

STATE OF NEBRASKA



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Authorization to Discharge Under the National Pollutant Discharge Elimination System (NPDES)

This NPDES permit is issued in compliance with the provisions of the Federal Water Pollution Control Act (33 U.S.C. Secs. 1251 *et. seq.* as amended to date), the Nebraska Environmental Protection Act (Neb. Rev. Stat. Secs. 81-1501 *et. seq.* as amended to date), and the Rules and Regulations promulgated pursuant to these Acts. The facility and outfalls identified in this permit are authorized to discharge wastewater and are subject to the limitations, requirements, prohibitions and conditions set forth herein. This permit regulates and controls the release of pollutants in the discharges authorized herein. This permit does not relieve permittees of other duties and responsibilities under the Nebraska Environmental Protection Act, as amended, or established by regulations promulgated pursuant thereto.

Permittee: **Cargill Meats Solutions Corporation**
Facility Name: **Cargill Meat Solution Corporation**
NPDES Permit No.: **NE0000795**
IIS File No.: **PCS 6272 - P**
Facility Location: **590 Road 9, Schuyler, Nebraska**
Legal Description: **NW¼, Section 16, Township 17 N, Range 3 E, Colfax County**
Receiving Water: **Outfalls 001 and 002: Shonka Ditch (Lower Platte River Basin/Segment LP1-21010)**
Outfall 003: Land Application Sites
Effective Date: **September 1, 2004**
Expiration Date: **August 31, 2009**

Pursuant to the Delegation Memorandum dated July 26, 1999 and signed by the Director, the undersigned hereby executes this document on the behalf of the Director.

Signed this 30th day of August, 2004


Jay D. Jungenberg
Deputy Director



TE055004002



Table of Contents

Sections and Titles	Page Numbers
Part I. Description of Outfalls Authorized to Discharge by this Permit	4
Part II. Effluent Limitations and Monitoring Requirements	5 - 7
A. Table 1 Categorical Discharge Limits and Monitoring Requirements for Outfall 001	5
B. Table 2 Seasonal Discharge Limits and Monitoring Requirements for Outfall 001	6
C. Table 3 Non-contact Cooling Water Discharge Limits and Monitoring Requirements for Outfall 002 ..	7
Part III. Effluent Land Application Requirements	8 - 11
A. General Land Application Requirements	8
B. Requirements for Prior Site Approval	8
C. Best Management Practices	8 - 9
D. Annual Reporting Requirements	9 - 10
E. Withdrawal of Site Approval(s)	10
F. Table 4 Discharge Limitations and Monitoring Requirements	11
Part IV. Biosolids Reuse and/or Disposal Requirements	12 - 13
A. General Approval Requirements	12
B. Biosolids Application Site Approval Requirements	12
C. Application to Agricultural Land	12
D. Annual Reporting Requirements	12 - 13
E. Non-compliance Reporting Requirements	13
F. Withdrawal of Site Approval(s)	13
Part V. Other Conditions and Requirements	14 - 15
A. Narrative Limits	14
B. Alternative Fecal Coliform Test Method	14
C. Total Residual Chlorine Test Requirements	14
D. Solid Deposition in Receiving Waters Requirement	14
E. Anaerobic Lagoon Cell Operation Requirements	14
F. Response to Toxicity Non-Compliance	14
G. Best Management Practices	15
H. TIE/TRE Studies	15
I. Additional Monitoring	15
J. Basis for Permit Modification	15
K. Modification of Attachments	15

Table of Contents –continued

Sections and Titles	Page Numbers
Part VI. Schedule of Compliance	16
A. Schedule of Compliance	16 - 17
B. Table 5 Interim Discharge Limits and Monitoring Requirements for Outfall 001	18
Appendix A - Standard Conditions for NPDES Permits	19 – 28
A. General Conditions	19 - 20
B. Management Requirements	20 - 21
C. Monitoring and Records	21 - 22
D. Reporting Requirements	23 - 25
E. Operation and Maintenance	25 - 26
F. Definitions	26 - 27
G. Abbreviations	27 - 28
Attachments	
Attachment 1 - Guidance for Conducting Toxicity Testing and TIE/TRE Studies - (two pages)	
Attachment 2 - Land Application Site Approval Form (4 pages)	
Attachment 3 - Certification of Annual Land Application Report	
Attachment 4 - Guidelines for Treated Wastewater Irrigation Systems – 1986 ed.	
Attachment 5 - Biosolids Application Site Approval Form (2 pages)	
Attachment 6 - Annual Biosolids Application Summary with Worksheets (9 pages)	
Attachment 7 – Guidelines for the Application of Wastewater Sludges on Land – 1992 ed.	

This permit contains discharge limits, management practices, and requirements for monitoring, Record Keeping and Reporting. See pertinent sections in Parts I, II, III, IV, V, and Appendix A of this permit.

Part I. Description of Outfalls Authorized to Discharge by this Permit

This permit specifically authorizes the discharges from the following identified and described outfalls. Discharge characteristics are required to be consistent with those described within the application and the supplemental information that provided the basis of this permit. Departmental approval is required for alterations.

A. Outfall 001: Complex Slaughterhouse Process Wastewater Discharge

These are treated process wastewater discharges from a complex beef slaughterhouse. The following devices are used to treat the process wastewater: dissolved air floatation unit, anaerobic lagoon cells, a four chambered sequence batch reactor (an activated sludge plant), chlorine contact basin and dechlorination. The water for this system is obtained from on site wells. The discharge flows of approximately 2,750,000 gallons per day are anticipated.

B. Outfall 002: Non-Contact Cooling Water Discharge

These are discharges of non-contact cooling water from ammonia condensers for meat coolers. The water for this system is obtained from on site wells. The discharge flows of approximately 2,870,000 gallons per day are anticipated.

C. Outfall 003: Land Application of Treated Effluent Discharge

These are discharges of treated process wastewater to various agricultural land application sites. The source is the treated process wastewater stored in the west lagoon cell (storage cell).

Part II. Effluent Limits and Monitoring Requirements

A. Table 1: Categorical Discharge Limits and Monitoring Requirements for Outfall 001 – This discharge shall be monitored and subject to the limitations set forth in the following table. Monitoring shall be conducted at the point of discharge from the de-chlorination basin. The Department may specify an alternate or more specific monitoring point.

Parameters	Storet#	Units	Discharge Limits		Monitoring Frequency	Sample Type
			Average	Maximum		
Flow	50050	MGD	Report	Report	Daily	Measured or Calculated
Biochemical Oxygen Demand (5-Day)	00310	kg/day	714.3	1428.6	Weekly	24-Hour Composite
Oil & Grease ⁽¹⁾	00556	kg/day	272.1	544.2	Weekly	Grab
Total Chloride	00940	mg/L	Report	Report	Weekly	24-Hour Composite
Total Suspended Solids	00530	kg/day	850.3	1700.7	Weekly	24-Hour Composite

Other Parameters	Storet#	Units	Discharge Limits		Monitoring Frequency	Sample Type
			Minimum	Maximum		
pH	00400	Standard Units	6.5	9.0	Weekly	Grab

Fecal Coliform Bacteria - Recreational Season - May 1 through September 30

Parameters	Storet#	Units	Discharge Limits		Monitoring Frequency	Sample Type
			Average	Maximum		
Fecal Coliform Bacteria	31615	MPN ⁽¹⁾	200	400	Weekly	Grab

Fecal Coliform Bacteria - Non-Recreational Season - October 1 through April 30

Parameters	Storet#	Units	Discharge Limits		Monitoring Frequency	Sample Type
			Average	Maximum		
Fecal Coliform Bacteria	31615	MPN ⁽¹⁾	Report	400	Weekly	Grab

Footnotes:

⁽¹⁾ Fecal Coliform Bacteria may be measured using an Alternative Test procedures set forth in 40 CFR, Part 136. See Part IV. J. Other Conditions and Requirements

Abbreviations: MGD - million gallons per day kg/day - kilograms per day
 MPN - Most Probable Number

Part II. Effluent Limits and Monitoring Requirements - continued

B. **Table 2: Seasonal Discharge Limits and Monitoring Requirements for Outfall 001.** - The discharge shall be monitored and subject to the limitations set forth in the following table. Monitoring shall be conducted at the point of discharge from the de-chlorination basin. The Department may specify an alternate or more specific monitoring point.

Spring Water Quality Season Discharge Limits and Monitoring Requirements (March 31 through May 31)						
Parameters	Storet#	Units	Discharge Limits		Monitoring Frequency	Sample Type
			Average	Maximum		
Ammonia as Nitrogen	00610	kg/day	28.8	66.7	Weekly	24-Hour Composite
Total Residual Chlorine ⁽¹⁾	50060	mg/L	0.01	0.02	Weekly	Grab
Acute Toxicity <i>Pimephales promelas</i> ⁽²⁾	61427	TUa	Report	1.00	Once per Season ^{(2) (3)}	24-Hour Composite
Acute Toxicity <i>Ceriodaphnia sp.</i> ⁽²⁾	61425	TUa	Report	1.00	Once per Season ^{(2) (3)}	24-Hour Composite
Summer Water Quality Season Discharge Limits and Monitoring Requirements (June 1 through October 31)						
Parameters	Storet#	Units	Discharge Limits		Monitoring Frequency	Sample Type
			Average	Maximum		
Ammonia as Nitrogen	00610	kg/day	16.4	39.1	Weekly	24-Hour Composite
Total Residual Chlorine ⁽¹⁾	50060	mg/L	0.01	0.02	Weekly	Grab
Acute Toxicity <i>Pimephales promelas</i> ⁽²⁾	61427	TUa	Report	1.00	Once per Season ^{(2) (3)}	24-Hour Composite
Acute Toxicity <i>Ceriodaphnia sp.</i> ⁽²⁾	61425	TUa	Report	1.00	Once per Season ^{(2) (3)}	24-Hour Composite
Winter Water Quality Season Discharge Limits and Monitoring Requirements (November 1 through February 29)						
Parameters	Storet#	Units	Discharge Limits		Monitoring Frequency	Sample Type
			Average	Maximum		
Ammonia as Nitrogen	00610	kg/day	28.5	75.9	Weekly	24-Hour Composite
Total Residual Chlorine ⁽¹⁾	50060	mg/L	0.01	0.02	Weekly	Grab
Acute Toxicity <i>Pimephales promelas</i> ⁽²⁾	61427	TUa	Report	1.00	Once per Season ^{(2) (3)}	24-Hour Composite
Acute Toxicity <i>Ceriodaphnia sp.</i> ⁽²⁾	61425	TUa	Report	1.00	Once per Season ^{(2) (3)}	24-Hour Composite
Footnotes:						
⁽¹⁾ If ultra-violet light disinfection is being used these limitations do not apply.						
⁽²⁾ Toxicity shall be measured using the Whole Effluent Toxicity (WET) test procedures set forth in 40 CFR, Part 136.						
⁽³⁾ Toxicity monitoring needs to be conducted during the first year of coverage under this permit. If test results are in compliance, addition whole effluent testing may be required at the discretion of the Department.						
Abbreviations: kg/day - kilograms per day TUa - Acute Toxic Units mg/L - milligrams per Liter						

Part II. Effluent Limits and Monitoring Requirements

C. Table 3: Non-Contact Cooling Water Discharge Limits and Monitoring Requirements for Outfall 002

This discharge shall be monitored and subject to the limitations set forth in the following table. Monitoring shall be conducted prior to the point of discharge to Shonka Ditch, unless the Department specifies an alternate or more specific monitoring point.

Parameters	Storet#	Units	Discharge Limits		Monitoring Frequency	Sample Type
			Average	Maximum		
Flow	50050	MGD	Report	Report	Daily	Measured or Calculated
Temperature	00011	°F	Report	90	Weekly	Grab
Other Parameters	Storet#	Units	Discharge Limits		Monitoring Frequency	Sample Type
			Minimum	Maximum		
pH	00400	Standard Units	6.5	9.0	Weekly	Grab

Part III. Effluent Land Application Requirements

A. General Land Application Requirements

1. Infiltration or surface runoff from the land application of process wastewater from storage cell shall not cause impairment to the beneficial uses of waters of the state.
2. Application of the process wastewater shall not cause degradation of the plant-soil characteristics nor degrade the long-term beneficial uses of the applications site.
3. The Land Application Season, (Irrigation Season), shall be defined as the time period from March 15th to November 1st. If effluent is land applied from November 2nd to March 14th, the application cannot exceed 1/4 inch per acre per week.
4. The beneficial reuse of treated effluent (e.g., land application at agronomic rates) is required.
5. A Best Management Practices (BMP) Plan shall be developed according to the conditions and requirements in Part III C of this permit and in reference to the guidance provided in *Guidelines for Treated Wastewater Irrigation Systems, 1986*.
6. A certified agronomist/crop specialist shall prepare an annual report. The cognizant official certifies the annual report. It shall be submitted annually to the Department based on the requirements of Part III D of this permit.

B. Requirement for Prior Site Approval

Any proposed effluent land application site must be approved by NDEQ prior to the initial effluent land application made after the effective issuance date of this NPDES permit. The permittee shall submit a *Land Application Site Approval Form* to NDEQ for each application site. Land application approvals shall be based upon the requirements set forth in NDEQ *Guidelines for Treated Wastewater Irrigation Systems, 1986* edition., NDEQ Title 117, NDEQ Title 118, NDEQ Title 119 and HHS Title 179, Chapter 2, Attachment 1, *Regulations Governing Public Water Supply Systems*.

C. Best Management Practices Plan

1. The permittee shall prepare a best management practices (BMP) plan for the land application of process wastewater from the holding lagoon.
2. This plan shall be submitted to NDEQ for approval at least 60 days prior to the start of land application.
3. The BMP must incorporate the following information for each application site and must be prepared in consultation with a certified agronomist/crop specialist.
 - a. Provide specific application site information to include:
 - (1) The name(s) of the land owner(s);
 - (2) A copy of any lease or contract;
 - (3) The total number of acres for land application;
 - (4) A description of the irrigation method to be used on this property; and
 - (5) The crop or vegetation to be grown on site and the type of agricultural practices generally employed.
 - b. Prepare a soil management evaluation to include:
 - (1) An analysis of soil texture and structure;
 - (2) Internal soil drainage;
 - (3) Gypsum and lime content of the soil;
 - (4) Salt and sodium tolerance of the crop; and
 - (5) Irrigation method and management.
 - c. The evaluation must specifically address the following items:
 - (1) An evaluation of site-specific plant-soil assimilation characteristics;

Part III. Effluent Land Application Requirements - continued

C. Best Management Practices Plan - continued

- c. The evaluation must specifically address the following items - continued:
 - (2) An assessment of wastewater characteristics to include a determination of the pollutant from the wastewater that requires the greatest land application area;
 - (3) A determination of the wastewater application rates and the land area needed to protect the plant-soil characteristics with the purpose of ensuring that there is no loss of crops or soil microbial populations; and
 - (4) An evaluation of soil management practices to ensure that there is a long-term correction for potential salt imbalances due to the application of wastes.
 - d. Submit subsurface data to include approximate depth to the drinking water aquifer, general direction of the ground-water flow, and a map depicting various soil characteristics.
 - e. Submit surface data that includes a topographic map or aerial photograph showing the project boundaries, and drinking water wells, residences, highways, and surface waters within a one-mile radius of the irrigation site(s).
 - f. Provide a narrative explanation of the type of controls to be maintained by the permittee to prevent short-term and long-term surface and ground water contamination.
4. The Best Management Practices plan shall incorporate the following set back requirements for the application of the process wastewater:
- a. During treated effluent land application:
 - (1) No treated wastewater shall be allowed to run-off the application site;
 - (2) Proper irrigation system operation shall insure that on treated is sprayed unto or across any public right-of-way;
 - b. A 30-foot vegetative buffer strip shall be maintained between the application site and any public right-of-way;
 - c. A 300-foot separation from an inhabited dwelling except this distance may be reduced to 200 feet if the liquid wastewater is incorporated with the soil and the resident owner and occupant give their written consent;
 - d. A 300 foot separation from potable water supply well and 1,000-foot separation from a well serving a community public water supply; and
 - e. A 200-foot separation to any waters of the state such as a stream or wetland, except that this may be reduced to 100 feet when a vegetative buffer strip of at least 20 feet in width is maintained between the site and the surface water.

D. Annual Reporting Requirements

The EXCEL Corporation shall submit an annual report each year to the NDEQ by March 1 of the following year to include the following specified provisions and requirements:

1. An independent certified agronomist/crop specialist shall prepare the annual report. The cognizant official shall certify the annual report by means of Attachment A (*Certification of Annual Land Application Report*).
2. The annual report shall include:
 - a. A daily record of the volume of the wastewater applied;
 - b. To which site the wastewater was applied;
 - c. The number of acres to which wastewater was applied; and
 - d. The application rate in gallons per acre.

Part III. Land Application Requirements - continued

D. Annual Reporting Requirements - continued

3. The annual report shall contain a review by a the agronomist of the following items:
 - a. Crop conditions;
 - b. Soil conditions;
 - c. Review of soil testing data;
 - d. Review of process wastewater data;
 - e. Agricultural practices
 - f. Crop tolerances; and
 - g. A discussion of any concerns or problems encountered during the preceding year.
4. The annual report shall contain a certification by the certified agronomist/crop specialist that the land application of the process wastewater from EXCEL Corporation is not having any long-term detrimental effects to the soil characteristics on the application sites.
5. The annual report shall contain the results of annual soil testing on each application site to include at a minimum alkalinity, conductivity, chloride, SAR, and pH. The certified agronomist/crop specialist preparing the annual report may require additional testing.
6. The annual report shall contain an evaluation of the BMP plan to include any proposed revisions of site locations, operations, or procedures. Changes to the BMP must be approved by the NDEQ prior to implementation.
7. The location of all land application sites (i.e., either a map or legal description).

E. Withdrawal of Site Approval(s)

The Department may withdraw site approval(s) for any of the following:

1. Failure to comply with the regulations contained in this NPDES permit;
2. Potential risks to surface or ground water quality;
3. Potential risks to the environment;
4. Potential risks to public health and / or welfare; and
5. Other site specific or facility specific considerations.

F. Table 4: Discharge Limits and Monitoring Requirements for Land Applied Effluent from Outfall 003 -
 The following table contains pollutants of concern that may be found in process wastewater. Unless otherwise specified by the Department, the permittee shall perform monitoring on the effluent that is being land applied, as specified in the following table.

Parameter	Storet #	Units	Discharge Limits		Monitoring Frequency	Sample Type
			Minimum	Maximum		
Flow	00092	Gallons per Day		Report	Monthly	Calculated or metered
Duration of Discharge	81381	Days/month		Report	Monthly	Calculated
Ammonia as Nitrogen	00610	mg/L		Report	Monthly	Grab
Nitrate as Nitrogen	00620	mg/L		Report	Monthly	Grab
Total Kjeldahl Nitrogen (TKN)	00625	mg/L		Report	Monthly	Grab
Total Alkalinity (as CaCO ₃)	00410	mg/L		Report	Monthly	Grab
Total Dissolved Solids	70295	mg/L		Report	Monthly	Grab
Total Chloride	00940	mg/L		Report	Monthly	Grab
Sodium Adsorption Ratio	00931	Ratio		Report	Monthly	Grab
Parameter	Storet #	Units	Minimum	Maximum	Frequency	Sample Type
pH	00400	Standard Units	6.5	Report	Monthly	Grab

Part IV. Biosolids Reuse and/or Disposal Requirements.

A. General Approval Requirements

Biosolids generated from wastewater treatment shall be land-applied and/or disposed in a manner approved by the NDEQ. The following biosolids handling practices are approved, unless otherwise specified:

1. Disposal at a licensed landfill in accordance with the regulations that apply to the landfill.
2. The Department may also approve biosolids reuse/disposal practices on a case-specific basis. Case specific approvals are subject to review and change, as well as the formal permit modification procedures set forth in *Other Conditions and Requirements*.
3. Application to agricultural land in accordance with the following provisions.

B. Biosolids Application Site Approval Requirements

A *Biosolids Application Site Approval Form* needs to be submitted for **each** biosolids land application site **prior** to the land application. Sites that are currently used for biosolids land application also need initial approval under this reissued permit. A *Biosolids Application Site Approval Form* needs to be submitted for these sites prior to any additional biosolids land application. The *Biosolids Application Site Approval Form* is formatted to give the applicant automatic approval provided all regulations and conditions are met.

C. Application to Agricultural Land

1. Site Approval

Approval for the application of biosolids to agricultural land is granted when all of the conditions set forth are met, unless the Department acts to provide a conditional or circumstantial approval.

- a. Biosolids application is in compliance with the Federal 257 regulations, including all requirements related to vector and pathogen control.
- b. Biosolids are not applied within 200 feet of any actively used groundwater well, except for those used exclusively for irrigation.
- c. Biosolids are not being applied within 1000 feet of any public drinking water supply well.
- d. Application sites are not subject to public access.

2. Conditional and Circumstantial Approvals

The Department, in lieu of or in addition to, may also grant Conditional and Circumstantial Approvals. A permit modification may be initiated to resolve issues related to Conditional and Circumstantial Approvals.

3. Monitoring Well Requirements

Where the potential for ground water contamination is a concern, the NDEQ may require monitoring wells to be installed and ground water monitoring to be conducted.

D. Annual Reporting Requirements

1. The permittee shall complete and retain an *Annual Biosolids Application Summary* form that contains the following information, unless alternative reporting requirements are approved or required by the Department. The completed *Annual Biosolids Application Summary* form must be retained with the permittee's copies of the 4th quarter DMRs for that reporting year.
 - a. Total tonnage of biosolids that was land-applied and/or disposed of during the year;
 - b. If land applied,
 - (1) The total acreage on which biosolids were land-applied during the year, and
 - (2) A listing of land application sites used during the year and their legal descriptions;

Part IV. Biosolids Reuse and/or Disposal Requirements - continued

D. Annual Reporting Requirements - continued

- c. If land-filled, the name of the landfill(s) used; and
 - d. Any ground water monitoring information that may be required or available.
2. The *Annual Biosolids Application Summary* form shall be completed and retained with the permittee's 4th quarter discharge monitoring reports (DMRs).

E. Non-compliance Reporting Requirements

1. The permittee shall report any noncompliance associated with biosolids application in accordance with the *24-Hour Reporting* and *Written Noncompliance Notification* requirements set forth in Appendix
2. A noncompliance shall be defined as any failures with respect to the requirements set forth above in this subpart, including failure to comply with:
 - a. Any approval conditions or requirements;
 - b. Any monitoring well requirements; and/or
 - c. The Federal 257 regulations.
3. In the event of a violation of the Federal 257 regulations, the permittee may comply with the *Written Noncompliance Notification* requirement.

F. Withdrawal of Site Approval(s)

1. The Department may withdraw land application approval(s) for any of the following:
 - a. Failure to comply with the regulations contained in 40 CFR Part 257;
 - b. Potential Risks to surface or ground water quality;
 - c. Potential risks to the environment;
 - d. Potential risks to public health or welfare; and/or
 - e. Other site specific or facility specific considerations.

Part V. Other Conditions and Requirements

A. Narrative Limits

Discharges authorized under this permit:

1. Shall not be toxic to aquatic life in surface waters of the State outside the mixing zones allowed in NDEQ Title 117 - *Nebraska Surface Water Quality Standard*;
2. Shall not contain pollutants at concentrations or levels that produce objectionable films, colors, turbidity, deposits, or noxious odors in the receiving stream or waterway;
3. Shall not contain or produce any hydrocarbon sheens; and/or
4. Shall not contain pollutants at concentrations or levels that cause the occurrence of undesirable or nuisance aquatic life in the receiving stream.

B. Alternative Fecal Coliform Test Method

40 CFR Part 136 requires the use of the MPN, 5-tube dilution analytical method for the determination of fecal coliform in chlorinated wastewaters. EPA's **Microbiological Methods for Monitoring the Environment - Wastes and Water, December, 1978** allows the permittee desiring to use the membrane filtration method (MF), an opportunity to demonstrate the equivalency of the MPN and MF procedures for a specific effluent. To show comparability of the MPN to the MF technique in chlorinated or toxic wastewaters, the permittee should provide data from at least 10 samples collected over 1 week (but less than 5 calendar days) of plant processing. Once collected the data must be submitted to NDEQ for comparability determination. The NDEQ shall determine if the MF (membrane filtration) method can be used instead of the MPN, 5-tube dilution analytical method.

C. Total Residual Chlorine Testing Requirement

The permittee shall implement a 40 CFR Part 136 approved measurement process for Total Residual Chlorine. The measurement process shall provide a detection limit sufficiently sensitive to demonstrate the facility's compliance with the effluent limitations.

D. Solids Deposition in Receiving Waters Requirement

The permittee shall develop a best practice management plan to minimize the discharge of solids into the receiving waters.

E. Anaerobic Lagoon Cell Operation Requirements

The permittee shall develop a best practice management plan to maintain the anaerobic lagoon cells in good working order. The lagoon cells shall be operated as efficiently as possible.

F. Response to Toxicity Non-Compliance

1. If acute or chronic toxicity test results exceed the discharge limits set forth in this permit, a follow-up test shall be performed within 30 days of the permittee becoming aware of said non-compliance. A Non-Compliance Report also needs to be submitted within 5 days.
2. If the follow-up test demonstrates compliance, further follow-up is not required unless the Department requests it. A copy of the test results needs to be submitted to the Department within 30 days.
3. If the follow-up testing demonstrates non-compliance, a Non-Compliance Report needs to be submitted within 5 days, and a Toxicity Identification and Reduction Evaluation (TIE/TRE) will need to be conducted. Appendix A provides guidance concerning toxicity testing and the TIE/TRE process.
4. The performance of the TIE/TRE does not relieve the permittee of responsibility to comply with the numeric discharge limits for toxicity.

Part V. Other Conditions and Requirements - continued

G. Best Management Practices

1. The permittee is required to report any measures implemented to reduce the Whole Effluent Toxicity of the effluent prior to the follow-up testing for toxicity. These toxicity reduction measures shall be continued as Best Management Practices requirements of this permit, unless the Department provides written approval for their discontinuance. These measures applies to any tests that are taken prior to follow-up toxicity testing, as well as measures implemented as a result of a formal TIE/TRE process (See Guidance in Appendix A).

H. TIE/TRE Studies

If toxicity testing demonstrates a violation of the *Narrative Limits* subsection above, the permittee shall initiate toxicity identification and reduction studies as set forth in the *Guidance for Conducting Toxicity Testing and TIE/TRE Studies*, which is an attachment to this permit, unless the Department specifies otherwise.

I. Additional Monitoring

The Department may require increases in the monitoring frequencies set forth in this permit to address new information concerning a discharge, evidence of potential non-compliance, suspect water quality in a discharge, evidence of water quality impacts in the receiving stream or waterway, or other similar concerns.

J. Basis for Permit Modification

The bases for permit modifications are set forth in Chapter 14 of NDEQ Title 119 (*Rules and Regulations Pertaining to the Issuance of Permits under the National Pollutant Discharge Elimination System*). This permit may be modified pursuant to this regulation, including for the circumstances described below.

1. Monitoring results (e.g., toxicity, conductivity and/or dissolved solids) indicate a possible violation of the surface water quality standards set forth in NDEQ Title 117 (*Nebraska Surface Water Quality Standards*).
2. The Department may require monitoring for additional parameters not specified in this permit to address new information concerning a discharge, evidence of potential non-compliance, suspect water quality in a discharge, evidence of water quality impacts in the receiving stream or waterway, or other similar concerns.

K. Modification of Attachments

The attachments (i.e. forms and guidance) to this permit may be modified without a formal modification of the permit.

Part VI. SCHEDULE OF COMPLIANCE

A. Schedule of Compliance

Upon issuance of this permit, the permittee shall maintain compliance with effluent limitations in Part II unless otherwise specified in Part VI. B. Table 5 "Interim Effluent Limitations and Monitoring Requirements". The interim requirements will remain in effect until the compliance date in this schedule is reached or prior to the expiration of this permit, whichever date is earlier, at which time the permittee must meet all effluent limitations in Part II. The conditions of the compliance schedule are:

1. Water Quality Study. The permittee has requested to conduct a site-specific water quality study to evaluate the proposed total residual chlorine limitations. The permittee must:
 - a. Submit a written site-specific water quality study plan and schedule to the Wastewater Section of the Department for comment and approval. The plan shall outline the types of data to be gathered and a completion schedule. The written study plan and schedule are to be submitted within 30 days after the effective date of this permit.
 - b. Submit a written report detailing the data gathered in this site-specific water quality study. When the study has been completed, the data and site-specific recommendations shall be submitted within 90 days after the effective date of the permit.
 - c. If the Department determines higher total residual limitations are justified, the permit will be modified. If the permit modification is denied, the interim limitations and requirements shall remain in effect and the permittee must comply with following construction/modification schedule:
2. Construction/Modification. If construction/modification of the facility are required to achieve compliance with the total residual chlorine limitations in this permit, the permittee shall do so in accordance with the following schedule:
 - a. The permittee shall submit an engineering report containing detailed engineering information of all intended facility modifications to the NDEQ Wastewater Section within 60 days after the denial date of the permit modification.
 - b. The permittee shall submit plans and specifications of these modifications to the NDEQ Wastewater Section within 120 days after the denial date of the permit modification.
 - c. After the NDEQ Wastewater Section authorizes the construction/modification of the facility, the permittee has 365 days to complete construction/modification of the facility or prior to , whichever is the earlier date.
 - d. The permittee shall achieve compliance with the final effluent limits in Part I of this permit within 60 days after completion of construction/ modification of the facility or prior to, whichever is the earlier date.
3. The permittee shall submit progress reports at nine-month intervals from the effective date of this permit until the permittee is in compliance with all water quality based permit limitations. The progress reports shall be submitted to the NDEQ Wastewater Section.
4. No later than 14 calendar days following every date identified in this schedule of compliance, the permittee shall submit a written notice of compliance or noncompliance to the NDEQ Permits and Compliance Section. In the latter case, the notice shall include the cause of noncompliance, any remedial action taken and the probability of meeting the next scheduled requirement.

Part VI. SCHEDULE OF COMPLIANCE - continued

A. Schedule of Compliance - continued

5. If the effluent limitations in Part I are met at an earlier date than the date specified in this compliance schedule, the permittee shall request a modification of this schedule. Upon review of the request, the Department will notify the permittee if there is a change in the compliance schedule.
6. All site specific water study reports, facility plans/engineering reports, plans and specifications and progress reports shall be submitted to:

Nebraska Department of Environmental Quality

Wastewater Section
1200 "N" Street, The Atrium
P.O. Box 98922
Lincoln, Nebraska 68509-8922

Part VI. SCHEDULE OF COMPLIANCE - continued

B. Interim Permit Limitations and Monitoring Requirements

Table 4: Interim Seasonal Discharge Limits and Monitoring Requirements for Outfall 001. - The discharge shall be monitored and subject to the limitations set forth in the following table. Monitoring shall be conducted at the point of discharge from the de-chlorination basin. The Department may specify an alternate or more specific monitoring point.

During the site-specific water quality study the following Limits and Monitoring Requirements shall apply at the end of the Acute Mixing Zone.						
Parameter	Storet#	Units	Discharge Limits		Monitoring Frequency	Sample Type
			Average	Maximum		
Total Residual Chlorine	50060	mg/L	Report	0.019	Daily	Grab
During the site-specific water quality study the following Limits and Monitoring Requirements shall apply at the end of the Chronic Mixing Zone						
Parameter	Storet#	Units	Discharge Limits		Monitoring Frequency	Sample Type
			Average	Maximum		
Total Residual Chlorine	50060	mg/L	Report	0.011	Daily	Grab
Summer Water Quality Season Discharge Limits and Monitoring Requirements (April 1 through October 31)						
Parameter	Storet#	Units	Discharge Limits		Monitoring Frequency	Sample Type
			Average	Maximum		
Total Residual Chlorine	50060	mg/L	0.02	0.04	Weekly	Grab
Winter Water Quality Season Discharge Limits and Monitoring Requirements (November 1 through March 31)						
Parameter	Storet#	Units	Discharge Limits		Monitoring Frequency	Sample Type
			Average	Maximum		
Total Residual Chlorine	50060	mg/L	0.02	0.04	Weekly	Grab
Abbreviations: mg/L - milligrams per Liter						

Appendix A - Standard Conditions that Apply to NPDES and NPP Permits

These general conditions are applicable to all NPDES and NPP permits. These conditions shall not preempt any more stringent requirements found elsewhere in this permit.

A. General Conditions

1. Information Available

All permit applications, fact sheets, permits, discharge data, monitoring reports, and any public comments concerning such shall be available to the public for inspection and copying, unless such information about methods or processes is entitled to protection as trade secrets of the owner or operator under Neb. Rev. Stat. §81-1527, (Cum. Supp. 1992) and Title 115, Chapter 4.

2. Duty to Comply

All authorized discharges shall be consistent with the terms and conditions of this permit. The discharge of any pollutant identified in this permit more frequently than or at a level in excess of that authorized shall constitute a violation of the permit.

The permittee shall comply with all conditions of this permit. Failure to comply with these conditions may be grounds for administrative action or enforcement proceedings including injunctive relief and civil or criminal penalties.

The filing of a request by the permittee for a permit modification, revocation and re-issuance, termination or a notification of planned changes or anticipated non-compliance does not stay any permit condition.

3. Duty to Mitigate

The permittee shall take all reasonable steps to minimize, prevent or correct any adverse impact to the environment resulting from noncompliance with this permit, including such accelerated or additional monitoring as required by the NDEQ to determine the nature and impact of the noncompliant discharge.

4. Permit Actions

This permit may be modified, suspended, revoked or reissued, in part or in whole, in accordance with the regulations set forth in NDEQ Titles 119 and/or 127. In addition, this permit may be modified, revoked and reissued to incorporate standards or limitations issued pursuant to Sections 301(b)(2)(c), 301(b)(2)(d), 304(b)(2), 307(a)(2), or 405(d) of the Clean Water Act, Public Law 100-4 (i.e., industrial categorical standards and municipal sludge regulations) and Title 121.

5. Toxic Pollutants

The permittee shall not discharge pollutants to waters of the State that cause a violation of the standards established in NDEQ Titles 117, 118 or 121. All discharges to surface waters of the State shall be free of toxic (acute or chronic) substances which alone or in combination with other substances, create conditions unsuitable for aquatic life outside the appropriate mixing zone.

6. Oil and Hazardous Substances/Spill Notification

Nothing in this permit shall preclude the initiation of any legal action or relieve the permittee from any responsibilities, liabilities or penalties under Section 311 of the Clean Water Act. The permittee shall conform to the provisions set forth in NDEQ Title 126, *Rules and Regulations Pertaining to the Management of Wastes*. If the permittee knows, or has reason to believe, that oil or hazardous substances were released at the facility and could enter waters of the State or any of the outfall discharges authorized in this permit, the permittee shall immediately notify the Department of a release of oil or hazardous substances. During Department office hours (i.e., 8:00 a.m. to 5:00 p.m., Monday through Friday, except holidays), notification shall be made to the Nebraska Department of Environmental Quality at telephone numbers (402) 471-2186 or (877) 253-2603 (toll free). When NDEQ cannot be contacted, the permittee shall report to the Nebraska State Patrol for referral to the NDEQ Emergency Response Team at telephone number (402) 471-4545. It shall be the permittee's responsibility to maintain current telephone numbers necessary to carry out the notification requirements set forth in this paragraph.

Appendix A - continued

A. General Conditions - continued

7. Property Rights

The issuance of this permit does not convey any property rights of any sort or any exclusive privileges nor does it authorize any damage to private property or neither any invasion of personal rights nor any infringement of federal, state or local laws or regulations.

8. Severability

If any provision of this permit is held invalid, the remainder of this permit shall not be affected.

9. Other Rules and Regulations Liability

The issuance of this permit in no way relieves the obligation of the permittee to comply with other rules and regulations of the Department.

10. Inspection and Entry

The permittee shall allow the Director or his authorized representative, upon the presentation of his identification and at a reasonable time:

- a. To enter upon the permittee's premises where a regulated facility or activity is located or conducted, or records are required to be kept under the terms and conditions of the permit,
- b. To have access to and copy any records required to be kept under the terms and conditions of the permit,
- c. To inspect any facilities, equipment (including monitoring and control), practices or operations regulated or required in the permit, and
- d. To sample or monitor any substances or parameters at any location.

11. Penalties

Violations of the terms and conditions of this permit may result in the initiation of criminal and/or civil actions. Civil penalties can result in fines of up to \$10,000.00 per day [Neb. Rev. Stat. §81-1508, as amended to date. Criminal penalties for willful or negligent violations of this permit may result in penalties of \$10,000.00 per day or by imprisonment. Violations may also result in federal prosecution.

B. Management Requirements

1. Duty to Provide Information

The permittee shall furnish to the Department within a reasonable time, any information which the Department may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit; or to determine compliance with this permit. The permittee shall also furnish to the Department upon request, copies of records retained as a requirement of this permit.

2. Duty to Reapply

The permittee shall apply for a re-issuance of this permit, if an activity regulated by this permit is to be continued after the expiration date of this permit. The application shall be submitted at least 180 days before the expiration of this permit on an application form supplied by the Department, as set forth in NDEQ Titles 119 and/or 127.

3. Signatory Requirements

All reports and applications required by this permit or submitted to maintain compliance with this permit shall be signed and certified as set forth in this section.

- a. Permit applications shall be signed by a **cognizant official** who meets the following criteria:
 - (1) For a corporation: by a principal executive officer of at least the level of vice-president,
 - (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 facility: by either a principal executive officer or highest ranking elected official.
- b. Discharge monitoring reports and other information shall be signed by the **cognizant official** or by an **authorized representative**.

Appendix A (continued)

B. Management Requirements-continued

- c. An authorized representative is designated by the cognizant official. The authorized representative is responsible for the overall operation of the facility (i.e., a plant manager, a well field operator or a wastewater treatment plant superintendent).
- d. Any change in the signatories shall be submitted to the Department, in writing, within 30 days after the change.
- e. Certification. All applications, reports and information submitted as a requirement of this permit, shall contain the following certification statement:

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

C. Monitoring and Records

1. Representative Sampling

Samples and measurements taken as required within this permit shall be representative of the discharge. All samples shall be taken at the monitoring points specified in this permit and, unless otherwise specified, before the effluent joins or is diluted by any other waste stream, body of water or substance. Monitoring points shall not be changed without notification to the Department and with the written approval of the Director.

- a. Composite sampling shall be conducted in one of the following manners:
 - (1) Continuous discharge - a minimum of one discrete aliquot collected every three hours,
 - (2) Less than 24 hours - a minimum of hourly discrete aliquots or a continuously drawn sample shall be collected during the discharge, or
 - (3) Batch discharge - a minimum of three discrete aliquots shall be collected during each discharge.
- b. Composite samples shall be collected in one of the following manners:
 - (1) The volume of each aliquot must be proportional to either the waste stream flow at the time of sampling or the total waste stream flow since collection of the previous aliquot,
 - (2) A number of equal volume aliquots taken at varying time intervals in proportion to flow,
 - (3) A sample continuously collected in proportion to flow, and
 - (4) Where flow proportional sampling is infeasible or non-representative of the pollutant loadings the Department may approve the use of time composite samples.
- c. Grab samples shall consist of a single aliquot collected over a time period not exceeding 15 minutes.
- d. All sample preservation techniques shall conform to the methods adopted in NDEQ Title 121, Chapter 8, unless:
 - (1) In the case of sludge samples, alternative techniques are specified in the 40 CFR, Part 503, or
 - (2) Other procedures are specified in this permit.

2. Flow Measurements

Appropriate flow measurement devices and methods consistent with accepted scientific practices shall be used to insure the accuracy and reliability of measurements. The devices shall be installed, calibrated and maintained to insure that the accuracy of the measurements are consistent with the accepted capability of that type of device. Devices selected shall be capable of measuring flows with a maximum deviation of +/- 10% from the true discharge rates throughout the range of expected discharge volumes. Guidance in selection, installation, calibration and operation of acceptable flow measurement devices can be obtained from the following references:

Appendix A - continued

C. Monitoring and Records - continued

- a. "Water Management Manual," U. S. Department of Interior, Bureau of Reclamation, Second Edition, Revised Reprint, 1974, 327 pp. Available from the U. S. Government Printing Office, Washington, DC 20402. Order by Catalog Number 127.19/2:W29/2, Stock Number S/N 24003-0027.
- b. "Flow Measurement in Open Channels and Closed Conduits," U. S. Department of Commerce, National Bureau of Standards, NBS Special Publication 484, October, 1977, 982 pp. Available in paper copy or microfiche from National Technical Information Service (NTIS), Springfield, VA 22151. Order by NTIS Number PB-273 535/5ST.
- c. "NPDES Compliance Sampling Manual," U. S. Environmental Protection Agency, Office of Water Enforcement, Publication MCD-51, May, 1988, 140 pp. Available from the General Services Administration (8FFS), Centralized Mailing Lists Services, Building 41, Denver Federal Center, Denver, CO 80225.

3. Test Procedures

Test procedures used for monitoring required by this permit, shall conform to the methods adopted in NDEQ Title 121, Chapter 8 unless:

- a. In the case of sludge samples, alternative techniques are specified in the 40 CFR, Part 503, or
- b. Other procedures are specified in this permit.

4. Averaging of Measurements

Averages shall be calculated as an arithmetic mean except:

- a. Bacterial counts which shall be calculated as a geometric mean, or
- b. Where otherwise specified by the Department.

5. Retention of Records

The permittee shall retain records of all monitoring activities for a period of at least three years (five years for sludge; see below) as set forth in NDEQ Titles 119 and/or 127. The types of records that must be retained include, but are not limited to:

- a. Calibration and maintenance records,
- b. Original strip chart recordings,
- c. Copies of all reports required by this permit,
- d. Monitoring records and information, and
- e. Electronically readable data.

The permittee shall retain records of monitoring required by this permit that are related to sludge use and disposal for a period of five years or longer, as required in 40 CFR, Part 503.

6. Record Contents

Records of sampling or monitoring information shall include:

- a. The date(s), exact place, time and methods of sampling or measurements,
- b. The name(s) of the individual(s), who performed the sampling or measurements,
- c. The date(s) the analyses were performed,
- d. The individual(s) who performed the analyses,
- e. The analytical techniques or methods used,
- f. The results of such analyses, and
- g. Laboratory data, bench sheets and other required information.

Appendix A – continued

D. Reporting Requirements

1. Immediate Notification

- a. NPP permittees shall report immediately to the publicly owned treatment works (POTW), any discharge to the POTW that may result in a violation of NDEQ Title 127, Chapter 3.
- b. All permittees shall report immediately to the NDEQ:
 - (1) Discharges of oil or hazardous substances which threaten waters of the State or public health and welfare, and
 - (2) Discharges causing in-stream toxicity (i.e., a fish kill) or an immediate threat to human health. Initial notification may be verbal. A written noncompliance notification shall be submitted as set forth in Section D. 3. of this Appendix.

2. 24-Hour Reporting

The permittee shall report to the NDEQ, within 24 hours of becoming aware of:

- a. Any noncompliance that may endanger the environment or human health or welfare,
- b. Any unanticipated bypass as set forth in NDEQ Titles 119 and/or 127,
- c. All upsets as set forth in NDEQ Titles 119 and/or 127,
- d. Any discharge to a POTW that causes a violation of the prohibited discharge standards set forth in NDEQ Title 127, Chapter 3, or
- e. Any noncompliance of an effluent limitation in this permit.

Initial notification may be verbal. A written noncompliance notification shall be submitted as set forth in Section D. 3. of this permit.

If sampling performed by an industrial user (NPP permittee) indicates a permit effluent violation, the permittee shall notify the Department and the city within 24 hours of becoming aware of the violation. The permittee shall resample and have it analyzed. The results of the resampling analysis shall be submitted to the Department and the city within 30 days after becoming aware of the violation.

3. Written Noncompliance Notification

- a. The permittee shall submit a written noncompliance report to the NDEQ:
 - (1) Within five days of becoming aware of any noncompliance with the:
 - (a) NPP effluent limitations or requirements set forth in this permit, or
 - (b) NPDES toxic pollutant effluent limitations or requirements set forth in this permit.
 - (2) Within seven days of becoming aware of any other noncompliance with the NPDES requirements and/or effluent limitations set forth in this permit.
- b. The written notification shall be submitted on a noncompliance form supplied by the Department and shall include:
 - (1) A description of the discharge and cause of noncompliance,
 - (2) The period of noncompliance, including exact dates and times, or if not corrected, the anticipated time the noncompliance is expected to continue, and
 - (3) The steps taken to reduce, eliminate, and prevent the reoccurrence of the noncompliance.

The submittal of a written noncompliance report does not relieve the permittee of any liability from enforcement proceedings that may result from the violation of permit or regulatory requirements.

Appendix A (continued)

D. Reporting Requirements - continued

4. Quarterly Discharge Monitoring Reports (DMRs)

The permittee shall report the monitoring results required by this permit on a DMR form supplied or approved by the Department. Monitoring results shall be submitted on a quarterly basis using the reporting schedule set forth below, unless otherwise specified in this permit or by the Department.

<u>Monitoring Quarters</u>	<u>DMR Reporting Deadlines</u>
January - March	April 28
April - June	July 28
July - September	October 28
October - December	January 28

If the permittee monitors any pollutant more frequently than required by this permit, using procedures specified in this permit, the results of this monitoring shall be included in the calculation and reporting of the data submitted on the DMR. The frequency of the analysis shall also be reported on the DMR.

5. Changes in Discharge

Any facility expansion, production increases or process modifications which will result in new or substantially increased discharges of pollutants or a change in the nature of the discharge of pollutants must be reported by the permittee 180 days prior to the expansion, increases or modifications, either by amending his original application or by submitting a new application. This permit may be modified or revoked and reissued as a result of this notification to maintain compliance with applicable state or federal regulations.

6. Changes in Toxic Discharges from Manufacturing, Commercial, Mining and Silvicultural Facilities

Permittees discharging from manufacturing, commercial, mining and silvicultural facilities shall report to the Department:

- a. If any toxic pollutant not limited in this permit is discharged from any NPDES outfall as a result of any activity that will or has occurred and results in its routine or frequent discharge. The Department shall be informed if that discharge exceeds the following notification levels:
 - (1) 100 micrograms per liter (0.1 mg/l) for any toxic pollutant,
 - (2) 200 micrograms per liter for acrolein and acrylonitrile (0.2 mg/l),
 - (3) 500 micrograms per liter for 2,4-dinitrophenol and for 2-methyl-4, 6-dinitrophenol (0.5 mg/l),
 - (4) 1000 micrograms per liter for antimony (1 mg/l),
 - (5) Five times the maximum concentration value reported for that pollutant in the permit application or
 - (6) An alternative level established by the Director, and
- b. If any toxic pollutant not limited in this permit is discharged from an NPDES outfall as a result of any activity that will or has occurred and results in its non-routine discharge. The Department shall be informed if that discharge exceeds the following notification levels:
 - (1) 500 micrograms per liter (0.5 mg/l) for any toxic pollutant,
 - (2) 1000 micrograms for antimony (1 mg/l),
 - (3) Ten times the maximum concentration value reported for that pollutant in the permit application, or
 - (4) An alternative level established by the Director.

7. Changes in Sludge Quality

The permittee shall provide written notice to the Department of any alteration or addition that results in a significant change in the permittee's sludge use or disposal practices. This permit may be modified or revoked and reissued as a result of this notification to maintain compliance with applicable state or federal regulations.

Appendix A (continued)

D. Reporting Requirements - continued

8. Changes of Loadings to Publicly Owned Treatment Work (POTW)

POTW's shall notify the Department of the following:

- a. Any new introduction of pollutants from dischargers subject to the categorical pretreatment discharge limitations set forth in NDEQ Title 121, Chapter 2, and
- b. Any substantial change in the volume or character of pollutants being introduced into the POTW.

Notification shall be made 180 days in advance whenever possible. Information on the quantity and quality of new discharges and their anticipated impact on the POTW shall be included.

9. Transfers

The permittee shall notify the Department at least 30 days prior to the proposed transfer of ownership of this permit or the permitted facility to another party as set forth in NDEQ Title 119, Chapter 12 and/or NDEQ Title 127, Chapter 14. The Department may modify or revoke and reissue this permit according to the regulations set forth in NDEQ Titles 119 and/or 127.

10. Compliance Schedules

The permittee shall submit a written report of compliance or noncompliance with any compliance schedule established in this permit. The written report shall be submitted within 14 days following all deadlines established in the compliance schedule. If compliance has not been achieved, the report shall include an alternative completion date, an explanation of the cause of the noncompliance and an explanation of the steps being taken to ensure future compliance. The submission of this report does not ensure the Department's acceptance of alternative compliance dates nor does it preclude the Department from initiating enforcement proceedings based upon the reported noncompliances.

E. Operation and Maintenance

1. Proper Operation and Maintenance

The permittee shall, at all times, maintain in good working order and operate as efficiently as possible, any facilities or systems of control installed by the permittee in order to achieve compliance with the terms and conditions of this permit. This would include, but not be limited to, effective performance based on designed facility removals, effective management, adequate operator staffing and training, adequate laboratory and process controls, and adequate funding that reflects proper user fee schedules.

2. Treatment System Failure and Upset

An upset is an affirmative defense to an enforcement action brought for noncompliance with technology-based permit effluent limitations if the permittee can demonstrate, through properly signed, operating logs or other relevant evidence, that:

- a. An upset occurred and the specific cause was identified,
- b. That the facility was properly operated and maintained at such time,
- c. The Department was notified within 24 hours of the permittee becoming aware of the upset, and
- d. The permittee took action to reduce, eliminate and prevent a reoccurrence of upset, including minimizing adverse impact to waters of the State.

3. Bypassing

Any diversion from or bypass of the treatment facilities is prohibited, unless:

- a. It is unavoidable to prevent loss of life, personal injury or severe property damage,
- b. No feasible alternative exists, i.e., auxiliary treatment facilities, retention of untreated wastes or maintenance during normal periods of equipment downtime,

Appendix A - continued

E. Operation and Maintenance - continued

- c. The permittee submits notice to the Department within 24 hours of becoming aware of the bypass or if the bypass is anticipated or should have been anticipated, the Department is notified at least ten days prior to the bypass, and
- d. The bypass is conducted under conditions determined to be necessary by the Director to minimize any adverse effects.

If the bypass is needed for regular preventative maintenance for which back-up equipment should be provided, the bypass will not be allowed. When a bypass occurs, the burden is on the permittee to demonstrate compliance with items "a" through "d".

Additionally, NPP permittees shall report any bypasses to the POTW. Unanticipated bypasses shall be reported immediately and anticipated bypasses shall be reported at least ten days in advance.

All NPDES permittees shall notify the general public that a bypass of the treatment system is occurring. The public notification shall include:

- a. Location of the bypass,
- b. The date the bypass started,
- c. Anticipated length of time the bypass will occur, and
- d. An estimate of the total volume of wastewater bypassed.

4. Removed Substances

Solids, sludge, filter backwash or other pollutants removed in the course of treatment or control of wastewater shall be disposed of at a site and in a manner approved by the Nebraska Department of Environmental Quality. The disposal of non-hazardous industrial sludges shall conform to the standards established in or to the regulations established pursuant to 40 CFR, Part 257. The disposal of sludge shall conform to the standards established in or to the regulations established pursuant to 40 CFR, Part 503. If solids are disposed of in a licensed sanitary landfill, the disposal of solids shall conform to the standards established in Title 132. Publicly owned treatment works shall dispose of sewage sludge in a manner that protects public health and the environment from any adverse effects which may occur from toxic pollutants as defined in Section 307 of the Clean Water Act. This permit may be modified or revoked and reissued to incorporate regulatory limitations established pursuant to 40 CFR, Part 503.

F. Definitions

Administrator: The Administrator of the USEPA.

Aliquot: An individual sample having a minimum volume of 100 milliliters that is collected either manually or in an automatic sampling device.

Biweekly: Once every other week.

Bimonthly: Once every other month.

Bypass: The intentional diversion of wastes from any portion of a treatment facility.

Daily Average: An effluent limitation that cannot be exceeded and is calculated by averaging the monitoring results for any given pollutant parameter obtained during a 24-hour day.

Department: Nebraska Department of Environmental Quality.

Director: The Director of the Nebraska Department of Environmental Quality.

Industrial User: A source of indirect discharge (a pretreatment facility).

Monthly Average: An effluent limitation that cannot be exceeded, calculated by averaging the monitoring results for any given pollutant parameter obtained during a calendar month.

Appendix A - continued

F. Definitions - continued

Publicly Owned Treatment Works (POTW): A treatment works as defined by Section 212 of the Clean Water Act (Public Law 100-4) which is owned by the state or municipality, excluding any sewers or other conveyances not leading to a facility providing treatment.

30-Day Average: An effluent limitation that cannot be exceeded, calculated by averaging the monitoring results for any given pollutant parameter obtained during a calendar month.

Total Toxic Organics (TTO): The summation of all quantifiable values greater than 0.01 milligrams per liter (mg/l) for toxic organic compounds that may be identified elsewhere in this permit. (If this term has application in this permit, the list of toxic organic compounds will be identified; typically in the Limitations and Monitoring Section(s) or in an additional Appendix to this permit.)

Toxic Pollutant: Those pollutants or combination of pollutants, including disease causing agents, after discharge and upon exposure, ingestion, inhalation or assimilation into an organism, either directly from the environment or indirectly by ingestion through food chains will, on the basis of information available to the administrator, cause death, disease, behavioral abnormalities, cancer, genetic mutations, physiological malfunction (including malfunctions in reproduction) or physical deformations, in such organisms or their offspring.

Upset: An exceptional incident in which there is unintentional and temporary noncompliance with technology based permit effluent limitations because of factors beyond the reasonable control of the permittee, excluding such factors as operational error, improperly designed or inadequate treatment facilities or improper operation and maintenance or lack thereof.

Volatile Organic Compounds (VOC): The summation of all quantifiable values greater than 0.01 milligrams per liter (mg/l) for volatile, toxic organic compounds that may be identified elsewhere in this permit. (See the definition for Total Toxic Organics above. In many instances, VOCs are defined as the volatile fraction of the TTO parameter. If the term "VOC" has application in this permit, the list of toxic organic compounds will be identified; typically in the Limitations and Monitoring Section(s) or in an additional Appendix to this permit.)

Weekly Average: An effluent limitation that cannot be exceeded, calculated by averaging the monitoring results for any given pollutant parameter obtained during a fixed calendar week. The permittee may start their week on any weekday but the weekday must remain fixed unless a change is approved by the Department.

"X" Day Average: An effluent limitation defined as the maximum allowable "X" day average of consecutive monitoring results during any monitoring period where "X" is a number in the range of one to seven days.

G. Abbreviations

CFR: Code of Federal Regulations

kg/Day: Kilograms per Day

MGD: Million Gallons per Day

mg/L: Milligrams per Liter

NDEQ: Nebraska Department of Environmental Quality

NDEQ Title 115: *Rules of Practice and Procedure*

NDEQ Title 117: *Nebraska Surface Water Quality Standards*

NDEQ Title 118: *Ground Water Quality Standards and Use Classification*

NDEQ Title 119: *Rules and Regulations Pertaining to the Issuance of Permits Under the National Pollutant Discharge Elimination System*

NDEQ Title 121: *Effluent Guidelines and Standards*

Appendix A - continued

G. Abbreviations - continued

NDEQ Title 126: *Rules and Regulations Pertaining to the Management of Wastes*

NDEQ Title 127: *Rules and Regulations Governing the Nebraska Pretreatment Program*

NDEQ Title 132: *Rules and Regulations Pertaining to Solid Waste Management*

NPDES: National Pollutant Discharge Elimination System

NPP: Nebraska Pretreatment Program

POTW: Publicly Owned Treatment Works

µg/L: Micrograms per Liter

WWTF: Wastewater Treatment Facility



Attachment 1

Guidance for Conducting Toxicity Testing and TIE/TRE Studies

(January 2001)

1. Test Procedures

Acute and chronic toxicity is a measure of the toxic effect that a wastewater effluent may have on living organisms (i.e., *Pimephales promelas* and *Ceriodaphnia* species). Acute and chronic toxicity analyses are conducted using the EPA approved Whole Effluent Toxicity (WET) test methods set forth in 40 CFR, Part 136 (July 1996 edition). There are separate and distinct test methods for measuring acute and/or chronic toxicity impacts. These test methods establish standardized conditions and require that certain chemical and physical analyses be conducted in conjunction with the toxicity analysis.

2. Results Reporting

Test results are reported in terms of toxic units. Acute toxic units are abbreviated TU_a, and are the inverse of the LC₅₀ (i.e., the concentration of effluent that is lethal to 50% of the organisms) expressed as a decimal fraction. Chronic toxic units are abbreviated TU_c, and are the inverse of the NOEC (i.e., the highest concentration of effluent at which there is no observed effect on the organisms) with respect to growth or reproductive inhibition) expressed as a decimal fraction. The tables below provide examples of the LC₅₀ and NOEC conversions to toxic units.

LC ₅₀	Decimal Fraction	TU _a	NOEC	Decimal Fraction	TU _c
0.1 %	0.001	1000	0.1 %	0.001	1000
1%	0.01	100	1%	0.01	100
10%	0.1	10	10%	0.1	10
25%	0.25	4	25%	0.25	4
50%	0.5	2	50%	0.5	2
100%	1	1	100%	1	1

3. Initial Response to Non-Compliance

If the permit limits for toxicity are exceeded, the permittee typically needs to perform the following actions.

- a. Submit a written non-compliance report (NCR) within 5 days. In the NCR, identify any suspect sources of the toxicity and describe any measures being taken to reduce toxicity.
- b. Conduct a follow-up toxicity testing with both organisms within four (4) weeks.

4. Return to Compliance

If the follow-up test results are in compliance with the limits in the permit, the permittee typically needs to perform the following actions.

- a. Within 30 days submit the results of the follow-up test in a written report to the NDEQ. The written report should discuss the effect of the measures taken to reduce toxicity. The report should also provide the NDEQ with a recommendation relative to their success and, if ongoing, the need to continue implementing these measures.