Ni concentrations. This starch slurry is the feed material for many of the downstream value-added products including the various sweeteners. After further processing, much of the resulting sweetener is ion exchanged. As a result Ni and Zn are present in the ion exchange acid waste. Over 50% of this waste is routed directly to the WWTP and cannot be readily treated. While testing has shown that a high pH precipitation on this waste stream is about 50% efficient on Ni and 85% efficient for Zn, since the Corn Plant uses approximately 3 million pounds of 35% Hydrochloric Acid a month, it would require millions of pounds of NaOH (which also contains Ni) or some other base to raise the pH of this waste material to 10 for the precipitation to occur. As a result, a precipitation option does not appear to be viable.

Following a meeting in December 2008, Illinois EPA provided information to ADM regarding a Ni-catalyzed hydrogenation facility in northern Illinois as a possible resource. ADM contacted the source and learned that their Ni removal technique is high pH precipitation. Further, because of their feedstock, they do not have a problem with Ni-gluconate complexing. As a result, their treatment system is not transferable to ADM's processes. Illinois EPA also mentioned electro-coagulation, which is a process ADM had not investigated. Discussions were started with an Oregon company that may be able to provide such a system, and ADM has sent four samples to them for a trial to determine initial viability of the process. Results are expected in the first quarter 2009.

ADM's East & West Soybean Processing Plants are also significant Ni contributors. The West Soybean Plant utilizes Ni catalyst in the hydrogenation process. ADM believes that most of the Ni from the catalyst that makes it into the waste water originates from the handling of the material and can be reduced through implementation of housekeeping procedures specific to Ni. These practices were implemented in the spring of 2008 and continue to be reviewed for effectiveness. Another option being investigated is moving the entire catalyst handling system, which ADM believes could result in a decrease in the amount of Ni entering the waste water stream from that process. The West Plant is also working with outside consultants and vendors to identify any other potential solutions.

The East Plant is the single largest contributor of Ni in the effluent, and all the Ni is from the soybeans processed. Sampling at the East Plant has identified four primary streams containing Ni. One of the four streams, which is also the lowest flow, contains roughly half the Ni from the plant. The East Plant is exploring options to find a feed or fertilizer outlet for this waste water stream. Further, ADM Research is assisting the East Plant in investigating any process changes or unique Ni removal options that could be viable for the remaining three streams. Efforts underway at the Corn Plant to evaluate electro-coagulation may also allow for technology transfer to the East Plant if proven successful.

Metal Sulfide Formation in Anaerobic System

In the Spring of 2007 ADM started up a new anaerobic wastewater treatment system to run in series with its existing aerobic system. In addition to improved treatment capabilities, the new plant was intended to allow for improved solids management through reduction of the solids and 'wasting' excess solids through the effluent to the SDD. In the fall of 2008, sampling confirmed that the new anaerobic treatment system was contributing to the Ni and Zn found in the final effluent. Insoluble metal sulfides had been forming in this system and had built up in the sludge over the past couple of years. Some of the anaerobic sludge carries over into the aerobic system. This aerobic/anaerobic sludge is 'wasted' into the effluent to control the solids in the system. Through sampling and testing, ADM has determined that the Ni contained in this sludge alone, even ignoring the soluble Ni component, is greater than the proposed limit while the insoluble Zn from the sludge could cause the limit to be exceeded based on the current rate of solids 'wasting.' ADM has made inquiries regarding the mechanics of metal sulfide formation in anaerobic systems and has sought assistance from ADM Research and GE Betz Company to address this source of metals. Work is also underway to gather data to decide if solids capture at the digester discharge is a viable control option.

Storm Water Pollution Prevention Plan

for the

Sanitary District of Decatur

501 Dipper Lane
Decatur, Illinois 62522

NPDES Permit IL0028321

November 2008

1. Site Description

This Storm Water Pollution Prevention Plan (SWPPP) was developed to meet the requirements of the NPDES program requiring permit coverage for storm water discharges from municipal wastewater treatment facilities with design flows of 1 mgd or more. The Sanitary District of Decatur (SDD) treatment plant occupies a site in the southwestern portion of Decatur (see Figure 1). Storm water from the site flows via surface drainage and underground pipes to one of five storm water pumping stations, and the pumping stations discharge collected storm water to either Stevens Creek or the Sangamon River.

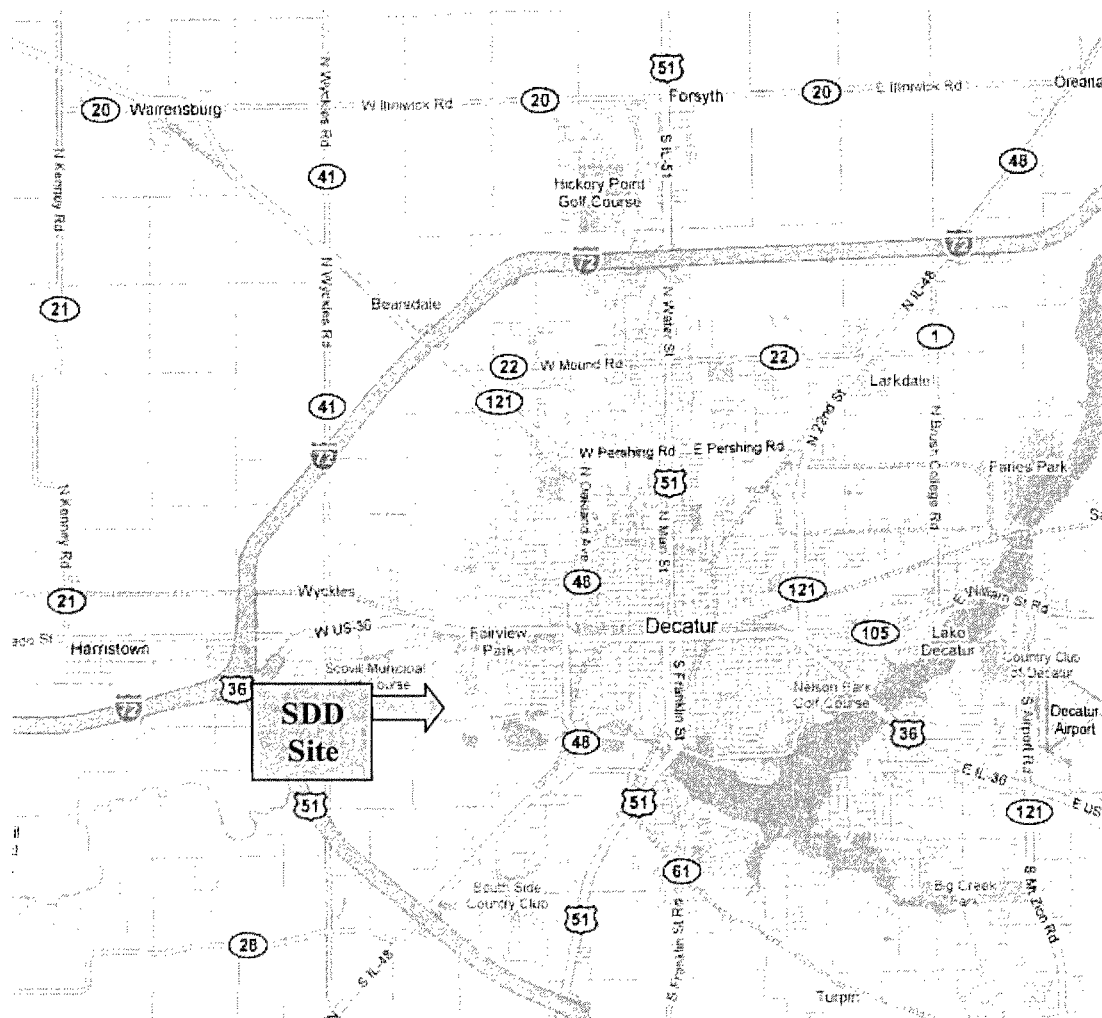


Figure 1. Location map

Designed to treat an average flow of 41.5 million gallons per day, the SDD facility includes screening, grit removal, primary settling, two stage activated sludge treatment, chlorination/dechlorination, and anaerobic sludge digestion. Treated effluent is discharged to the Sangamon River. District maintenance and administration facilities are also located at the site. Digested sludge is transferred to the Wyckles Road solids facility for storage prior to land application.

“No Exposure” certifications have been completed for the Wyckles Road site and four combined sewer overflow treatment facilities.

The treatment units and facility equipment are designed to contain wastewater and sludge so that storm water is not affected by wastewater treatment operations. However, a few areas exist where “industrial equipment” as described in federal regulations is exposed to storm water. A potential also exists for releases of wastewater, sludge, and chemicals used in the treatment process to occur in the event of a pipe, tank, or pump failure. This plan describes actions taken to prevent both normal operations and accidental releases from impacting storm water discharged to receiving waters.

2. Topographic Map

A topographic map of the SDD site is shown in Figure 2. Wells numbered 00258, 00259, 00857, 00858, and 00860 are shown on the plant site or within one-quarter mile of the plant boundary. These wells were installed by SDD for site dewatering, and are not used as water supply wells.

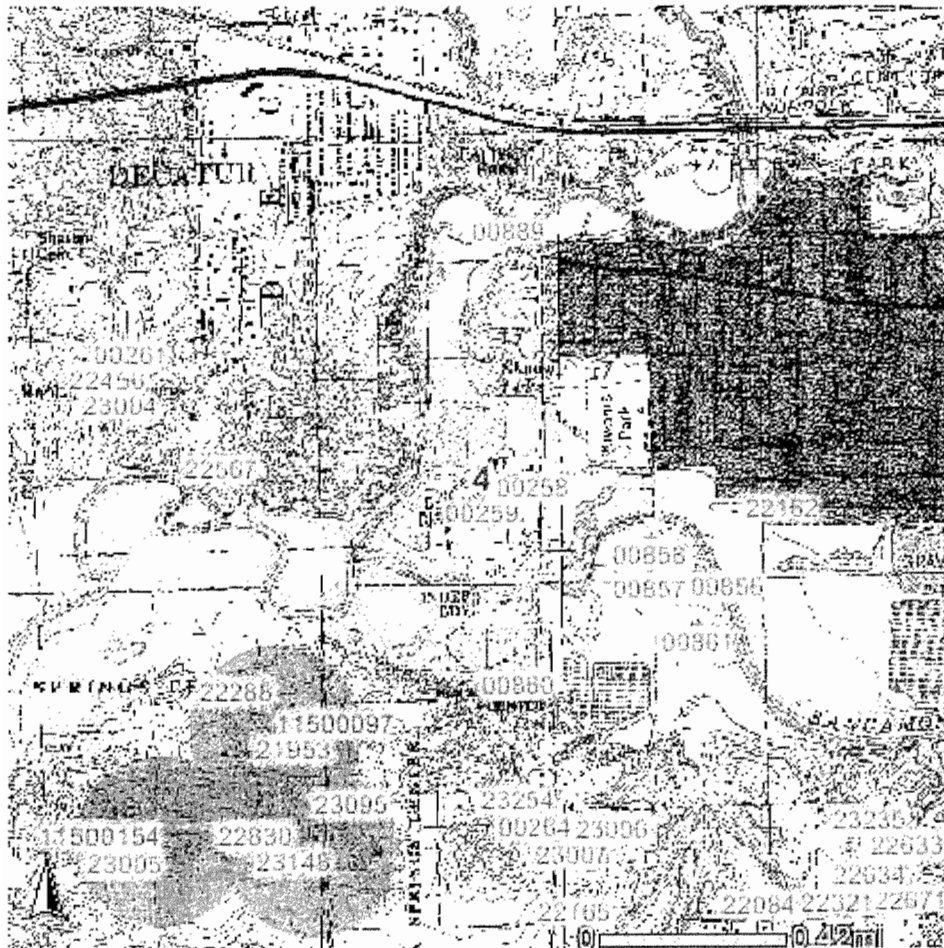


Figure 2. Topographic map

3. Site Map

A site map showing storm water piping, inlets, discharge points, paved areas, buildings, and drainage basins is attached. Due to the size and complexity of the facility, areas used for material storage, loading, and handling are not shown on the map but are described in the narrative below.

The treatment plant site is surrounded by a flood protection levee and nearly all storm water from the site is tributary to one of five storm water pump stations. The exceptions are the West Central and Northwest drainage basins; limited amounts of storm water from these vegetated areas flows through surface ditches to Stevens Creek. For reference, the drainage basins and associated pump stations are shown in the following table.

Drainage Basin	Storm Water Pump Station
Inner Plant	West (Structure 261)
Northeast	Northeast (Laydown Area)
Northside	North (Structure 218)
Northwest Side	Gravity flow to Stevens Creek
South Side	South (Structure 263)
Southeast	East (Structure 216)
Upper East Side	Underseepage (Structure 215) to East (Structure 216)
West Central	Gravity flow to Stevens Creek
West Side	West (Structure 261)

4. Narrative Description of Significant Materials and Chemicals

The following materials are present at the SDD treatment plant site and could, if improperly managed, contaminate storm water discharged from the plant site:

- a. Wastewater; sludge

Under normal operating conditions, wastewater is contained in underground pipes or below-grade channels and tanks, and will not be a source of storm water contamination. Various types of malfunctions could potentially result in overflows to the ground surface. Past incidents include an overflow from the old phase headworks influent channel following a power failure and a break in sludge piping leading to pooling of sludge on the plant grounds. During these and similar occurrences, contamination of storm water discharges can be avoided by shutting down the impacted storm water pumping station or stations until the wastewater or sludge can be collected and returned to a process tank.

b. Septage

A location is provided at the new phase headworks for receiving septage and grease trap contents from waste haulers. Trucks bringing materials to the plant park on a paved area adjacent to the influent channel and discharge directly into the influent channel. Facilities for cleaning the area are readily available and used on a regular basis to keep the area clean. In the event of a spill both the Northeast and Southeast drainage basins could be impacted, depending on the volume released. Contamination of storm water discharges would be avoided by shutting down the impacted storm water pumping station or stations until the wastewater can be returned to a process tank.

c. Screenings; grit

Two separate screening and grit removal facilities exist, one each for the old phase and new phase. All screens, grit handling facilities (except for the grit settling tanks), and stored materials are indoors. Screenings and grit are collected in dumpsters and picked up by a commercial waste hauler.

d. Ferrous chloride

Ferrous chloride is utilized for hydrogen sulfide control in the new phase primary area. The solution is delivered in tank trucks and stored in a tank within a concrete secondary containment structure. A valved drain line from the secondary containment area is normally kept closed to retain any spills; uncontaminated storm water is released to the Underseepage and Storm Water Pumping Station (Structure 215). Any material spilled outside the structure during unloading would flow to the along a plant roadway to the same location and would be managed by shutting down the pumping station until the spilled material was removed.

e. Caustic soda; odor masking agent

These two liquid materials are used in the new phase primary area. Sealed full drums, closed empty drums, and associated pallets are temporarily stored outdoors. The drums are managed to meet the "no exposure" criteria in federal guidance.

f. Sodium hypochlorite, sodium bisulfite

Liquid sodium hypochlorite solution is used for effluent disinfection from April 1 through October 31. The solution is delivered by tank truck and unloaded into storage tanks located under roof in Building 44. A plant operator is present for deliveries of hypochlorite and other bulk chemicals. A spill during unloading would flow to storm water drains located in the roadway north of the building tributary in the Northside drainage area, and would be managed by shutting down the pumping station until the spilled material was removed. Hypochlorite solution is pumped through underground piping to a second set of storage tanks in Building 264, located near the south plant levee.

These tanks and pumps are under roof and located within a concrete containment structure. A spill within the containment structure would not reach storm water.

Sodium bisulfate solution is also delivered by tank truck and is stored in tanks located inside Building 334. A spill during unloading would be in the South side drainage basin and would be managed by shutting down the pumping station until the spilled material was removed.

g. Polymer totes

Polymer used in the waste activated sludge DAF units is received in 2300-lb. polyethylene tote bins. Full totes are kept inside the polymer building. Empty totes are stored on the pavement outside Building 043 until picked up by the supplier. The empty totes are managed to meet the "no exposure" criteria in federal guidance.

h. Fuel; waste oil

Underground storage tanks are provided for gasoline and diesel fuel used in plant vehicles near the fueling station west of Building 117. A spill during bulk delivery of fuel or during vehicle fueling would enter a storm drain in the Inner plant drainage basin and would be managed by shutting down the West storm water pump station until the spilled material was removed.

An above-ground diesel tank is located within a concrete containment structure south of Building 325. The fuel is used in a standby generator for the effluent pumps. A spill during bulk delivery of fuel would enter a storm drain tributary to the south storm water pumping station and would be managed by shutting down the pumping station until the spilled material was removed.

Diesel fuel for the Building 203 generator and for the bypass structure generator is stored in tanks integrated with the bases of the generators. A release from the Building 203 tank would be tributary to Southeast side storm water pump station and a release from the small bypass structure generator tank would likely be contained in and immediately around the building driveway.

An above-ground kerosene storage tank is used to store fuel for small portable heaters used at various locations as needed. The tank is on the west side of Building 117 and a release would be tributary to a drain in the Inner plant drainage basin and the West Side storm water pump station.

Waste oil is stored in an above-ground tank west of the DAF building. A significant spill would likely occur only if the tank ruptured or was overturned. Spilled oil would enter a storm drain tributary to the west storm water pumping station and would be managed by shutting down the pumping station until the spilled material was removed.

i. Other Materials

A number of other materials and chemicals including lubricants, paint, solvents, cleaners, and pesticides, are used in plant operations and maintenance. All of these smaller quantity items are stored within buildings and are not exposed to storm water.

5. Narrative Description of Equipment and Vehicle Management

The majority of process equipment is either inside buildings (i.e. most pumps, blowers, piping, etc.) or in locations where storm water that contacts the equipment enters process wastewater treatment units (for example clarifier drives and flow control gates).

Exceptions are as follows:

a. Odor Control Units

Ten activated carbon canisters with top-mounted fans treat air from covered channels in the preliminary and primary areas. The carbon is contained within the units and they are not a source of storm water contamination.

b. Stored Equipment

Several locations exist for storage of unused plant equipment and supplies. A laydown area near the plant entrance is used to store three land application vehicles and other materials such as pipe, fittings, pallets, and some used equipment. The equipment and materials in this area have been observed to contribute few if any contaminants to storm water. Runoff from this area is tributary to the Northeast storm water pump station and flow could be retained in the event of a potential release.

Unused gratings and railings from various locations are stored near the old Unox aeration tank. Also, unused piping and hose are stored along the north side and south side of the waste sludge holding tanks. No significant potential for storm water contamination exists from this stored equipment.

c. Vehicles

The District utilizes a number of vehicles for plant operations, maintenance, and administration. The total includes approximately 60 licensed vehicles and trailers ranging in size from automobiles, pickup trucks, and vans to semi tractors and trailers used for land application of sludge, equipment hauling, and sewer or pump station maintenance. Smaller vehicles and equipment include lawn mowers, tractors, and forklifts.

The majority of maintenance and repair for over-the-road vehicles is performed off-site at commercial facilities. Any minor maintenance done at the plant is completed in the maintenance shop or vehicle storage building. Maintenance on other vehicles is also performed indoors under roof. Vehicles are kept in good repair and, except for semi

tractors and trailers, stored indoors when not in use. Vehicle storage, maintenance and repair are not a significant source of storm water contamination.

6. Waste materials

a. Trash dumpster

A rolloff box for general refuse from the plant is located in a fenced area at the west side of the plant, in an area tributary to the West storm water pump station. The potential for contaminated storm water from this area is minimal.

b. Vactor drain area

The District uses a Vactor truck for sewer cleaning and maintenance, and an area is provided at the north side of the plant for receiving the truck's contents after completion of a job. A three-sided concrete structure is provided to contain large solids (i.e. plastic bottles, bags, sticks) and underdrains collect the water, conveying it to a pump station tributary to the plant influent. The potential for contaminated storm water from this area is minimal.

7. Existing Storm Water Controls

Specific controls are described above as they relate to potential contamination sources. In general, good housekeeping is the primary control employed. Materials are stored and used in a manner to prevent storm water contamination. A high level of maintenance minimizes equipment failure that could lead to contaminant releases. Virtually all storm water from the plant site is from vegetated yard areas and from relatively clean pavement, roofs, and roadway areas.

8. Facility Size and Impervious Area

The area within the plant fence is approximately 90 acres. Less than five percent of this area is impervious surfaces such as roadways and roofs.

9. Existing Storm Water Sampling Data

Storm water sampling has not been conducted in the past and no analysis results are available. Federal regulations do not require sample data to be submitted with applications from POTWs.

10. SWPPP Coordinator and Team

This is the member roster and list of responsibilities for the pollution prevention team. The team is responsible for implementing the Storm Water Pollution Prevention Plan.

Leader: Tim Kluge Office Phone: (217) 422-6931 ext. 214

Title: Technical Director Cell Phone: (217) 620-2033

Responsibilities: Coordinate all stages of plan development, inspections and implementation; keep all records and ensure that reports are submitted; conduct inspections and oversee sampling program; oversee good housekeeping activities.

Member: Harold Brewner Office Phone: (217) 422-6931 ext. 257

Title: Operations Supervisor Cell Phone: (217) 433-8391

Responsibilities: Operate the storm water pumping stations in accordance with the SWPPP; conduct operations staff training; serve as spill response coordinator; assist with inspections.

Member: Charles Jarvis Office Phone: (217) 422-6931 ext. 246

Title: Pretreatment Coordinator Cell Phone: (217) 521-1918

Responsibilities: Assist with inspections; conduct sampling.

Member: Greg Pyles Office Phone: (217) 422-6931 ext. 221

Title: Safety and Training Coordinator Cell Phone: (217) 620-8624

Responsibilities: Assist with inspections and training program.

11. Proposed Storm Water Management Controls

a. Preventive Maintenance

Preventive maintenance of all plant facilities and equipment is well established and documented in a computerized maintenance management system. Equipment is kept in good repair to prevent leaks, and storage tanks and other containers are routinely checked for leaks. Paved areas and plant grounds are kept clean to prevent storm water contamination.

b. Good Housekeeping

In general, good housekeeping practices have been employed at the facility. These include returning of vehicle and equipment washwater to the treatment process,

secondary containment for bulk chemicals, indoor storage of materials, indoor fluid changes, timely cleanup of any spills, and proper waste material storage. The following improvements are planned for implementation within the next year:

- 1) Dumpster – This storage area is generally well kept, but additional efforts will be made to ensure that no materials are stored outside the dumpster.
- 2) Vactor drain area – Plastic bottles and bags occasionally blow out of this area after the solid material has dried. Improved housekeeping procedures will be implemented.
- 3) Waste oil storage tank – This tank currently has no secondary containment. A containment structure or relocation of the tank will be considered.
- 4) Kerosene storage tank - Elimination of this tank is being considered.

c. Spill Response

Storm water runoff from nearly all areas of the plant must be pumped to the receiving stream since a levee surrounds the plant. In most cases, therefore, the response to a release would be to suspend pumping until the released material can be collected and removed. This generalized procedure will be described in greater detail in a written spill response plan within the next year.

d. Sediment and erosion protection

The treatment plant site is relatively level and vegetation is maintained so that erosion and sediment loss from the site is minimal. Should construction activities on the site expose unvegetated areas, a plan incorporating applicable requirements of the construction site NPDES general permit will be implemented.

e. Employee Training

Employee training will be completed upon completion of the spill response plan described above, and annual refresher training will also be instituted at that time. Training will be provided for all plant operations and maintenance personnel. In addition, any significant modification of the spill response plan will be followed by an employee training session.

12. Proposed Facility Inspection Schedule

NPDES permit conditions require an annual inspection of the facility to verify conditions described in this SWPPP. The first inspection will be scheduled within one year of the date the SDD permit is modified to incorporate storm water requirements. An inspection report will be sent to the Illinois EPA within 60 days following the inspection, and future inspections will follow at one-year intervals. In addition, ongoing reviews will be

conducted during the year to ensure that operations do not result in storm water contamination. Appropriate inspection documentation will be maintained as required by permit conditions.

13. Other Program Requirements

While good spill prevention practices are followed and spill control planning is a part of this SWPPP, the SDD does not have oil storage facilities that would trigger the SPCC plan requirements under Section 311 of the Clean Water Act. Also, the District's current NPDES permit does not contain any BMP requirements as described in 40 CFR 125.100.

14. Plan Date and Signature

This Storm Water Pollution Prevention Plan has been prepared in accordance with good engineering practices. Qualified personnel properly gathered and evaluated information submitted for this plan. The information in this plan, to the best of my knowledge, is accurate and complete.


Name


Title


Date

NOTICE OF INTENT (NOI)

FOR
GENERAL PERMIT TO DISCHARGE STORM WATER
ASSOCIATED WITH INDUSTRIAL ACTIVITY
(EXCLUDING CONSTRUCTION ACTIVITY)

OWNER/OPERATOR INFORMATION

NAME:	LAST Sanitary Dist. of Decatur	FIRST	MIDDLE INITIAL (OR COMPANY NAME)	OWNER TYPE:	special district
MAILING ADDRESS:	501 Dipper Lane				
CITY:	Decatur	STATE:	IL	ZIP:	62522
CONTACT PERSON:	Tim Kluge	TELEPHONE NUMBER:	AREA CODE 217	NUMBER 422-6931	

FACILITY/SITE INFORMATION

SELECT ONE:	<input checked="" type="checkbox"/> NEW SITE <input type="checkbox"/> RENEWAL <input type="checkbox"/> CHANGE OF INFORMATION TO GENERAL NPDES PERMIT NO.: ILR00 _____												
FACILITY NAME:	Sanitary District of Decatur	OTHER NPDES PERMIT NUMBERS:	IL 0028321										
FACILITY LOCATION:	501 Dipper Lane	TELEPHONE NUMBER:	AREA CODE 217	NUMBER 422-6931									
CITY:	Decatur	ST:	IL	ZIP:	62522	LATITUDE:	DEG. 39	MIN. 49	SEC. 56	LONGITUDE:	DEG. 89	MIN. 00	SEC. 07
COUNTY:	Macon	SECTION:	17	TOWNSHIP:	16N	RANGE:	02E						
SIC OR DESIGNATED ACTIVITY CODE(S):	4952	PRIMARY	2ND	3RD	4TH								
STORM WATER POLLUTION PREVENTION PLAN COMPLETED <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO (IF NO, SEPARATE NOTIFICATION REQUIRED TO AGENCY PRIOR TO COVERAGE LETTER SENT BY AGENCY)													

RECEIVING WATER INFORMATION

DOES YOUR STORM WATER DISCHARGE DIRECTLY TO:	OWNER OF STORM SEWER SYSTEM
<input checked="" type="checkbox"/> WATER OF THE STATE OR <input type="checkbox"/> STORM SEWER	
NAME OF CLOSEST RECEIVING WATER:	Sangamon River; Stevens Creek
DOES QUANTITATIVE DATA CURRENTLY EXIST WHICH DESCRIBES THE CONCENTRATION OF POLLUTANTS IN THE STORM WATER DISCHARGES?	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO

ADDITIONAL INFORMATION

ATTACH A LIST OF MATERIAL HANDLING ACTIVITIES, RAW MATERIALS, INTERMEDIATE PRODUCTS, FINAL PRODUCTS, WASTE MATERIALS, BY-PRODUCTS OR INDUSTRIAL MACHINERY THAT IS EXPOSED TO STORMWATER.
ATTACH A LIST IF YOU HAVE OTHER INDUSTRIAL ACTIVITIES TAKING PLACE AT YOUR FACILITY NOT COVERED BY THE ABOVE SIC CODES.
FORM 2-F ATTACHED <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No (SEE INSTRUCTIONS)

I certify under penalty of law that this document and all attachments were prepared under my direction and 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 this 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. In addition, I certify that the provisions of the permit, including the development and implementation of a storm water pollution prevention plan and a monitoring program plan, will be complied with. I also certify that, to the best of my knowledge, the storm water which is discharged from this facility/site does not contain process wastewater, domestic wastewater, or cooling water.

APPLICANT SIGNATURE: Timothy R Kluge Title: Technical Director Date: 12/2/08

MAIL COMPLETED FORM TO:
(DO NOT SUBMIT ADDITIONAL DOCUMENTATION UNLESS REQUESTED)

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY
DIVISION OF WATER POLLUTION CONTROL
ATTN: PERMIT SECTION
POST OFFICE BOX 19276
SPRINGFIELD, ILLINOIS 62794-9276
www.epa.state.il.us

FOR OFFICE USE ONLY
LOG:
PERMIT NO. ILR00 _____
DATE:

Information required by this form must be provided to comply with 415 ILCS 5/39 (1996). Failure to do so may prevent this form from being processed and could result in your application being denied. This form has been approved by the Forms Management Center.

Exhibit J

Sanitary District of Decatur Email Providing

Supplemental Information to Illinois EPA

April 3, 2009

Katherine Hodge

From: Tim Kluge [TIMK@SDD.DST.IL.US]
Sent: Friday, April 03, 2009 1:17 PM
To: Sonjay.Sofat@illinois.gov
Cc: Rick.Pinneo@illinois.gov; Al.Keller@illinois.gov; Katherine Hodge;
 Joe.Koronkowski@illinois.gov
Subject: Additional information for Permit Modification Request

Attachments: IEPA_mtg_re_Nickel_&_Zinc.doc; Interim_Report_Ni_and_Zn_Limits.doc;
 Translator_Study_for_EPA_Jan_2008.doc; Ni_Zn_email_from_Scott_Twait_1_02_08.pdf;
 Iterim_Ni_Zn_report_June_2008.doc; Iterim_Ni_Zn_report_December_2008.doc;
 Nickel_Zinc_Overview__01-07-2008.docx



IEPA_mtg_re Interim_Rep Translator_St Ni_Zn_email Iterim_Ni_Zn Iterim_Ni_Zn Nickel_Zinc
 kel_&_Zinc.docj_and_Zn_Lir_for_EPA_Jan_n_Scott_Twaitort_June_200ort_Decembererview__01-07

Sonjay:

I understand that you requested additional information to help support the Sanitary District of Decatur's request to modify the compliance schedule for nickel and zinc contained in our NPDES Permit. The permit was reissued in April 2007 and contained new water quality-based limits for nickel and zinc based on standards adopted after the previous permit was issued. I was not involved with any discussions at the time the permit was reissued, but it is my understanding that both Illinois EPA and District personnel anticipated that completion of the translator study required by the permit would lead to a higher limit that the District would be able to meet.

Work on the translator study began in March 2007 and continued through November. As the study progressed, it became clear that the translator alone would not resolve the issue. Within 1-2 months after the permit effective date, sample data had been compiled which showed that, as expected, the source of nickel in the District's wastewater is ADM's pretreated industrial flow and the most significant sources of zinc were industrial flow from both ADM and Tate & Lyle. I have attached a summary of sample data that was given to IEPA personnel when we met on October 30, 2007. Personnel from ADM and Tate & Lyle were made aware of the District's nickel and zinc limits in August and September 2007, respectively.

Other activities during 2007 were summarized in our interim report sent to the Agency on December 20, 2007. A copy of the report and the completed translator study are attached. Scott Twait provided recalculated nickel and zinc limits based on the translator study January 2, 2008 (email attached).

Activities during 2008 are summarized in interim reports sent to the Agency in June and December (also attached). Early in 2008, the District calculated new pretreatment limits that would allow us to meet effluent limits for nickel and zinc. These proposed limits were provided to ADM and Tate & Lyle and were the basis for numerous discussions with the industries during the year. The industries reduced or eliminated their use of zinc cooling tower treatments during 2008 and our effluent zinc concentrations decreased significantly. Regarding nickel, ADM's efforts to identify sources within their plant and to investigate different treatment technologies werre summarized in a report that was submitted with our permit modification request. A copy of that report is attached for reference. Their efforts are continuing, including a recently-completed trial of electrocoagulation as a nickel removal process. Unfortunately, it was found that the process actually increased the nickel concentration, possibly due to nickel in the electrode used in the process.

Additional time is being requested to allow the District to investigate options for a rule change, a flow-based limit, or treatment technology, as well as to allow ADM to continue to investigate process changes and pretreatment options. Regarding treatment options for the District, reverse osmosis treatment of a portion of the effluent flow is the only

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***** PCB 2009-125 *****
treatment technology identified to meet the current nickel limit. To provide a sense of perspective, the consulting firm Black and Veatch has given the District a preliminary capital cost estimate of \$4 per gallon for RO treatment, not considering the cost of brine disposal and operating costs. Approximately 25 mgd of the District's flow would need to be treated to meet the proposed permit limit of 0.016 mg/L, resulting in a capital cost of \$100 million not considering brine disposal. This exceeds the construction cost of the District's entire plant, to achieve a removal of approximately six pounds per day of nickel from the effluent. Additionally, upstream flows are sufficient during all but very dry periods to allow the water quality standard to be met at current discharge levels. We believe the magnitude of this expenditure justifies additional time to investigate all options to achieve compliance.

Although the District has diligently pursued meeting nickel and zinc permit limits, the process has been much more complex than either the District or the Agency initially believed it would be. The possibility that a compliance period of more than two years would be needed was discussed when District and Agency personnel met in October 2007. At that time, we were advised that a request to extend the permit compliance schedule was premature, but could be considered at a later date. I hope this additional background information will provide further justification to support our permit modification request.

If you have any questions or need additional information, please feel free to contact me by email or phone at 422-6931 ext. 214.

Tim Kluge