



STEVEN A. THOMPSON  
Executive Director

OKLAHOMA DEPARTMENT OF ENVIRONMENTAL QUALITY

MARY FALLIN  
Governor

November 27, 2013

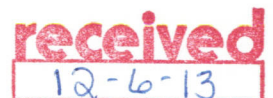
Mark Daniels, P. E., Utilities Engineer  
Norman Utilities Authority  
Post Office Box 370  
Norman, Oklahoma ST000014130639

Re: Permit No.: ST000014130639  
Norman Wastewater Treatment Plant  
Phase 2 Expansion Project  
Facility No.: S-20616

Dear Mr. Daniels:

Enclosed is Permit No.: ST000014130639 for the construction of modifications to the existing headworks, including a mechanical bar screen washer system, screenings washer compactor, and two shaft-less screw conveyors; influent metering and primary clarification diversion box including influent flow measuring systems; modifications to the four existing primary clarifiers including new internal components and equipment; three approximately 0.87-MG new aeration basins, fine bubble fix grid aeration diffusers system in the new and existing aeration basins, aeration blower building modifications including two 5,875-scfm high speed turbo blowers; new secondary clarifier flow splitter box, two new complete 125-foot diameter secondary clarification systems each with mechanical equipment and a 160-gpm at 62-ft TDH submersible chopper pump; RAS/WAS pump station including three 6,200-gpm at 39-ft TDH VFD RAS dry pit submersible pumps, two 405-gpm at 44-ft TDH VFD WAS dry pit submersible pumps, 24-inch Parshall flume for secondary clarifier 1 & 2 sludge flow measurement system, and building; WAS sludge thickening facility improvements including building modifications, two approximately 1,500-lbs/hr. WAS sludge thickening centrifuges, a polymer feed system, new Centrate pump station including two 500-gpm at 32-ft TDH wet-pit submersible pumps; U. V. disinfection post aeration facility including an open channel low-pressure/high intensity U. V. disinfection system with two treatment channels each with two treatment banks, two approximately 0.05-MG post aeration basins each equipped with a membrane disk fine bubble diffuser system, aluminum canopy cover over UV channels and basins and an adjoining building housing UV/Post Aeration Controls with a blower room housing an aeration blower system including two 870-scfm at 7-psi multistage centrifugal blowers; approximately 2,700 L. F. of sixty-six (66) inch plant outfall line with discharge headwall structure; sludge blending tank and thickened sludge pump station facility including an approximately 21,000-gallon sludge blending tank basin with two sets of two jet hydraulic mixing nozzles, a pump station with a 1,090-gpm at 39-ft blended sludge recirculation jet mixing pump, two 150-gpm at 35-ft TDH double disk sludge return pumps to digesters, and a pump station building; anaerobic digestion system improvements including Digester No.: 1 re-habilitation including new three nozzle jet hydraulic mixing system with a 2,300-gpm at 36-ft TDH jet mixing pump, and a new fixed cover, and, Digesters No.: 2, 3, and 4 piping and electrical modifications; new odor control system; five new generators including 650-kW, 1,500-kW, 600-kW, 550-kW, and 350-kW emergency generators including four automatic transfer switch for the first four referenced generators; and appurtenances to serve the Norman Utilities Authority Wastewater Treatment Plant Phase 2 Expansion Project, Cleveland County, Oklahoma.

The project authorized by this permit should be constructed in accordance with the plans approved by this Department on November 26, 2013. Any deviations from the approved plans and specifications affecting capacity, flow, or operation of units must be approved, in writing, by the Department before changes are made.



Mark Daniels, P. E.  
November 27, 2013  
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Receipt of this permit should be noted in the minutes of the next regular meeting of the Norman Utilities Authority, after which it should be made a matter of permanent record.

We are returning one (1) set of the approved plans to you and retaining one (1) set for our files.

Respectfully,

A handwritten signature in black ink, appearing to read "Robert B. Walker".

Robert B. Walker  
Construction Permit Section  
Water Quality Division

RBW/RC/bg

Enclosure

c: David Golden, R. S., Regional Manager, DEQ  
John Cutright, P. E., Garver  
Purcell DEQ Office





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**PERMIT NO.: ST000014130639**

**SEWAGE TREATMENT**

**FACILITY NO.: S-20616**

**PERMIT TO CONSTRUCT**

November 26, 2013

Pursuant to O.S. 27A 2-6-401, the Norman Utilities Authority is hereby granted this Tier I Permit to construct modifications to the existing head-works, including a mechanical bar screen washer system, screenings washer compactor, and two shaft-less screw conveyors; influent metering and primary clarification diversion box including influent flow measuring systems; modifications to the four existing primary clarifiers including new internal components and equipment; three approximately 0.87-MG new aeration basins, fine bubble fix grid aeration diffusers system in the new and existing aeration basins, aeration blower building modifications including two 5,875-scfm high speed turbo blowers; new secondary clarifier flow splitter box, two new complete 125-foot diameter secondary clarification systems each with mechanical equipment and a 160-gpm at 62-ft TDH submersible chopper pump; RAS/WAS pump station including three 6,200-gpm at 39-ft TDH VFD RAS dry pit submersible pumps, two 405-gpm at 44-ft TDH VFD WAS dry pit submersible pumps, 24-inch Parshall flume for secondary clarifier 1 & 2 sludge flow measurement system, and building; WAS sludge thickening facility improvements including building modifications, two approximately 1,500-lbs/hr. WAS sludge thickening centrifuges, a polymer feed system, new Centrate pump station including two 500-gpm at 32-ft TDH wet-pit submersible pumps; U. V. disinfection post aeration facility including an open channel low-pressure/high intensity U. V. disinfection system with two treatment channels each with two treatment banks, two approximately 0.05-MG post aeration basins each equipped with a membrane disk fine bubble diffuser system, aluminum canopy cover over UV channels and basins and an adjoining building housing UV/Post Aeration Controls with a blower room housing an aeration blower system including two 870-scfm at 7-psi multistage centrifugal blowers; approximately 2,700 L. F. of sixty-six (66) inch plant outfall line with discharge headwall structure; sludge blending tank and thickened sludge pump station facility including an approximately 21,000-gallon sludge blending tank basin with two sets of two jet hydraulic mixing nozzles, a pump station with a 1,090-gpm at 39-ft blended sludge recirculation jet mixing pump, two 150-gpm at 35-ft TDH double disk sludge return pumps to digesters, and a pump station building; anaerobic digestion system improvements including Digester No.: 1 re-habilitation including new three nozzle jet hydraulic mixing system with a 2,300-gpm at 36-ft TDH jet mixing pump, and a new fixed cover, and, Digesters No.: 2, 3, and 4 piping and electrical modifications; new odor control system; five new generators including 650-kW, 1,500-kW, 600-kW, 550-kW, and 350-kW emergency generators including four automatic transfer switch for the first four referenced generators; and appurtenances to serve the Norman Utilities Authority Wastewater Treatment Plant Phase 2 Expansion Project, located in part of S-1/2, SE-1/4, SE-1/4, Section 7, and, NE-1/4, Section 18, T-8-N, R-2-W, I. M., Cleveland County, OK, Cleveland County, Oklahoma, in accordance with the plans approved on November 26, 2013.

By acceptance of this permit, the permittee agrees to operate and maintain the facility in accordance with the Discharge - OPDES (NPDES) rules OAC 252:605 and to comply with the State Certification laws, Title 59, Section 1101-1116 O.S. and the rules and regulations adopted thereunder regarding the requirements for certified operators.







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**VARIANCES**

- 1) A variance from OAC 252:656-17-2(b), requiring a minimum primary clarifier side wall depth of 12-feet is granted, as per the approved Norman Utilities Authority, City of Norman Engineering Report, Wastewater Treatment Plant Phase 2, Improvements dated March 2013. The existing primary clarifiers' side wall depths are acceptable as designed.
- 2) A variance from OAC 252:656-17-2(b), requiring primary clarifiers to have a minimum 30 to 35% BOD removal is granted, as per the referenced Engineering Report, the existing primary clarifiers are acceptable, as designed.
- 3) A variance from OAC 252:656-16-1(b), requiring the facility's conventional activated sludge process be preceded by primary clarifiers is granted, as per the referenced Engineering Report.
- 4) A variance from OAC 252:656-21-3(a), requiring that effluent being disinfected shall have at least 65% ultraviolet (UV) transmittance is granted, as per the referenced Engineering Report. The UV system will be constructed as shown on the approved plans.

**PROVISIONS AND CONDITIONS**

This permit is issued subject to the following provisions and conditions.

- 1) That the recipient of the permit is responsible that the project receive supervision and inspection by competent and qualified personnel.
- 2) That construction of all phases of the project will be started within one year of the date of approval or the phases not under construction will be resubmitted for approval as a new project.
- 3) That no significant information necessary for a proper evaluation of the project has been omitted, or invalid information has been presented in applying for the permit.
- 4) That the Oklahoma Department of Environmental Quality shall be kept informed of occurrences which may affect the eventual performance of the works or that will unduly delay the progress of the project.
- 5) That the issuing of this permit does not relieve the responsible parties from any damage which may accrue as the result of the location and operation of the plant in this area.





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PERMIT TO CONSTRUCT

- 6) That the recipient of the permit is responsible for the continued operation and maintenance of these facilities in accordance with the rules and regulations adopted by the Environmental Quality Board and that this Department will be notified in writing of any sale or transfer of ownership of the facilities.
- 7) That these facilities are approved for an average hydraulic loading of 16 million gallons/day, or an organic loading of 35,100 pounds of BOD<sub>5</sub>/day. Before additional loading is connected to the system, plans for suitable enlargement of the facilities shall be submitted to the Oklahoma Department of Environmental Quality for approval.
- 8) That the permittee is responsible for complying fully with NPDES permit provisions and submitting a permit renewal application, 180-days prior to permit expiration.
- 9) That any deviations from approved plans or specifications affecting capacity, flow or operation of units must be approved by the Department before any such deviations are made in the construction of this project.
- 10) That any notations or changes recorded on the official approved set of plans and specifications in the Oklahoma Department of Environmental Quality files shall be a part of the plans as approved.
- 11) As-built plans of this project shall be placed on file with this Department within two months of the completion of the work or a certification by the engineer shall be submitted certifying that no changes have been made in the work as approved.
- 12) The issuance of this permit does not relieve the responsible parties of any obligations or liabilities which the permittee may be under pursuant to prior enforcement action taken by the Department.

Failure to appeal the conditions of this permit in writing within 30 days from the date of issue will constitute acceptance of the permit and all conditions and provisions.

A blue ink signature of Rocky Chen, written in a cursive style.

Rocky Chen, P.E., Engineering Manager, Construction Permit Section  
Water Quality Division

