Scan Original

BEFORE THE ILLINOIS POLLUTION CONTROL BOARD

IN THE MATTER OF:	)	
	)	
SITE-SPECIFIC RULE FOR CITY OF EFFINGHAM TREATMENT PLANT FLUORIDE DISCHARGE, 35 ILL. ADM. CODE 304.233	)	R03-11

NOTICE OF FILING

TO: Ms. Dorothy M. Gunn
Clerk of the Board
Illinois Pollution Control Board
100 West Randolph Street
Suite 11-500
Chicago, Illinois 60601
(VIA FIRST CLASS MAIL)

John C. Knittle, Esq.
Hearing Officer
Illinois Pollution Control Board
1717 Philo Road
Suite 25
Urbana, Illinois 61826

(SEE PERSONS ON ATTACHED LIST)

PLEASE TAKE NOTICE that I have today filed with the Office of the Illinois Pollution Control Board an original and nine copies each of the **PRE-FILED TESTIMONY OF GREG BRIGHT, IN SUPPORT OF SITE-SPECIFIC REGULATION; PRE-FILED TESTIMONY OF STEVE MILLER, IN SUPPORT OF SITE-SPECIFIC REGULATION; PRE-FILED TESTIMONY OF MIKE ROSE, IN SUPPORT OF SITE-SPECIFIC REGULATION; PRE-FILED TESTIMONY OF MAX SHEPARD, IN SUPPORT OF SITE-SPECIFIC REGULATION; and PRE-FILED EXHIBITS OF PETITIONERS, IN SUPPORT**

OF SITE-SPECIFIC REGULATION, attached herewith, copies of which are hereby served upon you.

Respectfully submitted,

CITY OF EFFINGHAM,
BLUE BEACON INTERNATIONAL, INC.,
and TRUCKOMAT CORPORATION,
Petitioners,

By: _____
One of their Attorneys

Dated: March 21, 2003

N. LaDonna Driver
David M. Walter
HODGE DWYER ZEMAN
3150 Roland Avenue
Post Office Box 5776
Springfield, Illinois 62705-5776
(217) 523-4900

CERTIFICATE OF SERVICE

I, David M. Walter, the undersigned, hereby certify that I have served the attached PRE-FILED TESTIMONY OF GREG BRIGHT, IN SUPPORT OF SITE-SPECIFIC REGULATION; PRE-FILED TESTIMONY OF STEVE MILLER, IN SUPPORT OF SITE-SPECIFIC REGULATION; PRE-FILED TESTIMONY OF MIKE ROSE, IN SUPPORT OF SITE-SPECIFIC REGULATION; PRE-FILED TESTIMONY OF MAX SHEPARD, IN SUPPORT OF SITE-SPECIFIC REGULATION; and PRE-FILED EXHIBITS OF PETITIONERS, IN SUPPORT OF SITE-SPECIFIC REGULATION upon:

Ms. Dorothy M. Gunn
Clerk of the Board
Illinois Pollution Control Board
100 West Randolph Street
Suite 11-500
Chicago, Illinois 60601

John C. Knittle, Esq.
Hearing Officer
Illinois Pollution Control Board
1717 Philo Road
Suite 25
Urbana, Illinois 61826

Deborah J. Williams, Esq.
Division of Legal Counsel
Illinois Environmental Protection Agency
1021 North Grand Avenue East
Post Office Box 19276
Springfield, Illinois 62794-9276

James E. Ryan, Esq.
Attorney General
500 South Second Street
Springfield, Illinois 62706

Robert T. Lawley, Esq.
Chief, Legal Division
Illinois Department of Natural Resources
524 South Second Street
Springfield, Illinois 62701

Matthew R. Hortenstine
122 East Washington
Post Office Box 668
Effingham, Illinois 62401

by depositing said documents in the United States Mail, postage prepaid, in Springfield, Illinois on March 21, 2003.

David M. Walter

BLUE:001/Filings/NOF-COS - Pre-filed Testimonies & Exhibits G-I

BEFORE THE ILLINOIS POLLUTION CONTROL BOARD

IN THE MATTER OF:	)	
	)	
SITE-SPECIFIC RULE FOR CITY OF EFFINGHAM TREATMENT PLANT FLUORIDE DISCHARGE, 35 ILL. ADM. CODE 304.233	)	R03-11

PRE-FILED TESTIMONY OF GREG BRIGHT,
IN SUPPORT OF SITE-SPECIFIC REGULATION

NOW COME the CITY OF EFFINGHAM ("City"), BLUE BEACON INTERNATIONAL, INC., and TRUCKOMAT CORPORATION (collectively "Petitioners"), by and through their attorneys, HODGE DWYER ZEMAN, and pursuant to 35 Ill. Admin. Code § 102.424, submit the following Pre-Filed Testimony of Greg Bright for presentation at the April 11, 2003, hearing scheduled in the above-referenced matter:

TESTIMONY OF GREG BRIGHT

Good morning. My name is Greg Bright. I am the Director of Commonwealth Biomonitoring, Inc. ("CBI"), of Indianapolis, Indiana. I am appearing here today on behalf of the Petitioners, in support of their proposal for a site specific rule for the fluoride discharge associated with the City of Effingham's treatment plant. I will testify regarding the available data on the toxicity of fluoride to aquatic life in general, the effect of hardness on fluoride toxicity, and actual bioassessments of the site. Thank you for allowing me to testify here today.

As previously explained by Mr. Shepard, the City's Publicly Owned Treatment Works ("POTW") discharges to an unnamed tributary of Salt Creek. Historical effluent fluoride data, as well as general facility information for the City's POTW, are

summarized in Attachment A to the Petition. As these data show, there have been only two occasions in the last three years where the City's effluent has achieved the 1.4 mg/L standard for fluoride. Indeed, the effluent fluoride concentration in the City's wastewater discharge ranged from 1.4 mg/L to 4.8 mg/L from January 1999 through December 2001. Nevertheless, the fluoride levels in the City's discharge are not having an adverse impact on the fluoride levels downstream.

At Petitioners' request, CBI conducted a detailed scientific assessment of the effects of fluoride on the water downstream from the City's wastewater treatment plant ("WWTP"). A detailed report of that assessment is included as Attachment D to the Petition. To determine a site-specific effluent limit for fluoride that would be protective of aquatic life downstream from Effingham, Illinois, fluoride toxicity data, as well as water quality and bioassessment data from the receiving stream, were collected and analyzed.

First, the available data concerning the toxicity of fluoride to aquatic life were examined. The lowest fluoride concentration at which a short-term (acute) toxic effect of exposure to a freshwater animal species was observed is 17 mg/L for the caddisfly *Ceratopsyche bronta*. Based on the available information, the lowest concentration of fluoride determined in laboratory tests to have a long-term (chronic) effect on freshwater animals present in Illinois was 3 mg/L. Nevertheless, this determination of chronic effect of fluoride exposure was made in a test conducted on rainbow trout in very soft water.

The fact that the test of the lowest concentration of fluoride with a long-term effect occurred in very soft water is significant, because the scientific literature demonstrates that there is a relationship between the hardness values for water and the

concentration at which fluoride is toxic to aquatic life. Indeed, additional tests have demonstrated that concentrations of fluoride significantly higher than 3 mg/L are not toxic to aquatic life in the characteristically much harder water of Central Illinois.

Multiple species have been used in aquatic toxicity tests involving varying hardness values of test water. For each species tested, the test results demonstrate that, as water hardness values increase, fluoride toxicity levels decrease. In other words, the harder the water, the higher the concentration of fluoride that can be maintained without causing any harm to aquatic life.

Here, too, because of the hardness of the water for which site-specific relief is sought, higher concentrations of fluoride are acceptable and will not be detrimental to aquatic life. Indeed, the water in the Little Wabash River downstream from Effingham, Illinois, is very hard, with hardness values of more than 300 mg/L during low flow conditions. Using a method developed by the United States Environmental Protection Agency the effects of hardness on fluoride toxicity were evaluated. Those data demonstrate that fluoride in the water downstream from Effingham would not be detrimental to aquatic life at concentrations at or below 10 mg/L.

Further support for this finding exists in field studies published in the scientific literature. Indeed, each study published in the scientific literature, including one conducted in Illinois, demonstrates that sensitive aquatic species can exist in waters where fluoride concentrations exceed 5-10 mg/L. Moreover, bioassessments show no harm to aquatic life from fluoride downstream from the City.

Recent studies conducted at Effingham, Illinois, illustrate that fluoride from the City's WWTP discharge is not, in fact, causing any environmental harm. The first study,

a 1999 bioassessment by the Illinois Environmental Protection Agency ("IEPA"), showed that net-spinning caddisflies are the dominant group of animals in the receiving stream one mile below the City's WWTP. Net-spinning caddisflies are known to be very sensitive to fluoride, yet they flourish in the receiving stream downstream from the City's WWTP. Their presence is further evidence that the concentration of fluoride from the City's WWTP discharge is not causing any environmental harm to aquatic life in the receiving water. Similarly, toxicity tests conducted by an independent laboratory in 1998 showed that effluent from the City's WWTP had no adverse effects on *Ceriodaphnia dubia* and fathead minnows in the receiving stream. Thus, the available bioassessments demonstrate that fluoride from the City's WWTP discharge is not causing any environmental harm.

At the IEPA's request, an additional bioassessment was completed on June 20, 2002, by CBI, in order to obtain additional information with respect to the environmental impact on the subject-receiving stream. The benthic samples obtained during the June 20, 2002, assessment were compared to the sample results from 1999. The study methods and results of this assessment and comparison are summarized in Attachment F to the Petition. Based upon this additional assessment, and its comparison with the 1999 data, CBI concluded that there is no evidence that the fluoride in the City WWTP effluent is harming the aquatic community immediately downstream from the discharge. Indeed, more taxa are present in 2002 than were observed in 1999, and net-spinning caddisflies are relatively abundant in an area immediately downstream from the City's WWTP discharge.

Bioassessments from the IEPA and CBI demonstrate that fluoride from the City's WWTP discharge is not causing any harm to aquatic life. In addition, studies published in the scientific literature demonstrate that sensitive aquatic species can exist in waters with higher fluoride concentrations than those proposed by Petitioners for the site-specific water quality and effluent standards. Finally, because of the hardness of the water for which site-specific relief is sought, such higher concentrations of fluoride are acceptable and will not be detrimental to the environment. The site-specific relief requested can therefore be granted without any harm to either aquatic life or the environment.

Thank you for the opportunity to testify today, and I would be pleased to answer any questions that the Board may have at this time.

* * *

Petitioners, CITY OF EFFINGHAM, BLUE BEACON INTERNATIONAL, INC., and TRUCKOMAT CORPORATION reserve the right to supplement or modify this pre-filed testimony.

Respectfully submitted,

CITY OF EFFINGHAM,
BLUE BEACON INTERNATIONAL, INC.,
and TRUCKOMAT CORPORATION,
Petitioners,

By: _____
One of their Attorneys

Dated: March 21, 2003

N. LaDonna Driver
David M. Walter
HODGE DWYER ZEMAN
3150 Roland Avenue
Post Office Box 5776
Springfield, Illinois 62705-5776
(217) 523-4900

BLUE:001/Fil/Petition – Bright - prefiled testimony

BEFORE THE ILLINOIS POLLUTION CONTROL BOARD

IN THE MATTER OF:	)	
	)	
SITE-SPECIFIC RULE FOR CITY	)	R03-11
OF EFFINGHAM TREATMENT	)	
PLANT FLUORIDE DISCHARGE,	)	
35 ILL. ADM. CODE 304.233	)	

PRE-FILED TESTIMONY OF STEVE MILLER
IN SUPPORT OF SITE-SPECIFIC REGULATION

NOW COME the CITY OF EFFINGHAM ("City"), BLUE BEACON INTERNATIONAL, INC. ("BBI"), and TRUCKOMAT CORPORATION ("Truckomat") (collectively "Petitioners"), by and through their attorneys, HODGE DWYER ZEMAN, and pursuant to 35 Ill. Admin. Code § 102.424, submit the following Pre-Filed Testimony of Steve Miller for presentation at the April 11, 2003, hearing scheduled in the above-referenced matter:

TESTIMONY OF STEVE MILLER

Good morning. My name is Steve Miller. I am the City Engineer for the City of Effingham, Illinois. I am appearing here today on behalf of the Petitioners, in support of their proposal for a site specific rule for the fluoride discharge associated with the City of Effingham's treatment plant. I will describe the City's water treatment plant, and its permitted fluoride limit. I will also discuss the City's attempt to determine the sources of, and to develop local limits for, fluoride in the City's discharge. Finally, I will describe how the City has worked with the fluoride dischargers, and the Illinois Environmental Protection Agency ("IEPA" or "Agency"), to address the issues raised by the fluoride in the City's effluent. Thank you for allowing me to testify here today.

Petitioners are seeking a site-specific effluent limit for fluoride for discharges from the City's Publicly Owned Treatment Works ("Treatment Plant"), including wastewater from BBI and Truckomat's Effingham facilities. The Illinois Pollution Control Board's ("Board") effluent regulations require, at Section 304.105, that effluent from the City not cause an applicable water quality standard to be exceeded. The general numeric water quality standard for fluoride, which is set forth in Section 302.208(g), is 1.4 mg/L.

For background, the City is a transportation hub located at the intersection of Interstate 57, connecting Chicago to New Orleans, and Interstate 70, stretching from the nation's capital to Los Angeles. The City has access to three interstate exchanges, as well as U.S. Highway 40, U.S. Highway 45, IL Highway 32, IL Highway 33, and IL Highway 37. The City has numerous motels, hotels and restaurants. The City has a population of 12,022. Industries in the City include Fedders, Inc. ("Fedders"); Quebecor World; Quebecor/Petty Printing; Sherwin-Williams Company; McLeod U.S.A. Publishing; Mid America Direct; Effingham Equity; Peerless of America; TSI Graphics, Inc.; Kingery Printing Company; Southeastern Container, Inc.; Effingham-Clay Service Company; John Boos and Company; Eagle Soft, A Patterson Company; Nukabe, Inc., U.S.A.; Effingham Daily News; Mid-Illinois Concrete, Inc.; J&J Ventures; Midco International; and Pepsi Cola Bottling Company.

The City's Treatment Plant was originally constructed in 1912. The plant was upgraded around 1935 and again in 1957. In 1980, a new plant was constructed at its current location. The Treatment Plant was upgraded again in 2001. The Treatment Plant employs approximately five full-time personnel and serves approximately 4,600

residential and 250 industrial/commercial customers. Flow to the Treatment Plant is split between residential and industrial/commercial users at 52 percent and 48 percent, respectively, based on water use.

The City's Treatment Plant has a design average flow of 3.75 million gallons per day and a maximum hydraulic flow of 9.375 million gallons per day. The Treatment Plant utilizes an oxidation ditch treatment system with tertiary rapid sand filtration. This treatment system is designed to address biological oxygen demand, and to remove suspended solids and carbonaceous biological oxygen demand. Like most Treatment Plants, however, it is not designed to remove soluble inorganic anions such as fluoride.

The City's Treatment Plant discharges its wastewater to an unnamed tributary of Salt Creek, pursuant to a National Pollutant Discharge Elimination System ("NPDES") permit issued by the IEPA. A modified NPDES permit (No. IL0028622) was issued to the City on March 30, 2000. The original issue and effective dates for this permit were October 6, 1998, and November 1, 1998, respectively. The permit expiration date is October 31, 2003.

The 2000 Permit established a daily maximum fluoride discharge limit for the City's Treatment Plant of 8.6 mg/L "from the effective date of the modified permit [i.e., November 1, 1998] until the attainment of operational level of the new sewage treatment plant." Once the City's new sewage treatment plant became operational, the permit specified that the daily maximum fluoride discharge limit would become 1.4 mg/L. This 1.4 mg/L daily maximum fluoride discharge limit in the Permit is based on the water quality standards set forth in Section 302.208(g) of the Board's regulations. This limit was apparently established based on a 7-day, 10-year ("7Q10") low flow value of zero

for the unnamed tributary of Salt Creek. In other words, for the case of no flow in the receiving water (i.e., 7Q10 of zero), the discharge itself would be required to meet the water quality standard for fluoride. In June 2001, the City's new sewage treatment plant became operational, and the 1.4 mg/L daily maximum fluoride discharge limit went into effect.

Following the issuance of the NPDES permit, with the fluoride discharge limit of 1.4 mg/L, the City attempted to determine the sources of the fluoride in its wastewater and to develop local limits for fluoride for those sources. Industry sampling was conducted in both 2000 and 2001. This sampling effort identified four Effingham industries as the primary sources of fluoride in the City's Treatment Plant. These four industries consist of two BBI truck washes, a Truckomat truck wash, and another industry named Fedders.

The background concentration of fluoride in the City's wastewater is 1.0 mg/L, since fluoride is added to the City water supply for dental health purposes. As a result, only a small amount of fluoride for industrial loading can be allowed, and the industrial discharge limit must be extremely stringent, in order for the City to comply with the general water quality standard of 1.4 mg/L. Indeed, in order to meet its new NPDES discharge limit of 1.4 mg/L, the City calculated a preliminary pretreatment discharge limit of 2.54 mg/L for each of the four industrial sources of fluoride in the City. This preliminary pretreatment discharge limit was approved by USEPA, however, never adopted by the City, because it did not appear to be obtainable by the industrial sources.

A sampling program was conducted by the City of Effingham in June through August of 2001. Fifteen samples were collected during this sampling event. The average

and maximum fluoride concentrations were 44 mg/L and 120 mg/L, respectively, at one BBI truck wash and 87 mg/L and 130 mg/L, respectively, at the other BBI truck wash.

Fourteen wastewater effluent samples from Truckomat were collected by the City of Effingham from June through August 2001 for fluoride analysis. The average and maximum fluoride concentrations for this sampling event at Truckomat were 39 mg/L and 100 mg/L, respectively.

The City completed a sampling program at the Fedders facility during the period from June through August 2001. Fourteen effluent wastewater samples were collected from Fedders for fluoride analysis. The average and maximum fluoride concentrations at Fedders were 9 mg/L and 20 mg/L, respectively. Fedders discontinued the process, which is the source of fluoride at the plant, in 2002.

After determining the sources of the fluoride in its discharge, and reviewing the sampling data against the preliminary discharge limit, the City has worked with BBI, Truckomat, Shepard Engineering Incorporated and the Agency to determine an acceptable fluoride discharge level. As will be described further by other witnesses today, there is no feasible treatment option for the fluoride in the discharge from BBI and Truckomat. Thus, in order for the City to meet its fluoride limit, these businesses would be severely hampered, if not eliminated. The continued operation of industries like BBI and Truckomat is important to the City. Indeed, the loss of these industries could have a severe negative impact on the City, as well as the surrounding areas. We believe the site-specific effluent limit proposed in this proceeding is protective of health and the environment, while preserving the economic viability of these important businesses.

Thank you for the opportunity to testify today, and I would be pleased to answer any questions that the Board may have at this time.

* * *

Petitioners, CITY OF EFFINGHAM, BLUE BEACON INTERNATIONAL, INC., and TRUCKOMAT CORPORATION reserve the right to supplement or modify this pre-filed testimony.

Respectfully submitted,

CITY OF EFFINGHAM,
BLUE BEACON INTERNATIONAL, INC.,
and TRUCKOMAT CORPORATION,
Petitioners,

By: _____
One of their Attorneys

Dated: March 21, 2003

N. LaDonna Driver
David M. Walter
HODGE DWYER ZEMAN
3150 Roland Avenue
Post Office Box 5776
Springfield, Illinois 62705-5776
(217) 523-4900

BLUE:001/Fil/Miller – prefiled testimony

BEFORE THE ILLINOIS POLLUTION CONTROL BOARD

IN THE MATTER OF:	)	
	)	
SITE-SPECIFIC RULE FOR CITY OF EFFINGHAM TREATMENT PLANT FLUORIDE DISCHARGE, 35 ILL. ADM. CODE 304.233	)	R03-11

PRE-FILED TESTIMONY OF MIKE ROSE,
IN SUPPORT OF SITE-SPECIFIC REGULATION

NOW COME the CITY OF EFFINGHAM ("City"), BLUE BEACON INTERNATIONAL, INC. ("BBI"), and TRUCKOMAT CORPORATION ("Truckomat") (collectively "Petitioners"), by and through their attorneys, HODGE DWYER ZEMAN, and pursuant to 35 Ill. Admin. Code § 102.424, submit the following Pre-Filed Testimony of Mike Rose for presentation at the April 11, 2003, hearing scheduled in the above-referenced matter:

TESTIMONY OF MIKE ROSE

Good morning. My name is Mike Rose. I am the Director of Environmental Research and Development for Blue Beacon International, Inc., of Salina, Kansas. I am appearing here today on behalf of the Petitioners, in support of their proposal for a site specific rule for the fluoride discharge associated with the City of Effingham's treatment plant. I will testify regarding the truck washes in Effingham, their economic significance to the City, the lack of available alternatives to these truck washes, and the fact that there is no economically reasonable way to reduce the fluoride levels. Thank you for allowing me to testify here today.

Adoption of the proposed site-specific effluent standard will allow socially and economically valuable services located in Effingham, Illinois, to continue. As a result of

its location at the intersection of two major interstates, the City derives much of its income from services provided to persons traveling along the nation's highways. BBI and Truckomat both operate truck washes in the City, and discharge wastewater produced from their operations to the City's Publicly Owned Treatment Works. The wastewater from the truck washes contains fluoride, which is sourced from the brightener used in washing the trucks.

BBI operates truck washes at two separate locations in the City. One of the facilities opened as a double bay wash in 1981, the other opened as a single bay in 1993 and added a second bay in 1997. Both of these facilities operate 24 hours per day, seven days per week. At its facilities, BBI washes the exteriors of over-the-road trucks, using chemicals (soap and brightener) applied with high-pressure wands. The brightener used to wash the trucks contains hydrofluoric acid ("HF"), which is the source of the fluoride in the wastewater from BBI's Effingham facilities. Each truck wash generates approximately 24,000 gallons per day of wastewater with a fluoride concentration in the range of 40 to 130 mg/L.

Wastewater pretreatment at the BBI truck wash facilities is accomplished by providing retention in a three-stage settling pit located inside each truck wash bay. The settling pit is designed to remove heavy solids by gravity settling. In addition, free-floating oil and grease is captured within the pit. Soluble parameters such as fluoride are not removed in the settling pit and are, therefore, discharged to the City's municipal sewer system.

Truckomat has been in operation in Effingham since the 1970s, and HF-based brightener has been used since 1996. Truckomat operations resemble BBI's, with the

exception that Truckomat operates only one double-bay facility in the City. The chemicals used, wastewater flows, and fluoride concentrations at Truckomat's facility are otherwise similar to BBI's. It is my understanding that the other former source of fluoride in the City's discharge, Fedders, Inc., is no longer a source of fluoride.

As previously explained, fluoride is a component of brighteners used in truck wash operations. Specifically, the active ingredient in truck wash brighteners is HF. The HF chemically removes the aluminum oxide coating, which forms on the exposed aluminum surface of over-the-road trucks. In addition, HF removes film from a truck's paint by the simple process of spraying on and washing off. This allows trucks to be cleaned without the use of a brush, which virtually eliminates the possibility of scratching a vehicle and decreases the waiting time for drivers. Despite significant efforts by the truck wash industry, no alternative, which produces the wash quality of the HF-based brightener, has been discovered.

The fluoride anion is present in the truck wash wastewater effluent by virtue of its presence in the chemical that is used to brighten aluminum – logically referenced as "brightener." The brightener chemical constitutes a significant portion of the truck wash operational cost. Therefore, the truck wash facilities are driven by operational costs to use no more brightener than necessary to achieve the desired finished product. All truck wash operators are given extensive training with respect to chemical application procedures and rates. Also, management personnel track chemical use on a weekly basis. Specifically, chemical use is compared to total revenue (which is directly related to truck volume). Therefore, if excessive use of brightener were occurring, it would be quickly

identified and corrected. Economic incentives already prevent excess use of the brightener chemical. Moreover, there are no effective alternative replacements for HF.

Furthermore, there are no economically reasonable methods to reduce fluoride. BBI and its consultants, Shepard Engineering, Incorporated, completed bench tests using untreated truck wash wastewater samples. During the bench tests, 27 jar tests were completed using varying dosages and combinations of calcium hydroxide, calcium chloride, and alum. These jar tests revealed that the lowest practicable fluoride removal level for the truck wash facilities was in the range of 10 mg/L. Thus, the lowest practicable fluoride removal level for the truck washes is significantly greater than the pretreatment discharge limit of 2.54 mg/L proposed by the City. Accordingly, as will be discussed by Mr. Shepard, it is not technically feasible for BBI or Truckomat to achieve the fluoride limit proposed by the City.

Though the bench tests did not achieve fluoride reduction that would be required to comply with the discharge limits at issue, cost estimates were developed for wastewater treatment systems for the three truck wash operations in the City; the results of the cost analysis are as follows. Treatment system components would include an equalization tank, a rapid-mix tank, a slow-mix tank, a flash mixer, a flocculation (slow) mixer, an inclined plate clarifier and sludge thickener, a filter press, a wastewater transfer pump, chemical feed pumps, and chemical storage systems. The estimated total capital cost for this equipment (i.e., for separate systems at each of the three locations) is $1.5 million, based on a design wastewater flow rate of 30,000 gallons per day at each location. Moreover, it is estimated that the chemicals, operating labor, sludge disposal, maintenance and depreciation associated with such a wastewater treatment system would

cost $600,000 annually. If an attempt were made to recoup this annual operating cost by increasing prices, the price of a wash would increase approximately 13 percent, i.e., an additional $5.00 every time a truck is washed. Such drastic increases would cripple the truck wash operations in the City, particularly since there are a number of truck wash competitors within driving range of the trucks utilizing these services. Thus, even if it was technically feasible using the available technology to achieve the fluoride standard currently imposed, which it is not, the costs of such technology would be prohibitively expensive.

To summarize, there is no economically reasonable system available to reduce fluoride to the desired concentrations. Chemical costs (i.e., for brightener) are a significant portion of the operating cost for a truck wash. Consequently, both BBI and Truckomat carefully monitor and control the amount of brightener used in the truck washing process. In other words, the minimum amount of brightener is used at all times, which results in the minimum amount of fluoride being released to the City sewer.

The negative economic impact that would occur, if the truck washes in the City were forced to abandon the HF brightener and use an inferior product, would be severe. Specifically, BBI projects that the loss of HF brightener would result in annual revenue loss of $300,000 per double bay location. This correlates to a total economic loss of $900,000 in the City, based on the decrease of truck wash revenue alone. These economic losses would be compounded by the lost revenue for other associated businesses (e.g., restaurants, truck stops, motels, etc.), as well as loss of employment. It is also projected that the loss of HF brightener would result in the loss of seven to eight employees per truck wash location – a total of 21 to 24 lost jobs in the City.

Given the industrial and transportation presence in the Effingham area, truck washes are an important industry in, and source of income for, the City. Indeed, the Average Daily Traffic Report for 2001 indicates that 47 percent of the approximately 33,100 vehicles travelling on Interstate 57 and Interstate 70 are semi-trucks. The drivers of these 15,557 trucks make a substantial contribution to the Effingham community each day. It is estimated that, on a daily basis, an average of 1,000 truck drivers purchase fuel in the City. The drivers of these trucks spend an average of $71.00 per person in the City, i.e., $71,000 contributed to the local economy on a daily basis. Statistical research has shown that truck drivers generally stop for a truck wash, fuel, and food at the same time. An average of 26 percent of the 1,000 truck drivers stopping daily for fuel in the City will also obtain a truck wash, at an average cost of $37.50. This does not even take into consideration the dollars spent by these truck drivers at local restaurants or hotels. If these truck drivers travel through or around the City to obtain a truck wash elsewhere, these restaurants and hotels will be impacted, as well as the truck washes and filling stations. Thus, as previously explained, there would be a significant negative economic impact, if truck washes in the City were forced to abandon the HF brightener and use an inferior product. As a result, Shepard Engineering, Inc. helped the Petitioners derive the alternate standard for fluoride that is proposed here today.

Thank you for the opportunity to testify today, and I would be pleased to answer any questions that the Board may have at this time.

* * *

Petitioners, CITY OF EFFINGHAM, BLUE BEACON INTERNATIONAL, INC., and TRUCKOMAT CORPORATION reserve the right to supplement or modify this pre-filed testimony.

Respectfully submitted,

CITY OF EFFINGHAM,
BLUE BEACON INTERNATIONAL, INC.,
and TRUCKOMAT CORPORATION,
Petitioners,

By: _____
One of their Attorneys

Dated: March 21, 2003

N. LaDonna Driver
David M. Walter
HODGE DWYER ZEMAN
3150 Roland Avenue
Post Office Box 5776
Springfield, Illinois 62705-5776
(217) 523-4900

BLUE:001/Fil/Petition – Rose - prefiled testimony

BEFORE THE ILLINOIS POLLUTION CONTROL BOARD

IN THE MATTER OF:	)	
	)	
SITE-SPECIFIC RULE FOR CITY OF EFFINGHAM TREATMENT PLANT FLUORIDE DISCHARGE, 35 ILL. ADM. CODE 304.233	)	R03-11

PRE-FILED TESTIMONY OF MAX SHEPARD,
IN SUPPORT OF SITE-SPECIFIC REGULATION

NOW COME the CITY OF EFFINGHAM ("City"), BLUE BEACON INTERNATIONAL, INC. ("BBI"), and TRUCKOMAT CORPORATION ("Truckomat") (collectively "Petitioners"), by and through their attorneys, HODGE DWYER ZEMAN, and pursuant to 35 Ill. Admin. Code § 102.424, submit the following Pre-Filed Testimony of Max Shepard for presentation at the April 11, 2003, hearing scheduled in the above-referenced matter:

TESTIMONY OF MAX SHEPARD

Good morning. My name is Max Shepard. I am a chemical engineer, a licensed professional engineer in four states, and the President of Shepard Engineering Incorporated, of Salina, Kansas. I am appearing here today on behalf of the Petitioners, in support of their proposal for a site specific rule for the fluoride discharge associated with the City of Effingham's treatment plant. I will testify about how the proposed site-specific effluent standard was derived, the condition of the receiving streams for the City's discharge, the historical flow and fluoride data for those receiving streams; the entities presently discharging to the affected water segments downstream of the City's discharge, as well as the entities using water downstream of the City's discharge, fluoride impacts from the City's discharge, the available treatment or control options for fluoride,

fluoride removal technologies, and the technical feasibility of reducing fluoride levels. Thank you for allowing me to testify here today.

Petitioners are seeking a site-specific effluent limit for fluoride for discharges from the City's Publicly Owned Treatment Works ("POTW"), which includes wastewater from BBI and Truckomat's Effingham facilities. The Illinois Pollution Control Board ("Board") effluent regulations require, at Section 304.105, that effluent from the City not cause an applicable water quality standard to be exceeded. The general numeric water quality standard for fluoride, which is set forth in Section 302.208(g), is 1.4 mg/L.

Nevertheless, as I will later explain, treatment to a general fluoride water quality standard of 1.4 mg/L is not technically feasible. Thus, a site-specific effluent standard has been proposed by the Petitioners. As proposed, the City's effluent would not be subject to Section 304.105 as it applies to the water quality standard for fluoride at Section 302.208(g). Instead, such discharge would have to meet a fluoride effluent standard of 4.5 mg/L, subject to the averaging rule of Section 304.104.

These fluoride levels, to the receiving waters of the State, will be protective of aquatic life, human health, and the environment as a whole. Moreover, as explained by others who are testifying here today, adoption of the proposed site-specific effluent standard will allow socially and economically valuable services located in Effingham, Illinois, to continue.

Waters from the POTW are discharged to an unnamed tributary of Salt Creek. The potentially affected waters include the unnamed tributary, Salt Creek itself, and the Little Wabash River, into which Salt Creek flows. The City of Flora, Illinois, receives its

water from the Little Wabash River through a water supply intake, which is located approximately 37 miles downstream from Effingham on the Little Wabash River. There are no other public or private entities known to Petitioners, which use the subject stream segment for a water supply.

As previously explained, the City's POTW discharges to an unnamed tributary of Salt Creek. The seven-day, 10-year low flow value ("7Q10") for this unnamed tributary is zero. This means that, from a statistical perspective, there can be periods where the stream flow in Salt Creek is comprised entirely of the discharge flow from the City. Furthermore, this means that the POTW discharge does not undergo any mixing with the receiving water. Therefore, the Agency set the General Use Water Quality Standard of 1.4 mg/L for fluoride as the NPDES permit limit for the City's discharge.

Historical effluent fluoride data, as well as general facility information for the City's POTW, are summarized in Attachment A to the Petition. As these data show, there have been only two occasions in the last three years where the City's effluent has achieved the 1.4 mg/L standard for fluoride. Indeed, the effluent fluoride concentration in the City's wastewater discharge ranged from 1.4 mg/L to 4.8 mg/L from January 1999 through December 2001. The average discharge fluoride concentration during that time period was 2.73 mg/L for 45 sampling events. Nevertheless, based on empirical data, the fluoride levels in the City's discharge are not having an adverse impact on the City of Flora water supply fluoride levels downstream.

The first location downstream of the City's discharge where fluoride data are available is at sampling Station C-19, which is located on the Little Wabash River at Louisville, Illinois. This sampling station is located approximately 34 miles downstream

from the City's discharge. Fluoride concentration data and stream flow data at this sampling station are found in Table B-1 in the Petition. These data were generated from the STORET database. The average and maximum fluoride concentrations over the sampling period in Table B-1 (July 1970 through September 1992) were 0.30 mg/L and 0.90 mg/L, respectively.

The City of Flora's water supply intake is located approximately three miles downstream from the City of Louisville on the Little Wabash River. Fluoride data are available from the City of Flora's water supply intake. These data from the City of Flora are summarized in Table B-2 in the Petition. The data presented in Table B-2 indicate that the average and maximum fluoride concentrations at the Flora intake were 0.26 mg/L and 0.77 mg/L, respectively, for the period from June 1994 through September 2001.

As we have set forth in detail in the Petition, several municipalities and businesses discharge wastewater to Salt Creek and the Little Wabash River stream segments that are the subject of this petition. With the exception of the Harper Oil Company discharge, all of the dischargers to Salt Creek and the Little Wabash River stream segments, that are the subject of this Petition, are municipalities. While there are no fluoride data available for these dischargers, based on a review of the regulated parameters, it can be concluded that the dischargers are primarily treating and discharging conventional pollutants (i.e., Biological Oxygen Demand ("BOD") and Total Suspended Solids ("TSS")). Accordingly, there do not appear to be any significant sources of fluoride in the subject streams, other than the City, BBI, Truckomat, and previously Fedders, Inc.

A map has also been included with Attachment B to the Petition, which shows the 7Q10 stream flows for the Little Wabash Region. These data were recently updated (March 2002) by the Illinois State Water Survey. The 7Q10 flow data show that the City's POTW discharge contributes a significant amount of the flow to Salt Creek during low flow periods. However, downstream fluoride data generated at sampling station C-19 documented that the fluoride contributed by the City's POTW discharge has little impact on the downstream fluoride concentrations. For example, as discussed earlier, the average and maximum fluoride concentrations in the Little Wabash River at Louisville (monitoring Station C 19) were 0.3 mg/L and 0.9 mg/L, respectively.

During the years 1999 and 2001, the effluent discharged from the City's POTW exhibited a fluoride concentration ranging between 1.5 mg/L to 4.8 mg/L. Nevertheless, 0.51 mg/L was the highest concentration of fluoride detected downstream on the Little Wabash River in the City of Flora's raw water supply intake during those same years. Thus, the historic levels of fluoride discharged in the effluent from the City's POTW have clearly not affected downstream use of the water by the City of Flora.

During discussions with technical staff from the Illinois Environmental Protection Agency ("IEPA" or "Agency") prior to the submittal of the Petition, the IEPA requested a more comprehensive evaluation of the impact of evaporation on the expected fluoride levels in the affected stream segments during low flow periods. On behalf of the Petitioners, and at the request of the IEPA, Shepard Engineering, Incorporated conducted water balance and fluoride balance calculations on the stream segments in question. These calculations, which are set forth in Attachment F, demonstrate that using the

standards proposed herein, the City of Flora's water supply will not exceed 2.0 mg/L fluoride, even under 7Q10 low flow conditions and taking evaporation into consideration.

The Board's opinion setting forth the fluoride water quality standard of 1.4 mg/L was published on March 7, 1972. In it, the Board explained that McKee and Wolf had recommended a standard of 1.5 mg/L for fluoride, the Board's standard of 1.4 mg/L was in line with that recommendation, and it would assure a potable supply. In its earlier, January 6, 1972, opinion, the Board provided additional information regarding the problems associated with the treatment of fluoride, and specifically for municipal treatment plants whose influent has been deliberately dosed with as much as 1.0 mg/L of fluoride for dental purposes.

A literature review summary and the results from bench test treatability studies are included as Attachment C to the Petition. As discussed more fully in Attachment C, fluoride removal from industrial wastewater has typically focused on precipitation as calcium fluoride using calcium-based chemicals (i.e., calcium hydroxide or calcium chloride) or removal by sorption onto aluminum-based chemicals. The latter treatment methods have included sorption onto aluminum-based chemicals that are added to the wastewater solution (typically alum) or sorption onto a fixed bed such as alumina.

Since fluoride in wastewater is a soluble ion, other potential removal processes include ion exchange or reverse osmosis ("RO"). However, ion exchange and RO require that the wastewater be pretreated to a level where essentially all oil, grease and suspended solids are removed prior to the process. It has been reported that the chemical processes most widely used for fluoride removal are alum coagulation and lime

treatment, with an insoluble fluoride complex that may be removed from the water as sludge.

The literature also indicates, however, that achievable fluoride removal levels are highly dependent on the type of wastewater stream being treated. Therefore, BBI and Shepard Engineering Incorporated, completed bench tests using untreated truck wash wastewater samples. The results of these tests are found in Attachment C to the Petition.

During the bench tests, 27 jar tests were completed using varying dosages and combinations of calcium hydroxide, calcium chloride, and alum. These jar tests revealed that the lowest practicable fluoride removal level for the truck wash facilities was in the range of 10 mg/L. Thus, the lowest practicable fluoride removal level for the truck washes is significantly greater than the preliminary pretreatment discharge limit of 2.54 mg/L proposed by the City. Accordingly, it is not technically feasible for BBI or Truckomat to achieve the fluoride limit proposed by the City.

In turn, it will not be possible for the City to comply with the water quality standard for fluoride. Pretreatment by the City is also not technically practicable, due to the same limitations as were found with treatment at the truck washes. Despite the addition of wastewater from other sources, at the City's WWTP, the lowest practicable fluoride removal level that could be achieved by the City still greatly exceeds the current fluoride effluent limit.

Prior to its formal submittal, Petitioners provided a draft of their Petition to the IEPA, and participated in a telephone conference with the IEPA regarding that draft. Among other things, the Petitioners discussed with the IEPA the hardness of the water in the receiving streams, why the removal of fluoride to levels below 10 to 20 mg/L is not

technically feasible, why it is not possible to discharge wastewater directly to the City's WWTP following the addition of the calcium-based precipitation chemicals only, and why only partially treating the wastewater at the respective truck washes is not a viable solution.

BBI is conducting extensive research in the area of wastewater recycle and re-use on an on-going basis. Unfortunately, recycle systems do not reduce the total mass loading of soluble parameters such as fluoride. That is, if the truck washes were able to recycle 50 percent of their wastewater effluent, the fluoride concentration in the discharge would double and the total mass loading in the effluent would remain the same.

To summarize, there is no technically feasible system available to reduce fluoride to the desired concentrations. Indeed, as discussed earlier, the systems would only reduce the effluent fluoride concentration to the 10 mg/L range, a level significantly higher than the level desired.

The City's inability to meet the current water quality standard for fluoride is a result of several factors. As has been discussed by others, the City is a prime location for over-the-road truck traffic, which has resulted in the construction and operation of three successful truck wash facilities. These truck washes all utilize the industry standard for brighteners, which contain a significant concentration of hydrofluoric acid. Fluoride is an extremely soluble ion, and, as a result, its removal is extremely costly at the source. Also, due to its solubility, fluoride is not removed at the City's WWTP.

At many locations across the country, fluoride that is sourced from truck wash operations is simply mixed with the wastewater generated by other industrial, commercial, and residential users, as well as, the flow in the receiving stream. However,

Effingham is a relatively small community (population 12,022), which discharges to an extremely low flow stream – specifically, Little Salt Creek, which has a 7Q10 value of zero. Therefore, no mixing is available with respect to the City's POTW discharge and the receiving stream. Conversely, most municipalities in Illinois and across the country do not have significant sources of fluoride from their industrial dischargers, and/or have significant volumes of wastewater from non-fluoride sources, and/or discharge to a receiving stream with significant flows.

The proposed site-specific fluoride effluent standard will be protective of the waters of the State located downstream. Waters from the POTW are discharged to an unnamed tributary of Salt Creek. The potentially affected waters flow from this discharge point to the confluence of the unnamed tributary with Salt Creek, from there downstream to the juncture of Salt Creek with the Little Wabash River, and from there downstream to a point approximately 9.8 river miles downstream from the City of Louisville, Illinois, on the Little Wabash River at the confluence of Buck Creek and the Little Wabash River.

Petitioners studied and calculated fluoride levels at these locations. If the proposed site-specific effluent standard is adopted, fluoride levels as a result of the discharge from the POTW to the above-listed potentially affected waters would be as follows. From the point of discharge of the City's POTW to the confluence of Salt Creek with the Little Wabash River, the fluoride levels would be less than or equal to 5.0 mg/L. From the confluence of Salt Creek with the Little Wabash River to a point on the Little Wabash River located 2.8 miles downstream of Louisville, Illinois, the fluoride levels would be less than or equal to 3.2 mg/L. From a point on the Little Wabash River

located 2.8 miles downstream of Louisville, Illinois to the confluence of Buck Creek and the Little Wabash River, a point on the Little Wabash River located approximately 9.8 miles downstream of Louisville, Illinois, the fluoride levels would be less than or equal to 2.0 mg/L. Furthermore, Petitioners are working with the IEPA on permit conditions that will require monitoring of flow conditions downstream, including the impacts, if any, of the discharge on downstream water supplies.

Commonwealth Biomonitoring, Inc. ("CBI"), Indianapolis, Indiana, conducted a detailed scientific assessment of the effects of fluoride on the water downstream from the City's WWTP. A detailed report of that assessment is included as Attachment D to the Petition, and will be discussed further by Greg Bright. To determine a site-specific effluent limit for fluoride that would be protective of aquatic life downstream from Effingham, Illinois, fluoride toxicity data, as well as water quality and bioassessment data from the receiving stream, were collected and analyzed.

Bioassessments from CBI and the IEPA demonstrate that fluoride from the City's WWTP discharge is not causing any harm to aquatic life. In addition, studies published in the scientific literature demonstrate that sensitive aquatic species can exist in waters with higher fluoride concentrations than those proposed by Petitioners for the site-specific water quality and effluent standards. Finally, because of the hardness of the water for which site-specific relief is sought, higher concentrations of fluoride are acceptable and will not be detrimental to the environment. Thus, site-specific relief requested can be granted without any harm to either aquatic life or the environment.

Thank you for the opportunity to testify today, and I would be pleased to answer any questions that the Board may have at this time.

* * *

Petitioners, CITY OF EFFINGHAM, BLUE BEACON INTERNATIONAL, INC., and TRUCKOMAT CORPORATION reserve the right to supplement or modify this pre-filed testimony.

Respectfully submitted,

CITY OF EFFINGHAM,
BLUE BEACON INTERNATIONAL, INC.,
and TRUCKOMAT CORPORATION,
Petitioners,

By: _____
One of their Attorneys

Dated: March 21, 2003

N. LaDonna Driver
David M. Walter
HODGE DWYER ZEMAN
3150 Roland Avenue
Post Office Box 5776
Springfield, Illinois 62705-5776
(217) 523-4900

BLUE:001/Fil/Petition – Shepard - pre-filed testimony

BEFORE THE ILLINOIS POLLUTION CONTROL BOARD

IN THE MATTER OF:	)	
	)	
SITE-SPECIFIC RULE FOR CITY OF EFFINGHAM TREATMENT PLANT FLUORIDE DISCHARGE, 35 ILL. ADM. CODE 304.233	)	R03-11

PRE-FILED EXHIBITS OF PETITIONERS,
IN SUPPORT OF SITE-SPECIFIC REGULATION

NOW COME the CITY OF EFFINGHAM ("City"), BLUE BEACON INTERNATIONAL, INC., and TRUCKOMAT CORPORATION (collectively "Petitioners"), by and through their attorneys, HODGE DWYER ZEMAN, and pursuant to 35 Ill. Admin. Code § 102.424, submit their Pre-Filed Exhibits for presentation at the April 11, 2003, hearing scheduled in the above-referenced matter, as follows:

1. Petitioner's Pre-filed Exhibits A through F are Attachments A through F of the Petition. Thus, copies of Pre-filed Exhibits A through F have already been filed with the Board and served upon the parties in this matter. In order to conserve paper, additional copies of Exhibits A through F are not attached hereto, but such additional copies are available upon request.

2. Pre-filed Exhibits G through I are attached hereto.

Petitioners, CITY OF EFFINGHAM, BLUE BEACON INTERNATIONAL, INC., and TRUCKOMAT CORPORATION reserve the right to supplement or modify their Pre-filed Exhibits.

Respectfully submitted,

CITY OF EFFINGHAM,
BLUE BEACON INTERNATIONAL, INC.,
and TRUCKOMAT CORPORATION,
Petitioners,

By: _____
One of their Attorneys

Dated: March 21, 2003

N. LaDonna Driver
David M. Walter
HODGE DWYER ZEMAN
3150 Roland Avenue
Post Office Box 5776
Springfield, Illinois 62705-5776
(217) 523-4900
BLUE:001/Fil/Petition – Prefiled Exhibits

MAX SHEPARD, P.E.

Chemical Engineer/President, Shepard Engineering, Inc.

EDUCATION

- Bachelor of Science Degree (Summa Cum Laude), Chemical Engineering, Kansas State University, 1979

CONTINUING EDUCATION

- Fisher Control Valve Seminar, Wichita, Kansas 1981
- Hazard Communication Regulation Seminar, Wichita, Kansas, 1985
- Distillation in Practice, American Institute of Chemical Engineers, Denver, Colorado, 1988
- On-line Process Measurements, American Institute of Chemical Engineers, Philadelphia, Pennsylvania, 1989
- Analysis of Groundwater (Graduate Course), Kansas State University, 1991
- RCRA Corrective Action Stabilization Technologies, EPA, Kansas City, Missouri, 1992
- Groundwater Monitoring and Sampling, NGWA, Denver, Colorado, 1992
- Hazardous Materials Management (Graduate Course), Kansas State University, 1992
- Bioremediation of Organic Constituents in Soil and Groundwater, NGWA, Denver, Colorado, 1993
- Treatment Technology for Contaminated Soil and Groundwater, NGWA, Denver, Colorado, 1994
- Kansas Environmental Law Compliance Course, Government Institutes, Kansas City, Missouri, 1994
- Environmental Risk Assessment, Environmental Education Enterprises, Albuquerque, New Mexico, 1994
- Negotiating Environmental Agreements, Massachusetts Institute of Technology, Cambridge, Massachusetts, 1995
- Understanding Migration, Assessment and Remediation of LNAPLs and DNAPLs, NGWA, Denver, Colorado, 1995
- Princeton Groundwater Course, San Francisco, California, 1996
- Applied Pollutant Fate and Transport Principles in Parameter Estimation and Modeling Risk-Based Soil Screening, NGWA, Columbus, Ohio, 1997
- Computer-Aided Cleanup for Risk-Based Soil and Ground Water Cleanup, NGWA, Columbus, Ohio, 1997
- Natural Attenuation of Chlorinated Solvents in Groundwater, Kansas City, Missouri, 1998
- Applications of Groundwater Geochemistry, Dallas, Texas, 1999
- Abiotic In-Situ Technologies for Groundwater Remediation, Dallas, Texas, 1999
- Low-Cost Remediation Strategies for Contaminated Soil and Groundwater, Denver, Colorado, 2001
- Application of Waste Remediation Technologies to Agricultural Contamination of Water Resources, Kansas City, Missouri, 2002
- Estimating Times of Remediation Associated with Monitored Natural Attenuation of Contaminant Source Removal, Orlando, FL, 2003

PROFESSIONAL SOCIETIES

- Water Environment Federation
- National Groundwater Association
- American Electroplaters and Surface Finishers Society

PROFESSIONAL ACTIVITIES

- Ozone-UV Disinfection of Secondary Sewage Effluent: Presented at the American Chemical Society Regional Meeting, Columbia, Missouri, November, 1981
- Implementation of City of Wichita Pretreatment Program: Presented at the Kansas Water Pollution Control Association Conference, May, 1984
- Preparation of a Practical and Effective Industrial Spill Control Plan: Presented at the Kansas Water Environment Federation Meeting, Manhattan, Kansas, 1991
- Industrial Wastewater Treatment Technologies: Presented at the Kansas Water Environment Federation Meeting, Hutchinson, Kansas, 1992
- Program Presenter at the Electroplater Pollution Prevention Workshop, Sponsored by Kansas State University, Manhattan, Kansas, 1993
- Near Zero Wastewater Discharge: Presented at the Kansas Pollution Prevention Workshop, Wichita, Kansas, 1993
- Successful Wastewater Pretreatment System Implementation for the International Multifoods, Inc. Food Processing Plant: Presented at the Kansas/Missouri Joint Water Environment Federation Meeting, Kansas City, Missouri, 1994

PATENTS

- U.S. Patent No. 4350597 - "Apparatus and Process for Treatment of Sludge", deals with the processing of sludge from the regeneration of aluminum chemical milling solutions. The process washes the sludge to recover usable chemicals and then neutralizes and de-waters the washed solids to render the material non-hazardous. September, 1982

LICENSES

- Registered Professional Engineer in Kansas (No. 9648)
- Registered Professional Engineer in Missouri (No. E-22696)
- Registered Professional Engineer in Arizona (No. 28948)
- Registered Professional Engineer in California (No. 5997)

PROFESSIONAL WORK EXPERIENCE

Mr. Shepard worked as a Research Assistant in the Chemical Engineering Department at Kansas State University prior to graduation. He joined Wilson & Company Engineers & Architects in 1979 and was involved in a variety of process and environmental projects. Project responsibilities at Wilson & Company included preparation of material and energy balances, bench and pilot plant scale design and operation, environmental pollution control studies, industrial waste surveys, industrial waste treatment process design, treatment process research and development, hazardous waste treatment and stabilization, and pretreatment program implementation.

From 1984 to 1990, Mr. Shepard was an Associate Professor in the Chemical Engineering Technology Department at the Kansas College of Technology. During that time, he continued to be involved in a variety of environmental consulting projects including development of innovative waste treatment processes, industrial wastewater pretreatment program implementation, preparation of hazardous waste closure plans, certification of hazardous waste closures, hazardous waste Part B Permit Applications, SARA Title III reporting, and environmental site assessments.

Mr. Shepard started Shepard Engineering, Inc. in 1990. He is responsible for all phases of environmental projects with the firm, including groundwater and soil investigation and remediation, development and execution of wastewater treatability studies, hazardous waste management, industrial wastewater treatment system design, environmental site assessment, preparation of Spill Control Plans, NPDES Permit applications, SARA Title III reporting, chromium emissions stack testing, and waste minimization.

REPRESENTATIVE PROJECTS

- Exline, Inc., Salina, Kansas - Groundwater and soil investigation and remediation (chromium); Hazardous waste Part B permit application; Sara Title III reporting; Industrial wastewater treatment; Ambient air monitoring; Chrome plating ventilation system design
- Morrison Enterprises, Salina, Kansas - Food processing plant wastewater treatment system design and startup; Soil and groundwater investigation and remediation (carbon tet and EDB); Environmental site assessments
- Lowen Corporation, Hutchinson, Kansas - Industrial wastewater treatment system design; Sara Title III reporting; Hazardous waste management; Air permitting; Groundwater and soil investigation
- Blue Beacon International, Inc., Salina, Kansas - Industrial wastewater treatment system design, startup, and operation; Development and implementation of sludge characterization plan; NPDES reporting
- Tony's Pizza Service, Salina, Kansas - Development of SPCC Plan; Development of sludge management plan
- Precision Industries, McPherson, Kansas - Sara Title III reporting; Soil investigation; Hazardous waste management
- Kansas Plating, Wichita, Kansas - Industrial wastewater management; Hazardous waste management; Chrome plating system air emissions
- S.S. Papadopulos & Associates, Bethesda, Maryland - Groundwater remediation alternatives
- Turbine Specialties, Inc., Salina, Kansas - Industrial wastewater management; Solid waste management
- Eaton Corporation, Hutchinson, Kansas - Preparation of SPCC Plans; Hazardous waste management; Industrial wastewater management; Chrome plating system air emissions testing
- Eaton Corporation, Kearney, Nebraska - Chrome plating system air emissions testing

REPRESENTATIVE PROJECTS (continued)

- Sundstrand Aerospace Corporation, Denver, Colorado - Chrome plating system air emissions testing
- Century Manufacturing, Lincoln, Kansas - Groundwater and soil investigation; Air Permitting; Groundwater remediation (air stripping of TCE)
- City of Enid, Enid, Oklahoma - Pretreatment program implementation; Local limits development
- Valley Fertilizer, Clay Center, Kansas - Soil and groundwater investigation and remediation (nitrate and pesticides)
- Plating, Inc., Great Bend, Kansas - Soil and groundwater investigation (chromium); Chromium emissions stack testing
- Lockheed-Georgia Company, Marietta, Georgia - Chem-mill recovery feasibility study; Ozone/UV treatability studies
- Great Plains Manufacturing, Salina, Kansas - Industrial wastewater treatability studies and system design; Environmental site assessments; Sara Title III reporting
- City of Salina, Kansas - Pretreatment Program implementation
- City of Olathe, Kansas - Pretreatment Program implementation
- City of Wichita, Kansas - Pretreatment Program implementation; Pilot plant study - ozone/UV disinfection of secondary sewage effluent
- City of Iola, Kansas - Pretreatment Program implementation
- City of Kansas City, Kansas - Pretreatment Program implementation
- Boeing Military Airplane Company, Wichita, Kansas - Paint waste treatability study
- General Electric Company, Albuquerque, New Mexico - Industrial wastewater survey and treatability studies
- McDonnell Douglas Corporation, Tulsa, Oklahoma - Environmental pollution control study
- Grumman Aerospace Corporation, Bethpage, New York - Industrial wastewater treatment plant process design; Aluminum etch recovery process pilot plant study; Nitric acid recovery process pilot study
- Owens-Brockway, Muskogee, Oklahoma - Industrial wastewater survey; Wastewater treatability study
- KASA Fab, Inc. - Industrial wastewater management
- Kimble Glass, Chicago Heights, Illinois - Environmental Audit, Form R Report, Tier II Report and Air Emissions Report
- A-1 Plank & Scaffold, Inc., Hays, Kansas - Laboratory treatability studies, treatment system design
- Wichita County Grain Company, Leoti, Kansas - Groundwater sampling and reporting
- Coleman Company, Wichita, Kansas - Industrial wastewater management
- Crestwood, Inc., Salina, Kansas - Community right-to-know reporting and air permitting, environmental consulting
- Lewis Coop Elevator, Lewis, Kansas - VCPRP Site Investigation
- Logan Nitrate Site, Logan, Kansas - Site Investigation
- Dillons, Hutchinson, Kansas - Wastewater Survey

Greg R. Bright
Director of Biological Studies

Education: B.A. Biology - Hanover College, Hanover, Indiana (1975)
M.S. Zoology - Clemson University, Clemson, South Carolina (1977)

Experience:

1989 to Present — **Commonwealth Biomonitoring, Inc.**
Indianapolis, Indiana

Director of Biological Studies

Acts as project manager for all water quality studies, including:

- Whole effluent toxicity tests
- Site-specific water quality criteria
- Toxicity identification evaluations
- Fisheries and invertebrate studies to evaluate water quality
- Lake enhancement and wetlands

1980 to 1989 — **Department of Environmental Management**
Indianapolis, Indiana

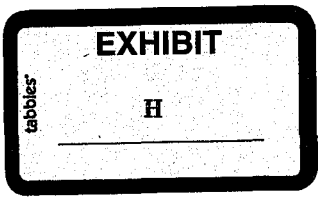
Senior Environmental Manager

Worked as an aquatic biologist in the water pollution control program. The work included toxicity testing, fish and macroinvertebrate studies, tissue and sediment contamination, lake trophic status, and water quality standards review.

1977 to 1979 — **United States Peace Corps**
Koror, Palau (Republic of Belau)

Limnologist

Worked in the Office of the Chief Conservationist. Completed an inventory of freshwater resources. Collected and identified aquatic biota and life histories. Helped develop the island's first water quality standards.



Publications:

Bright, G.R. 1979. The inland waters of Palau, Caroline Islands. Office of the Chief Conservationist, Koror, Palau, 61 pp.

Bright, G. 1979. The life histories of some freshwater decapod crustaceans from Palau. Abstracts of the 14th Pacific Science Congress, Khabarovsk, USSR.

Bright, G. and J. June. 1981. Freshwater fishes of Palau, Caroline Islands. Micronesica 17: 107-111.

Bright, G.R. 1981. Macroinvertebrate sampling and water quality monitoring in Indiana. Proc. Ind. Acad. Sci. 91: 320-327.

Bright, G.R. 1982. Secondary benthic production in a tropical island stream. Limnol. Oceanogr. 27: 472-480.

Cook, D. and G. Bright, 1983. Water mites of the Palu Islands. Acarologia 14: 187-201.

Bright, G. R. 1986. Notes on the caddisflies of the Kankakee River in Indiana. Proc. Ind. Acad. Sci. 95: 191-194.

Simon, T., G. Bright, J. Rud & J. Stahl. 1994. Water quality characterization of the Grand Calumet River using the Index of Biotic Integrity. Proc. Ind. Acad. Sci. 98: 257-265.

Bright, G.R. 1994. Recent water quality in the Grand Calumet River as measured by benthic invertebrates. Proc. Ind. Acad. Sci. 98: 229-233.

Bright, G.R. 1995. Variability of the "water effect ratio" for copper toxicity - a case study. Water Environment Federation Conference Proceedings: Toxic Substances in Water Environments, Cincinnati, OH. 5-23 - 5-30.

Bright, G. and W. Eubanks. 1996. Tackling a perceived mercury problem in a municipal effluent - a case study. Water Environment Federation Conference Proceedings: Understanding the Industrial Pretreatment Program, Indianapolis, IN.

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

1021 NORTH GRAND AVENUE EAST, P.O. BOX 19276, SPRINGFIELD, ILLINOIS 62794-9276

THOMAS V. SKINNER, DIRECTOR

217/782-0610

March 30, 2000

City of Effingham
P.O. Box 648
Effingham, Illinois 62401

Re: City of Effingham
Effingham Sewage Treatment Plant
NPDES Permit No. IL0028622
Modification of NPDES Permit (After Public Notice)

Gentlemen:

The Illinois Environmental Protection Agency has reviewed the request for modification of the above-referenced NPDES Permit and issued a public notice based on that request. The final decision of the Agency is to modify the Permit as follows:

Interim and final fluoride limits have been added to the 001 STP outfall. Several miscellaneous non-substantive corrections have been made to the permit language.

Enclosed is a copy of the modified Permit. You have the right to appeal this modification to the Illinois Pollution Control Board within a 35 day period following the modification date shown on the first page of the permit.

Should you have any questions or comments regarding the above, please contact Wayne Caughman of my staff.

Very truly yours,

Thomas G. McSwiggin, P.E.
Manager, Permit Section
Division of Water Pollution Control

TGM:DJS:HWC:98051801.daa

Attachment: Modified Permit

cc: Records
Compliance Assurance Section
Champaign Region
USEPA
IFAS

EXHIBIT
tabbies
I

NPDES Permit No. IL0028622

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: October 31, 2003

Issue Date: October 6, 1998
Effective Date: November 1, 1998
Modification Date: March 30, 2000

Name and Address of Permittee:

City of Effingham
P.O. Box 648
Effingham, Illinois 62401

Facility Name and Address:

Effingham Sewage Treatment Plant
Intersection of Eiche Ave. and Pembroke St.
Effingham, Illinois
(Effingham County)

Receiving Waters: Unnamed Tributary of Salt Creek

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.

Thomas G. McSwiggin, P.E.
Manager, Permit Section
Division of Water Pollution Control

TGM:HWC:98051801.daa

Modification Date: March 30, 2000

NPDES Permit No. IL0028622

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 2.5 MGD (design maximum flow (DMF) of 6.25 MGD).

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

From the effective date of this permit until the attainment of operational level of the new sewage treatment plant, the effluent of the above discharge(s) shall be monitored and limited at all times as follows:

	LOAD LIMITS lbs/day DAF (DMF)*			CONCENTRATION LIMITS MG/L				
Parameter	Monthly Average	Weekly Average	Daily Maximum	Monthly Average	Weekly Average	Daily Maximum	Sample Frequency	Sample Type
Flow (MGD)							Continuous	RIT
$CBOD_5$**	209 (521)		417 (1043)	10		20	2 days/Week	Composite
Suspended Solids	250 (626)		500 (1251)	12		24	2 days/Week	Composite
pH	Shall be in the range of 6 to 9 Standard Units						2 days/Week	Grab
Ammonia Nitrogen as (N)	April through October 31 (78)		63 (156)	1.5		3.0	2 days/Week	Composite
	November through March 69 (172)		138 (344)	3.3		6.6	2 days/Week	Composite
Copper	.31 (.78)		.48 (1.20)	0.015		0.023	2 days/Month	Composite
WAD Cyanide	.11(.27)		.46 (1.15)	0.0052		0.022	2 days/Month	Grab
Silver			.10 (.26)			0.005	2 days/Month	Composite
Fluoride***			179 (448)			8.6	2 days/Month	Composite

*Load limits based on design maximum flow shall apply only when flow exceeds design average flow.
**Carbonaceous BOD_5 ($CBOD_5$) testing shall be in accordance with 40 CFR 136.
***Minimum detection level shall be 0.1 mg/L.

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

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

Modification Date: March 30, 2000

NPDES Permit No. IL0028622

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 3.75 MGD (design maximum flow (DMF) of 9.00 MGD).

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

From the attainment of operational level of the new sewage treatment plant until the expiration date ,the effluent of the above discharge(s) shall be monitored and limited at all times as follows:

	LOAD LIMITS lbs/day DAF (DMF)*			CONCENTRATION LIMITS MG/L				
Parameter	Monthly Average	Weekly Average	Daily Maximum	Monthly Average	Weekly Average	Daily Maximum	Sample Frequency	Sample Type
Flow (MGD)							Continuous	RIT
$CBOD_5$**	313 (751)		625 (1501)	10		20	2 days/Week	Composite
Suspended Solids	375 (901)		751 (1801)	12		24	2 days/Week	Composite
pH	Shall be in the range of 6 to 9 Standard Units						2 days/Week	Grab
Ammonia Nitrogen as (N)	April through October 47 (113)		94 (225)	1.5		3.0	2 days/Week	Composite
	November through March 103 (248)		206 (495)	3.3		6.6	2 days/Week	Composite
Fluoride****			44 (105)			1.4	2 days/Month	Composite
Copper***								Composite
WAD Cyanide***								Grab
Silver***								Composite

*Load limits based on design maximum flow shall apply only when flow exceeds design average flow.
**Carbonaceous BOD_5 ($CBOD_5$) testing shall be in accordance with 40 CFR 136.
***See Special Condition 7.
****Minimum detection level shall be 0.1 mg/L.

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

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

NPDES Permit No. IL0028622

Effluent Limitations, Monitoring, and Reporting

FINAL

Discharge Number(s) and Name(s):002 Treated CSO Outfall

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

From the effective 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	Daily Maximum		
Total Flow (MG)			Daily When Discharging	
BOD_5	Report		Daily When Discharging	Grab
Suspended Solids	Report		Daily When Discharging	Grab
Fecal Coliform	Daily Maximum Shall Not Exceed 400 per 100 mL		Daily When Discharging	Grab
pH	Shall be in the range of 6 to 9 Standard Units		Daily When Discharging	Grab
Chlorine Residual	0.75		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.

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

Chlorine Residual shall be reported on the DMR as a monthly average concentration.

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

BOD_5 and Suspended Solids shall be reported on the DMR as a monthly average concentration.

NPDES Permit No. IL0028622

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.

BOD_5 and Suspended Solids shall be reported on the DMR as a monthly average concentration.

NPDES Permit No. IL0028622

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. The Permittee shall monitor the effluent for the following parameters monthly for a period of six (6) consecutive months, beginning three (3) months from the attainment of operational level of the new sewage treatment plant. This Permit may be modified with public notice to establish effluent limitations if appropriate, based on information obtained through sampling. The sample shall be a 24-hour effluent composite except as otherwise specifically provided below and the results shall be submitted on the DMR's to IEPA. The parameters to be sampled and the minimum detection limits to be attained are as follows:

STORET CODE	PARAMETER	Minimum detection limit
1042	Copper	0.005 mg/L
00718	Cyanide (grab) (weak acid dissociable)	10.0 ug/L
01077	Silver (total)	0.003 mg/L

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

SPECIAL CONDITION 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 10, 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 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.

NPDES Permit No. IL0028622

Special Conditions

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).

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.

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.

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.

5. 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.

6. Unless already completed, the Permittee shall within six 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.

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 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.

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.

Special Conditions

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 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 6 month intervals at the indicated detection 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.

STORET CODE	PARAMETER	Minimum detection limit
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	0.003 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)	10.0 ug/L
00720	Cyanide (grab) (total)	10.0 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	0.2 ug/L
01067	Nickel	0.005 mg/L
00556	*Oil (hexane soluble or equivalent) (Grab Sample only)	1.0 mg/L
32730	Phenols (grab)	0.005 mg/L
01147	Selenium	0.002 mg/L
01077	Silver (total)	0.003 mg/L
01059	Thallium	0.3 mg/L
01092	Zinc	0.050 mg/L

*(Influent and effluent only)

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 110 organic priority pollutants identified in 40 CFR 122 Appendix D, Table II as amended. This monitoring shall be semi-annually 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 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.

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

      Five 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 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 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).

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. 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 10. For Discharge No.001, any use of chlorine to control slime growths, odors or as an operational control, etc. shall not exceed the limit of 0.05 mg/L (daily maximum) total residual chlorine in the effluent. Sampling is required on a daily grab basis during the chlorination process. Reporting shall be submitted on the (DMR's) on a monthly basis.

SPECIAL CONDITION 11. The Permittee shall conduct biomonitoring of the effluent from 001. The Permittee shall conduct biomonitoring of the effluent discharge no earlier than one (1) year prior to the expiration date of this Permit. The results shall be submitted with the Permit renewal application.

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. Except as noted here and in the IEPA document "Effluent Biomonitoring and Toxicity Assessment", testing must be consistent with Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms (Fourth Ed.) EPA-600/4-90-027. Unless substitute tests are pre-approved; the following tests are required:

   a. Fish - 96 hour static LC_{50} Bioassay using one to two week old fathead minnows (Pimephales promelas).

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

2. Testing Frequency - The above tests shall be conducted on a one time basis using 24-hour composite effluent samples unless otherwise authorized by the IEPA. Results shall be reported according to EPA/600/4-90/027, Section 12, Report Preparation, and shall be submitted to IEPA with the renewal application.

SPECIAL CONDITION 12. 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.

NPDES Permit No. IL0028622

Special Conditions

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.

f the Permittee monitors any pollutant more frequently than required by the Sludge Permit, the results of this monitoring shall be included n 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 13.

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. 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 ms and conditions are met:

Discharge Number	Location	Receiving Water
003	3rd and Wabash	A tributary of Salt Creek
006	Rolling Hills Lift Station	A tributary of Salt Creek
007	East Temple Lift Station	A tributary of Salt Creek

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. All dry weather flows, and the first flush of storm flows shall meet all applicable effluent standards and the effluent limitations as required for the main STP outfall; and,

   b. Additional flows, but not less than ten times the average dry weather flow for the design year, shall receive a minimum of primary treatment and disinfection with adequate retention time.

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.

3. Overflows during dry weather are prohibited. Dry weather overflows, if discovered, 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.

5. The treatment system shall be operated to maximize treatment of wastewater flows.

line Minimum Controls

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;

b. Maximum use of the collection system for storage;

c. Review and modification of pretreatment requirements to assure CSO impacts are minimized;

d. Maximization of flow to the POTW for treatment;

e. Prohibition of CSO's during dry weather;

f. Control of solids and floatable materials in CSO's;

g. Pollution prevention programs which focus on source control activities;

h. Public notification to ensure that citizens receive adequate information regarding CSO occurrences and CSO impacts; and,

i. Monitoring to characterize impacts and efficiency of CSO controls.

Compliance with Item (a) shall be met through the requirements imposed by Paragraph 8 of this Special Condition. Compliance with Items (b) and (d) shall be met through the requirements of Paragraphs 4, 5, and 8 of this Special Condition. Compliance with Item (c) shall be met through the requirements imposed by Paragraph 9 of this Special Condition. Compliance with Item (e) shall be met through the requirements imposed by Paragraph 3 of this Special Condition. Compliance with Item (f) shall be met through the requirements imposed by Paragraphs 3 and 8 of this Special Condition. Compliance with Item (h) has been met through the inclusion of the public notice requirements associated with this revision of this Permit provided Paragraph 7 of this Special Condition indicates that none of the CSOs authorized in this Permit discharge to sensitive areas. Compliance with Item (i) shall be met through the requirements imposed by Paragraphs 10 and 11 of this Special Condition.

The Permittee, within six (6) months of the effective date of this Permit, shall develop and implement a pollution prevention plan and submit two (2) copies of the appropriate documentation of such plan to the IEPA.

Sensitive Area Considerations

7. Sensitive areas are any water in the immediate area of the discharge point designated as an Outstanding National Resource Water, found to contain either shellfish beds or threatened or endangered aquatic species or their habitat, used for primary contact recreation, or within the protection area for a drinking water intake structure.

   The IEPA has determined that none of the outfalls listed in this Special Condition discharge to sensitive areas. However, this Permit may be reopened and modified, with Public Notice, to include additional CSO controls for these outfalls if information becomes available that causes the IEPA to reverse this determination and/or to include a schedule for relocating, controlling, or treating CSO flows to sensitive areas. If none of these are possible, the Permittee shall submit adequate justification at that time as to why these 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. A CSO operational and maintenance plan ("CSO O&M plan") shall be developed within nine (9) months of the effective date of this Permit. Two (2) copies of the plan and completed copies of the "CSO Operational Plan Checklist", one with original signatures, shall be submitted to the IEPA for administrative acceptance. Upon administrative acceptance, said plan shall be expeditiously implemented, but in no case shall complete implementation exceed one (1) year from date of State acceptance. Thereafter, the Permittee shall maintain a current operational plan updated to reflect system modifications, on file at the sewage treatment works or other acceptable location.

   The objectives of the CSO O&M plan are to reduce the total loading of pollutants entering the receiving stream. These plans, tailored to the local government's collection and waste treatment systems, will include mechanisms and specific procedures where applicable to ensure:

   a. Collection system inspection;

   b. Sewer, catch basin, and regulator cleaning and maintenance;

   c. Collection system replacement, where necessary;

   d. Detection and elimination of illegal connections;

   e. Detection and elimination of dry weather overflows;

   f. The collection system is to be operated to maximize storage capacity and delay storm water entry into the system; and,

   g. The treatment and collection systems are operated to maximize treatment.

NPDES Permit No. IL0028622

Special Conditions

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. 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 to 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; and,

   e. assure that CSO impacts from non-domestic sources are minimized by determining which non-domestic discharges, if any, are tributary to CSO's and reviewing, and, if necessary, modifying the sewer use ordinance to control pollutants in these discharges.

   Upon completion of the review of the sewer use ordinance, the Permittee shall notify the IEPA in writing that such review is complete and that the Permittee's sewer use ordinance is in compliance with this Special Condition.

Compliance with Water Quality Standards

10. Pursuant to Section 301 of the federal Clean Water Act and 40 CFR § 122.4, discharges from the outfalls listed in this Special Condition shall not cause violations of applicable water quality standards or cause use impairment in the receiving waters. Based on available information, it appears that the outfalls listed in this Special Condition do not have a high reasonable potential to cause violations of applicable water quality standards or use impairment. However, should information causing the IEPA to reverse this conclusion become available, the Permittee shall develop a plan for abating such use impairment and bringing the flows from all its CSOs into compliance with applicable standards. This plan shall be submitted to the IEPA within three (3) months of such notification and shall contain a schedule for its implementation and provisions for re-evaluating compliance with applicable standards and regulations after implementation.

Reporting and Monitoring 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.

    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. 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.

Special Conditions

Summary of Compliance Dates in this CSO Special Condition

13. The following summarizes the dates that submittals contained in this Special Condition are due at the IEPA:

Submission of CSO Monitoring Data (Paragraph 11)	15th of every month
Elimination of a CSO or Discovery of Additional CSO locations (Paragraph 12)	1 month from discovery or elimination
Pollution Prevention Plan Documentation (Paragraph 6)	6 months from the effective date of this Permit
Revisions to Sewer Use Ordinance (Paragraph 9)	6 months from the effective date of this Permit
CSO Operational and Maintenance Plan (Paragraph 8)	9 months from the effective date of this Permit
CSO Abatement Plan (Paragraph 10)	3 months from IEPA notification

All submittals listed in this paragraph shall 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

14. 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 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 14. The Permittee shall record monitoring results on Discharge Monitoring Report 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 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.

Discharge Monitoring Reports shall be mailed 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

SPECIAL CONDITION 15. The Permittee has undergone a Monitoring Reduction review and the influent and effluent sample frequency has been reduced for BOD_5, $CBOD_5$, Suspended Solids, pH and Ammonia Nitrogen due to sustained compliance. The IEPA will require that the influent and effluent sample frequency for these parameters be increased to the monitoring frequency of 3 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.

NPDES Permit No. IL0028622

Special Conditions

SPECIAL CONDITION 16. For Discharge No. 001, the Permittee shall sample for fecal coliform a minimum of four grab samples, at a minimum of 7 day intervals in order to verify the original assumptions made in the modeling used to grant the disinfection exemption. The four results, expressed in terms of fecal coliform per 100 mL of sample ("too numerous to count" results cannot be accepted), shall be reported to the IEPA within 7 days of the final sample being analyzed and submitted to the following address:

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

SPECIAL CONDITION 17. The Permittee shall notify the IEPA in writing once the treatment plant expansion has been completed. A letter stating the date that the expansion was completed shall be sent to the following address within fourteen (14) days of the expansion becoming operational:

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

Attachment H

Standard Conditions

Definitions

Act means the Illinois Environmental Protection Act, 415 ILCS 5 as Amended.

Agency means the Illinois Environmental Protection Agency.

Board means the Illinois Pollution Control Board.

Clean Water Act (formerly referred to as the Federal Water Pollution Control Act) means Pub. L 92-500, as amended. 33 U.S.C. 1251 et seq.

NPDES (National Pollutant Discharge Elimination System) means the national program for issuing, modifying, revoking and reissuing, terminating, monitoring and enforcing permits, and imposing and enforcing pretreatment requirements, under Sections 307, 402, 318 and 405 of the Clean Water Act.

USEPA means the United States Environmental Protection Agency

Daily Discharge means the discharge of a pollutant measured during a calendar day or any 24-hour period that reasonably represents the calendar day for purposes of sampling. For pollutants with limitations expressed in units of mass, the "daily discharge" is calculated as the total mass of the pollutant discharged over the day. For pollutants with limitations expressed in other units of measurements, the "daily discharge" is calculated as the average measurement of the pollutant over the day.

Maximum Daily Discharge Limitation (daily maximum) means the highest allowable daily discharge.

Average Monthly Discharge Limitation (30 day average) means the highest allowable average of daily discharges over a calendar month, calculated as the sum of all daily discharges measured during a calendar month divided by the number of daily discharges measured during that month.

Average Weekly Discharge Limitation (7 day average) means the highest allowable average of daily discharges over a calendar week, calculated as the sum of all daily discharges measured during a calendar week divided by the number of daily discharges measured during that week.

Best Management Practices (BMPs) means schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the pollution of waters of the State. BMPs also include treatment requirements, operating procedures, and practices to control plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage.

Aliquot means a sample of specified volume used to make up a total composite sample.

Grab Sample means an individual sample of at least 100 milliliters collected at a randomly-selected time over a period not exceeding 15 minutes.

24 Hour Composite Sample means a combination of at least 8 sample aliquots of at least 100 milliliters, collected at periodic intervals during the operating hours of a facility over a 24-hour period.

8 Hour Composite Sample means a combination of at least 3 sample aliquots of at least 100 milliliters, collected at periodic intervals during the operating hours of a facility over an 8-hour period.

Flow Proportional Composite Sample means a combination of sample aliquots of at least 100 milliliters collected at periodic intervals such that either the time interval between each aliquot or the volume of each aliquot is proportional to either the stream flow at the time of sampling or the total stream flow since the collection of the previous aliquot.

(1) Duty to comply. The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the Act and is grounds for enforcement action, permit termination, revocation and reissuance, modification, or for denial of a permit renewal application. The permittee shall comply with effluent standards or prohibitions established under Section 307(a) of the Clean Water Act for toxic pollutants within the time provided in the regulations that establish these standards or prohibitions, even if the permit has not yet been modified to incorporate the requirement.

(2) Duty to reapply. If the permittee wishes to continue an activity regulated by this permit after the expiration date of this permit, the permittee must apply for and obtain a new permit. If the permittee submits a proper application as required by the Agency no later than 180 days prior to the expiration date, this permit shall continue in full force and effect until the final Agency decision on the application has been made.

(3) Need to halt or reduce activity not a defense. It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

(4) Duty to mitigate. The permittee shall take all reasonable steps to minimize or prevent any discharge in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment.

(5) Proper operation and maintenance. The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with conditions of this permit. Proper operation and maintenance includes effective performance, adequate funding, adequate operator staffing and training, and adequate laboratory and process controls, including appropriate quality assurance procedures. This provision requires the operation of back-up, or auxiliary facilities, or similar systems only when necessary to achieve compliance with the conditions of the permit.

(6) Permit actions. This permit may be modified, revoked and reissued, or terminated for cause by the Agency pursuant to 40 CFR 122.62. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance, does not stay any permit condition.

(7) Property rights. This permit does not convey any property rights of any sort, or any exclusive privilege.

(8) Duty to provide information. The permittee shall furnish to the Agency within a reasonable time, any information which the Agency may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with the permit. The permittee shall also furnish to the Agency upon request, copies of records required to be kept by this permit.

(9) Inspection and entry. The permittee shall allow an authorized representative of the Agency, upon the presentation of credentials and other documents as may be required by law, to:

(a) Enter upon the permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this permit;

(b) Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit.

(c) Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and

(d) Sample or monitor at reasonable times, for the purpose of assuring permit compliance, or as otherwise authorized by the Act, any substances or parameters at any location.

(10) Monitoring and records.

(a) Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity.

(b) The permittee shall retain records of all monitoring information, including all calibration and maintenance records, and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this permit, and records of all data used to complete the application for this permit, for a period of at least 3 years from the date of this permit, measurement, report or application. This period may be extended by request of the Agency at any time

(c) Records of monitoring information shall include:

(1) The date, exact place, and time of sampling or measurements;

(2) The individual(s) who performed the sampling or measurements;

(3) The date(s) analyses were performed;

(4) The individual(s) who performed the analyses;

(5) The analytical techniques or methods used; and

(6) The results of such analyses.

(d) Monitoring must be conducted according to test procedures approved under 40 CFR Part 136, unless other test procedures have been specified in this permit. Where no test procedure under 40 CFR Part 136 has been approved, the permittee must submit to the Agency a test method for approval. The permittee shall calibrate and perform maintenance procedures on all monitoring and analytical instrumentation at intervals to ensure accuracy of measurements.

(11) Signatory requirement. All applications, reports or information submitted to the Agency shall be signed and certified.

(a) Application. All permit applications shall be signed as follows:

(1) For a corporation: by a principal executive officer of at least the level of vice president or a person or position having overall responsibility for environmental matters for the corporation;

(2) For a partnership or sole proprietorship: by a general partner or the proprietor, respectively; or

(3) For a municipality, State, Federal, or other public agency: by either a principal executive officer or ranking elected official.

(b) Reports. All reports required by permits, or other information requested by the Agency shall be signed by a person described in paragraph (a) or by a duly authorized representative of that person. A person is a duly authorized representative only if:

(1) The authorization is made in writing by a person described in paragraph (a) and

(2) The authorization specifies either an individual or a position responsible for the overall operation of the facility, from which the discharge originates, such as a plant manager, superintendent or person of equivalent responsibility; and

(3) The written authorization is submitted to the Agency.

(c) Changes of Authorization. If an authorization under (b) is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of (b) must be submitted to the Agency prior to or together with any reports, information, or applications to be signed by an authorized representative.

Reporting requirements.

(a) Planned changes. The permittee shall give notice to the Agency as soon as possible of any planned physical alterations or additions to the permitted facility

(b) Anticipated noncompliance. The permittee shall give advance notice to the Agency of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements

(c) Compliance schedules. Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this permit shall be submitted no later than 14 days following each schedule date.

(d) Monitoring reports. Monitoring results shall be reported at the intervals specified elsewhere in this permit

(1) Monitoring results must be reported on a Discharge Monitoring Report (DMR).

(2) If the permittee monitors any pollutant more frequently than required by the permit, using test procedures approved under 40 CFR 136 or as specified in the permit, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the DMR.

(3) Calculations for all limitations which require averaging of measurements shall utilize an arithmetic mean unless otherwise specified by the Agency in the permit.

(e) Twenty-four hour reporting. The permittee shall report any noncompliance which may endanger health or the environment. Any information shall be provided orally within 24 hours from the time the permittee becomes aware of the circumstances. A written submission shall also be provided within 5 days of the time the permittee becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and time; and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance. The following shall be included as information which must be reported within 24 hours:

(1) Any unanticipated bypass which exceeds any effluent limitation in the permit;

(2) Violation of a maximum daily discharge limitation for any of the pollutants listed by the Agency in the permit to be reported within 24 hours.

The Agency may waive the written report on a case-by-case basis if the oral report has been received within 24 hours.

(f) Other noncompliance. The permittee shall report all instances of noncompliance not reported under paragraphs (12)(c), (d), or (e), at the time monitoring reports are submitted. The reports shall contain the information listed in paragraph (12)(e).

(g) Other information. Where the permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application, or in any report to the Agency, it shall promptly submit such facts or information.

(13) Transfer of permits. A permit may be automatically transferred to a new permittee if:

(a) The current permittee notifies the Agency at least 30 days in advance of the proposed transfer date;

(b) The notice includes a written agreement between the existing and new permittees containing a specific date for transfer of permit responsibility, coverage and liability between the current and new permittees; and

(c) The Agency does not notify the existing permittee and the proposed new permittee of its intent to modify or revoke and reissue the permit. If this notice is not received, the transfer is effective on the date specified in the agreement.

(14) All manufacturing, commercial, mining, and silvicultural dischargers must notify the Agency as soon as they know or have reason to believe:

(a) That any activity has occurred or will occur which would result in the discharge of any toxic pollutant identified under Section 307 of the Clean Water Act which is not limited in the permit, if that discharge will exceed the highest of the following notification levels:

(1) One hundred micrograms per liter (100 ug/l);

(2) Two hundred micrograms per liter (200 ug/l) for acrolein and acrylonitrile; five hundred micrograms per liter (500 ug/l) for 2,4-dinitrophenol and for 2-methyl-4,6 dinitrophenol; and one milligram per liter (1 mg/l) for antimony.

(3) Five (5) times the maximum concentration value reported for that pollutant in the NPDES permit application; or

(4) The level established by the Agency in this permit.

(b) That they have begun or expect to begin to use or manufacture as an intermediate or final product or byproduct any toxic pollutant which was not reported in the NPDES permit application.

(15) All Publicly Owned Treatment Works (POTWs) must provide adequate notice to the Agency of the following:

(a) Any new introduction of pollutants into that POTW from an indirect discharge which would be subject to Sections 301 or 306 of the Clean Water Act if it were directly discharging those pollutants; and

(b) Any substantial change in the volume or character of pollutants being introduced into that POTW by a source introducing pollutants into the POTW at the time of issuance of the permit.

(c) For purposes of this paragraph, adequate notice shall include information on (i) the quality and quantity of effluent introduced into the POTW, and (ii) any anticipated impact of the change on the quantity or quality of effluent to be discharged from the POTW.

(16) If the permit is issued to a publicly owned or publicly regulated treatment works, the permittee shall require any industrial user of such treatment works to comply with federal requirements concerning:

(a) User charges pursuant to Section 204(b) of the Clean Water Act, and applicable regulations appearing in 40 CFR 35,

(b) Toxic pollutant effluent standards and pretreatment standards pursuant to Section 307 of the Clean Water Act; and

(c) Inspection, monitoring and entry pursuant to Section 308 of the Clean Water Act.

(17) If an applicable standard or limitation is promulgated under Section 301(b)(2)(C) and (D), 304(b)(2), or 307(a)(2) and that effluent standard or limitation is more stringent than any effluent limitation in the permit, or controls a pollutant not limited in the permit, the permit shall be promptly modified or revoked, and reissued to conform to that effluent standard or limitation.

(18) Any authorization to construct issued to the permittee pursuant to 35 Ill. Adm. Code 309.154 is hereby incorporated by reference as a condition of this permit.

(19) The permittee shall not make any false statement, representation or certification in any application, record, report, plan or other document submitted to the Agency or the USEPA, or required to be maintained under this permit.

(20) The Clean Water Act provides that any person who violates a permit condition implementing Sections 301, 302, 306, 307, 308, 318, or 405 of the Clean Water Act is subject to a civil penalty not to exceed $10,000 per day of such violation. Any person who willfully or negligently violates permit conditions implementing Sections 301, 302, 306, 307, or 308 of the Clean Water Act is subject to a fine of not less than $2,500 nor more than $25,000 per day of violation, or by imprisonment for not more than one year, or both.

(21) The Clean Water Act provides that any person who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained under permit shall, upon conviction, be punished by a fine of not more than $10,000 per violation, or by imprisonment for not more than 6 months per violation, or by both.

(22) The Clean Water Act provides that any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this permit shall, including monitoring reports or reports of compliance or non-compliance shall, upon conviction, be punished by a fine of not more than $10,000 per violation, or by imprisonment for not more than 6 months per violation, or by both.

(23) Collected screening, slurries, sludges, and other solids shall be disposed of in such a manner as to prevent entry of those wastes (or runoff from the wastes) into waters of the State. The proper authorization for such disposal shall be obtained from the Agency and is incorporated as part hereof by reference.

(24) In case of conflict between these standard conditions and any other condition(s) included in this permit, the other condition(s) shall govern.

(25) The permittee shall comply with, in addition to the requirements of the permit, all applicable provisions of 35 Ill. Adm. Code, Subtitle C, Subtitle D, Subtitle E, and all applicable orders of the Board.

(26) The provisions of this permit are severable, and if any provision of this permit, or the application of any provision of this permit is held invalid, the remaining provisions of this permit shall continue in full force and effect.

(Rev. 3-13-98)