



Nebraska Department of Environmental Quality

Wastewater Section

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

March 21, 2011 Draft

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 outfall(s) 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 discharge(s) 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.

NPDES Permit No.: **NE0111155**
IIS File No.: **PCS 57640-P**
Permittee: **City of Lincoln**
Facility: **City of Lincoln-Ashland PWTP**
Facility Location: **401 Highway 6, Ashland, NE 68003**
S½ NE¼, Section 1, Township 12 North, Range 9 East, Saunders County, Nebraska
Outfall Locations: **SW¼ NE¼, Section 1, Township 12 North, Range 9 East, Saunders County, Nebraska**
Receiving Waters: **Salt Creek via an Unnamed Tributary / LP2-10000 / Lower Platte River Basin**
SIC Code: **4941 - Water Supply**
Effective Date:
Expiration Date:

Pursuant to the Delegation Memorandum dated January 12, 1999 and signed by the Director, the undersigned hereby executes this document on the behalf of the Director.

Signed this _____ day of _____, _____

Patrick W. Rice, Assistant Director

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Part I. Identification of Outfalls Authorized to Discharge under this Permit

This permit specifically authorizes and regulates the discharge from the outfalls identified and described below. Discharge characteristics from these outfalls need to be consistent with those described below, and those described in the permit application and the supplemental information submitted with it, unless Departmental approval for alterations is obtained. Departmental approval for changes shall be predicated upon the requirements in this permit being able to properly address any new or changed pollution potential that may occur.

A. Outfall 001: Filter Backwash Discharge from West Plant

This is an existing discharge of backwash water from rapid sand filtration basins. Source water for backwashing is treated water produced by the facility. In the treatment of the raw well water, chlorine is added. The finished water is chloraminated and fluoridated. No other chemicals are added in the treatment process. The backwash water containing oxidized iron and manganese discharges to Salt Creek via an unnamed tributary.

B. Outfall 002: Filter Backwash Discharge from East Plant

This is a new discharge of backwash water from dual media (sand/anthracite) filtration basins. Source water for backwashing is treated water produced by the facility. In the treatment of the raw well water, chlorine, ozone, and a cationic polymer are added prior to filtration. The finished water is chloraminated and fluoridated. No other chemicals are added in the treatment process. The backwash water containing oxidized iron and manganese discharges to Salt Creek via an unnamed tributary. The outfall is approximately 300 feet upstream of the West Plant outfall.

C. Outfall 003: Cooling Water and Wastewater Discharges from Floor Drains and Effluent Analyzers

This is a new discharge of cooling water for a high pressure pump motor, gear drives, and pump packing for high pressure pumps and wash water supply pumps; wastewater from all building area floor drains which include air relief valve discharges; and wastewater from the West Pump Station effluent analyzers. Source water is treated water produced by the facility. The outfall is between Outfall 001 and Outfall 002.

D. Outfall 004: Discharges from Chlorine Contact Basin and Storm Water from Roof Drains and Streets

This is a new discharge of storm water from building roof drains and street storm sewers and draining of the 890,000-gallon chlorine contact/detention basin for raw water once a year. The outfall is downstream of Outfall 001.

Part II. Discharge Limits and Monitoring Requirements

A. Requirements for Outfall 001

The discharge of backwash water from Outfall 001 (West Plant) to Salt Creek via an unnamed tributary is authorized and shall be monitored and limited as specified in the table below. Monitoring shall be conducted by sampling prior to discharge to the receiving stream, unless an alternative or more specific monitoring point is specified by the NDEQ.

Table 1: Discharge Limits and Monitoring Requirements for Flow, pH, Conductivity, TSS, Iron, and Manganese - Outfall 001 (West Plant)							
Parameters	Storet #	Units	Discharge Limits			Monitoring Frequency	Sample Type
			Daily Minimum	Monthly Average	Daily Maximum		
Flow	50050	MGD	---	Report	Report	Daily	Measured or Calculated
pH	00400	Standard Units	6.5	---	9.0	Monthly	Grab
Conductivity	00094	µmhos/cm	---	Report	Report	Monthly	Grab
Total Suspended Solids	00530	mg/L	---	Report	Report	Monthly	Grab
Dissolved Iron	01046	mg/L	---	Report	Report	Monthly	Grab
Dissolved Manganese	01056	mg/L	---	Report	Report	Monthly	Grab

Abbreviations:
 mg/L – milligrams per liter MGD – million gallons per day µmhos/cm – micromhos per centimeter

Table 2: Discharge Limits and Monitoring Requirements for TRC - Outfall 001 (West Plant)							
Parameters ^(a)	Discharge Period	Storet #	Units	Discharge Limits		Monitoring Frequency	Sample Type
				Monthly Average	Daily Maximum		
Interim Total Residual Chlorine	<i>Yearly</i> (Jan. 1 – Dec. 31)	50060	mg/L	Report	Report	Monthly	Grab
Final Total Residual Chlorine	<i>Spring</i> (March 1 – May 31)	50060	mg/L	0.011	0.021	Monthly	Grab
Final Total Residual Chlorine	<i>Summer</i> (June 1 – October 31)	50060	mg/L	0.010	0.020	Monthly	Grab
Final Total Residual Chlorine	<i>Winter</i> (Nov. 1 – Feb. 28 [29])	50060	mg/L	0.011	0.021	Monthly	Grab

(a) See Part III of this permit for the compliance schedule that applies to TRC requirements.

B. Requirements for Outfall 002

The discharge of backwash water from Outfall 002 (East Plant) to Salt Creek via an unnamed tributary is authorized and shall be monitored and limited as specified in the table below. Monitoring shall be conducted by sampling prior to discharge to the receiving stream, unless an alternative or more specific monitoring point is specified by the NDEQ

Table 3: Discharge Limits and Monitoring Requirements for Flow, pH, Conductivity, TSS, Iron, and Manganese - Outfall 002 (East Plant)							
Parameters	Storet #	Units	Discharge Limits			Monitoring Frequency	Sample Type
			Daily Minimum	Monthly Average	Daily Maximum		
Flow	50050	MGD	---	Report	Report	Daily	Measured or Calculated
pH	00400	Standard Units	6.5	---	9.0	Monthly	Grab
Conductivity	00094	µmhos/cm	---	Report	Report	Monthly	Grab
Total Suspended Solids	00530	mg/L	---	Report	Report	Monthly	Grab
Dissolved Iron	01046	mg/L	---	Report	Report	Monthly	Grab
Dissolved Manganese	01056	mg/L	---	Report	Report	Monthly	Grab

Abbreviations:
 mg/L – milligrams per liter MGD – million gallons per day µmhos/cm – micromhos per centimeter

Table 4: Discharge Limits and Monitoring Requirements for TRC - Outfall 002 (East Plant)							
Parameters ^(a)	Discharge Period	Storet #	Units	Discharge Limits		Monitoring Frequency	Sample Type
				Monthly Average	Daily Maximum		
Interim Total Residual Chlorine	<i>Yearly</i> (Jan. 1 – Dec. 31)	50060	mg/L	Report	Report	Monthly	Grab
Final Total Residual Chlorine	<i>Spring</i> (March 1 – May 31)	50060	mg/L	0.015	0.031	Monthly	Grab
Final Total Residual Chlorine	<i>Summer</i> (June 1 – October 31)	50060	mg/L	0.012	0.025	Monthly	Grab
Final Total Residual Chlorine	<i>Winter</i> (Nov. 1 – Feb. 28 [29])	50060	mg/L	0.012	0.023	Monthly	Grab

(a) See Part III of this permit for the compliance schedule that applies to TRC requirements.

C. Requirements for Outfall 003

The discharges of cooling and packing water, building area floor drains, air relief valve, and effluent analyzers from Outfall 003 to Salt Creek via an unnamed tributary are authorized and shall be monitored and limited as specified in the table below. Monitoring shall be conducted by sampling prior to discharge to the receiving stream, unless an alternative or more specific monitoring point is specified by the NDEQ.

Table 5: Discharge Limits and Monitoring Requirements for Flow, pH, TSS, and TRC							
Parameters	Storet #	Units	Discharge Limits			Monitoring Frequency	Sample Type
			Daily Minimum	Monthly Average	Daily Maximum		
Flow	50050	MGD	---	Report	Report	Daily	Measured or Calculated
pH	00400	Standard Units	6.5	---	9.0	Monthly	Grab
Total Suspended Solids	00530	mg/L	---	Report	Report	Monthly	Grab
Interim Total Residual Chlorine^(a)	50060	mg/L	---	Report	Report	Monthly	Grab
Final Total Residual Chlorine^(a)	50060	mg/L	---	0.011	0.019	Monthly	Grab

(a) See Part III of this permit for the compliance schedule that applies to TRC requirements.

D. Requirements for Outfall 004

The discharges of storm water from roof drains and street storm sewers and draining of the chlorine contact/detention basin for raw water from Outfall 004 to Salt Creek via an unnamed tributary are authorized and shall be monitored and limited as specified in the table below. Monitoring shall be conducted by sampling prior to discharge to the receiving stream, unless an alternative or more specific monitoring point is specified by the NDEQ.

Monitoring shall be specifically conducted during the draining of the 890,000-gallon W2 chlorine contact/detention basin. Monitoring shall also be conducted during the cleaning of the basin. These samplings shall be reported as the monthly monitoring data for the Discharge Monitoring Report.

Table 6: Discharge Limits and Monitoring Requirements for Flow, pH, TSS, TDS, and TRC							
Parameters	Storet #	Units	Discharge Limits			Monitoring Frequency	Sample Type
			Daily Minimum	Monthly Average	Daily Maximum		
Flow	50050	MGD	---	Report	Report	Daily	Measured or Calculated
pH	00400	Standard Units	6.5	---	9.0	Monthly	Grab
Total Suspended Solids	00530	mg/L	---	Report	Report	Monthly	Grab
Total Dissolved Solids	70296	mg/L	---	Report	Report	Monthly	Grab
Dissolved Iron	01046	mg/L	---	Report	Report	Monthly	Grab
Dissolved Manganese	01056	mg/L	---	Report	Report	Monthly	Grab
Interim Total Residual Chlorine ^(a)	50060	mg/L	---	Report	Report	Monthly	Grab
Final Total Residual Chlorine ^(a)	50060	mg/L	---	0.011	0.019	Monthly	Grab

(a) See Part III of this permit for the compliance schedule that applies to TRC requirements.

Part III. Compliance Schedule for Meeting Final Total Residual Chlorine Limits

Upon issuance of this permit, the City of Lincoln shall implement the compliance schedule set forth below for meeting final total residual chlorine (TRC) limits for Outfalls 001, 002, 003, and 004 set forth in this permit. The interim limits for TRC shall apply to the wastewater discharged through Outfalls 001, 002, 003, and 004 until the City of Lincoln Potable Water Treatment Plant (PWTP) at Ashland, Nebraska can be routinely operated to meet final TRC limits, not to exceed three years after the effective date of this permit.

1. One Year. On or before one year after the effective date of this permit, the City of Lincoln shall submit to the NDEQ for approval; design and specifications for an upgrade to the City of Lincoln PWTP at Ashland that will routinely produce an effluent discharge that will meet the final TRC limits for Outfalls 001, 002, 003, and 004 set forth in this permit.
2. Two Years. On or before two years after the effective date of this permit, the City of Lincoln shall initiate the construction phase of the NDEQ approved upgrade to the City of Lincoln PWTP at Ashland.
3. Three Years. On or before three years after the effective date of this permit, the City of Lincoln shall operate the City of Lincoln PWTP at Ashland to meet the final TRC limits for Outfalls 001, 002, 003, and 004 set forth in this permit. Three years after the effective date of this permit, the final limits for TRC for Outfalls 001, 002, 003, and 004 shall be in effect and shall apply to the discharge of wastewater from the City of Lincoln PWTP at Ashland.

Part IV. Other Conditions and Requirements

A. Narrative Limits

Discharges authorized under this permit:

4. Shall not be toxic to aquatic life in surface waters of the State in accordance with NDEQ Title 117 - *Nebraska Surface Water Quality Standards*;
5. Shall not contain pollutants at concentrations or levels that produce objectionable films, colors, turbidity, deposits, or noxious odors in the receiving stream or waterway; and
6. Shall not contain pollutants at concentrations or levels that cause the occurrence of undesirable or nuisance aquatic life in the receiving stream.

B. Certified Operator Requirements

This facility is to be operated and maintained by operators certified in accordance with Nebraska Health and Human Services Title 179 - *Public Water Systems*.

C. Method Detection Limit Reporting Requirements

The minimum detection limit (MDL) is defined as the level at which the analytical system gives acceptable calibration points. If the analytical results are below the MDL, then the reported value on the DMR shall be a numerical value less than the MDL (e.g. <0.005).

D. 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.

E. Sludge Disposal

Sludge shall be disposed of or utilized in a manner approved by the NDEQ.

F. Notification of Additional Treatment Compounds

The NDEQ Permits and Compliance Section shall be notified prior to adding any compound (i.e., biocides or conditioners). The notification shall include: the quantity to be added, Material Safety Data Sheets (MSDS), and any information regarding the compound's toxicity to aquatic life.

G. Permit Modification and Reopening

This permit may be reopened and modified after public notice and opportunity for a public hearing for reasons specified in NDEQ Title 119 - *Rules and Regulations Pertaining to the Issuance of Permits under the National Pollutant Discharge Elimination System*, Chapter 24.

H. Permit Attachments

The attachments to this permit (e.g. forms and guidance) may be changed without a formal modification of this permit.

I. Best Management Practices

1. Discharge of **chloraminated backwash water** to surface waters is not allowed unless it can be shown that applicable water quality criteria will be met at all times, based on peak pumping rates. A compliance schedule is included in Part III of the permit to give the City of Lincoln sufficient time to meet final TRC limits.
2. Discharges of **treatment solids and backwash water** should be constant and equalized to the maximum extent practicable so that the solids or other pollutants are dispersed efficiently into surface waters.

Appendix A
Standard Conditions that Apply to NPDES and NPP Permits

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