



INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

We Protect Hoosiers and Our Environment.

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Eric J. Holcomb
Governor

April 26, 2018

Bruno Pigott
Commissioner

VIA CERTIFIED MAIL

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APR 30 2018

Mr. Bob Gray, Wastewater Superintendent
City of Wabash
700 S. Carroll Street
Wabash, Indiana 46992

Dear Mr. Gray:

Re: 327 IAC 3 Construction
Permit Application
Wabash Wastewater Treatment Plant
Improvements, Phosphorous Removal
Permit Approval No. 22617
Wabash, Indiana
Wabash County

The application, plans and specifications, and supporting documents for the above-referenced project have been reviewed and processed in accordance with rules adopted under 327 IAC 3. Enclosed is the Construction Permit (Approval No. 22617), which applies to the construction of the above-referenced proposed Wabash Wastewater Treatment Plant (WWTP) Improvements, Phosphorous Removal, to be located at the existing Wabash WWTP at 700 South Carroll Street.

Please review the enclosed permit carefully and become familiar with its terms and conditions. In addition, it is imperative that the applicant, consulting architect/engineer (A/E), inspector, and contractor are aware of these terms and conditions.

It should be noted that any person affected or aggrieved by the agency's decision in authorizing the construction of the above-referenced facility may, within fifteen (15) days from date of mailing, appeal by filing a request with the Office of Environmental Adjudication for an adjudicatory hearing in accordance with IC 4-21.5-3-7 and IC 13-15-6. The procedure for appeal is outlined in more detail in Part III of the attached construction permit.

Plans and specifications were prepared by United Consulting, and certified by Mr. Keith Bryant, P.E., and submitted for review on February 23, 2018, with additional information submitted on April 2, 2018.



A State that Works

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
AUTHORIZATION FOR CONSTRUCTION OF
WATER POLLUTION TREATMENT/CONTROL FACILITY
UNDER 327 IAC 3

DECISION OF APPROVAL

City of Wabash, in accordance with the provisions of IC 13-15 and 327 IAC 3 is hereby issued a permit to construct the proposed Wabash Wastewater Treatment Plant (WWTP) Improvements, Phosphorous Removal, to be located at the existing Wabash WWTP at 700 South Carroll Street. The permittee is required to comply with requirements set forth in Parts I, II and III hereof. The permit is effective pursuant to IC 4-21.5-3-4(d). If a petition for review and a petition for stay of effectiveness are filed pursuant to IC 13-15-6, an Environmental Law Judge may be appointed for an adjudicatory hearing. The force and effect of any contested permit provision may be stayed at that time.

NOTICE OF EXPIRATION DATE

Authorization to initiate construction of the proposed Wabash WWTP Improvements, Phosphorous Removal, shall expire at midnight May 1, 2019. In order to receive authorization to initiate construction beyond this date, the permittee shall submit such information and forms as required by the Indiana Department of Environmental Management. It is requested that this information be submitted sixty (60) days prior to the expiration date to initiate construction. This permit shall be valid for a period of five (5) years from the date below for full construction completion.

Signed this 26th day of April, 2018, for the Indiana Department of Environmental Management.



Dale T. Schnaith, Chief
Facility Construction and
Engineering Support Section
Office of Water Quality

WATER POLLUTION TREATMENT/CONTROL FACILITY DESCRIPTION

The permittee operates a Class III, 4.0 MGD oxidation ditch type extended aeration WWTP. The existing WWTP consists of an influent flow meter, two mechanical fine screens, influent pump station, two oxidation ditches (4.0 million gallons [MG] total volume), two (2) circular secondary clarifiers, ultraviolet light (UV) disinfection, post aeration, and an effluent flow meter. Sludge handling facilities include: four (4) gravity sludge thickeners, two double pass primary aerobic digesters, two secondary aerobic digesters, and ten reed sludge drying beds. Biosolids are hauled to a nearby landfill.

The collection system is comprised of combined sanitary and storm sewers with eight (8) Combined Sewer Overflow (CSO) locations.

The proposed Wabash WWTP Improvements, Phosphorous Removal project includes:

- Installation of submersible sampling pump in the existing post aeration structure and 1.5" Schedule 80 PVC sampling line to Chemical Feed Building
- Chemical Feed Building with two, 3,000 gallons each High-density Cross-linked Polyethylene dual-walled tanks; wall-mounted chemical feed pump package (three, 0.001 to 7.93 gph each peristaltic pumps); chemical feed control panel, orthophosphate analyzer (to get samples from the post aeration structure) for dosing rate adjustments; and emergency eye wash/safety shower.
- Two separate PVC chemical piping (inside PVC carrier pipes) to two below grade chemical injection points (One in mixed liquor pipe upstream of secondary clarifier splitter structure and one on RAS line to Upper Headworks)
- Site, utilities and other improvements to support the proposed project

CONDITIONS AND LIMITATIONS TO THE AUTHORIZATION FOR CONSTRUCTION OF WATER POLLUTION TREATMENT/CONTROL FACILITY

During the period beginning on the effective date of this permit and extending until the expiration date, the permittee is authorized to construct the above described water pollution treatment/control facility. Such construction shall conform to all provisions of State Rule 327 IAC 3 and the following specific provisions:

PART I

SPECIFIC CONDITIONS AND LIMITATIONS TO THE CONSTRUCTION PERMIT

Unless specific authorization is otherwise provided under the permit, the permittee shall comply with the following conditions:

1. All local permits shall be obtained before construction is begun on this project.
2. If pollution or nuisance conditions are created, immediate corrective action will be taken by the permittee.
3. Additional treatment facilities shall be installed if the proposed facilities prove to be inadequate or cannot meet applicable federal or state requirements.
4. If construction is located within a floodway, a permit may also be required from The Department of Natural Resources prior to the start of construction. It is the permittee's responsibility to coordinate with that agency and obtain any required approvals if applicable. Questions may be directed to the Technical Services Section, Division of Water at 317/232-4160.
5. If this project includes a change in design flow, addition of new treatment unit(s), or modification/removal of existing treatment unit(s), an NPDES Permit modification will likely be required. This would include any CSO treatment addition/modification. Questions may be directed to the NPDES Permit Section, Office of Water Quality at 317/233-0469.
6. After construction this agency shall be given advanced notice of the date of startup of the facilities.
7. The sewage treatment plant must be capable of providing the same degree of treatment during construction as prior to expansion of the existing facilities. If this is not feasible, the plans for reduced degree of treatment must be submitted to the Department of Environmental Management for consideration of approval.

Failure to meet guidelines as set forth in the above conditions could be subject to enforcement proceedings as provided by 327 IAC 3-5-3.

PART II

GENERAL CONDITIONS

1. No significant or material changes in the scope of the plans or construction of this project shall be made unless the following provisions are met:
 - a. Request for permit modification is made 60 days in advance of the proposed significant or material changes in the scope of the plans or construction;
 - b. Submit a detailed statement of such proposed changes;
 - c. Submit revised plans and specifications including a revised design summary; and
 - d. Obtain a revised construction permit from this agency.
2. This permit may be modified, suspended, or revoked for cause including, but not limited to the following:
 - a. Violation of any term or conditions of this permit:
 - b. Obtaining this permit by misrepresentation or failure to disclose fully all relevant facts.
3. Nothing herein shall be construed as guaranteeing that the proposed water pollution treatment/control facility shall meet standards, limitations or requirements of this or any other agency of state or federal government, as this agency has no direct control over the actual construction and/or operation of the proposed project.

PART III

NOTICE OF RIGHT TO ADMINISTRATIVE REVIEW

Anyone wishing to challenge this construction permit must do so by filing a Petition for Administrative Review with the Office of Environmental Adjudication (OEA), and serving a copy of the petition upon IDEM. The requirements for filing a Petition for Administrative Review are found in IC 4-21.5-3-7, IC 13-15-6-1 and 315 IAC 1-3-2. A summary of the requirements of these laws is provided below.

A Petition for Administrative Review must be filed with the Office of Environmental Adjudication (OEA) within fifteen (15) days of the issuance of this notice (eighteen (18) days if notice was received by U.S. Mail), and a copy must be served upon IDEM. Addresses are:

Director
Office of Environmental Adjudication
Indiana Government Center North
Room 103
100 North Senate Avenue
Indianapolis, Indiana 46204

Commissioner
Indiana Department of Environmental
Management
Indiana Government Center North
Room 1301
100 North Senate Avenue
Indianapolis, Indiana 46204

The petition must contain the following information:

1. The name, address and telephone number of each petitioner.
2. A description of each petitioner's interest in the permit.
3. A statement of facts demonstrating that each petitioner is:
 - a. a person to whom the order is directed;
 - b. aggrieved or adversely affected by the permit; or
 - c. entitled to administrative review under any law.
4. The reasons for the request for administrative review.
5. The particular legal issues proposed for review.
6. The alleged environmental concerns or technical deficiencies of the permit.
7. The permit terms and conditions that the petitioner believes would be appropriate and would comply with the law.
8. The identity of any persons represented by the petitioner.
9. The identity of the person against whom administrative review is sought.
10. A copy of the permit that is the basis of the petition.
11. A statement identifying petitioner's attorney or other representative, if any.

Failure to meet the requirements of the law with respect to a Petition for Administrative Review may result in a waiver of the Petitioner's right to seek administrative review of the permit. Examples are:

1. Failure to file a Petition by the applicable deadline;
2. Failure to serve a copy of the Petition upon IDEM when it is filed; or
3. Failure to include the information required by law.

If Petitioner seeks to have a permit stayed during the administrative review, he or she may need to file a Petition for a Stay of Effectiveness. The specific requirements for such a Petition can be found in 315 IAC 1-3-2 and 315 IAC 1-3-2.1.

Pursuant to IC 4-21.5-3-17, OEA will provide all parties with notice of any pre-hearing conferences, preliminary hearings, hearings, stays, or orders disposing of the review of this action. Those who are entitled to notice under IC 4-21.5-3-5(b) and would like to obtain notices of any pre-hearing conferences, preliminary hearings, hearings, stays, or orders disposing of the review of this action without intervening in the proceeding must submit a written request to OEA at the address above.

More information on the review process is available at the website for the Office of Environmental Adjudication at <http://www.in.gov/oea>.

Wastewater Treatment Facility
Design Summary

I. GENERAL

1. Applicant: City of Wabash
2. Project Name and Location: Wabash Wastewater Treatment Plant (WWTP) Improvements, Phosphorous Removal
3. Project Number: P-23198
4. Engineer (Consulting Firm): United Consulting
5. NPDES Permit Number: IN0024741
 - A. Effective Date: March 1, 2016 (Issued on January 28, 2016)
 - B. Expiration Date: February 28, 2021
6. Remarks
 - A. Description of Present Situation: The permittee operates a Class III, 4.0 MGD oxidation ditch type extended aeration WWTP. The existing WWTP consists of an influent flow meter, two mechanical fine screens, influent pump station, two oxidation ditches (4.0 million gallons [MG] total volume), two (2) circular secondary clarifiers, ultraviolet light (UV) disinfection, post aeration, and an effluent flow meter. Sludge handling facilities include: four (4) gravity sludge thickeners, two double pass primary aerobic digesters, two secondary aerobic digesters, and ten reed sludge drying beds. Biosolids are hauled to a nearby landfill.

The collection system is comprised of combined sanitary and storm sewers with eight (8) Combined Sewer Overflow (CSO) locations.
 - B. Description of Proposed Facilities: The proposed Wabash WWTP Improvements, Phosphorous Removal project includes:
 - Installation of submersible sampling pump in the existing post aeration structure and 1.5" Schedule 80 PVC sampling line to Chemical Feed Building
 - Chemical Feed Building with two, 3,000 gallons each High-density Cross-linked Polyethylene dual-walled tanks; wall-mounted chemical feed pump package (three, 0.001 to 7.93 gph each peristaltic pumps); chemical feed control panel, orthophosphate analyzer (to get samples from the post aeration structure) for dosing rate adjustments; and emergency eye wash/safety shower.
 - Two separate PVC chemical piping (inside PVC carrier pipes) to two below grade chemical injection points (One in mixed liquor pipe upstream of secondary clarifier splitter structure and one on RAS line to Upper

Headworks)

- Site, utilities and other improvements to support the proposed project

7. Estimated Project Cost:
 - A. Source of Funding: Revenue bond
 - B. Total Cost: \$1,000,000

II. DESIGN DATA

1. Current Population: 10,253
2. Design Year and Population: 2038 and 13,930
3. Design P.E.: 39,247 based on 0.17 lbs CBOD/capita-day
4. Average Design Flow: 4.0 MGD
5. Peak Design Flow: 10.0 MGD
6. Maximum Plant Flow Capacity: 10.0 MGD
7. Design Waste Strength
 - A. CBOD: 200 mg/l (6,672 lbs/day)
 - B. TSS: 200 mg/l (6,672 lbs/day)
 - C. NH₃-N: 30 mg/l (1,001 lbs/day)
 - D. P: 3.1 mg/l (103.4 lbs/day)
8. NPDES Permit Limitation on Effluent Quality:
 - A. CBOD: 25.0 mg/l
 - B. TSS: 30.0 mg/l
 - C. NH₃-N: 6.1 mg/l (summer), 9.4 mg/l (winter)
 - D. P: 1.0 mg/l (NPDES Schedule of Compliance)
 - E. E. coli: 235 count/100 mL (daily maximum), 125 count/100 mL (monthly average)
 - F. Chlorine Residual: N/A
 - G. pH: 6.0 – 9.0 s.u.
 - H. D.O. (daily minimum): N/A
9. Receiving Stream:
 - A. Name: Wabash river
 - B. Tributary to: Ohio River
 - C. Stream Uses: Full body contact recreational use and shall be capable of supporting a well-balanced warm water aquatic community
 - D. 7-day, 1-in-10 year low flow: 64 CFS

III. TREATMENT UNITS

Flow Meters (Existing)

Screens (Existing, installed in 2016)*

1. Type: Mechanical fine screen (Headworks MS1)
2. Number and capacity: Two, 12.0 MGD each
3. Bar spacing and slope: ¼" and 85 degree
4. Method of cleaning: Mechanical (Chain driven rakes and scraper mechanism)
5. Disposal of screenings: Washed and compacted (Headworks Screwfactor 320 HD) screenings to landfill

Plant Site Lift Station (Existing, improvements completed in 2016)*

1. Location: Lower Headworks
2. Type of pump: Submersible
3. Number of pumps: Four (three Flygt and one Hydromatic [piped to emergency offloading tanks])
4. Constant or variable speed: Variable (Flygt) and constant (Hydromatic)
5. Capacity of pumps: 7.5 MGD each (Flygt) and 6.9 MGD (Hydromatic)
6. RPM and TDH: 1185 and 40' TDH (Flygt); 1200 and 40' TDH (Hydromatic)
7. Volume of the wet well: 57,600 gallons (between CSO #1 invert and bottom of Lower Headworks)
8. Detention time in the wet well: Variable
9. A plug valve and a check valve in the discharge line: No (Each pump discharges through a dedicated vertical discharge pipe to the Upper Headworks)
10. A gate valve on suction line: N/A
11. Ventilation: N/A (Open wet well)
12. Standby power: Yes (Generator receptacle)
13. Alarm: Yes (Connected to SCADA)
14. Bypass or overflow: Yes (Existing)

* Information from United Consulting

Oxidation Ditch/Nitrification System (Existing, two, 267,380 gallons each, 4.0 MG total volume)

Secondary Clarifiers (Existing, two, 100' diameter and 12' SWD each, circular, center-feed)

Phosphorus Removal Facilities (Proposed)

1. Type of chemical to be used: Alum (Aluminum sulfate)
2. Location of chemical injection: Two below grade chemical injection points (One in mixed liquor pipe upstream of secondary clarifier splitter structure and one on RAS line to Upper Headworks)
3. Number and size of chemical feed pumps: Three, 0.001 to 7.93 gph each peristaltic pumps
4. Size of chemical storage tank: Two, 3,000 gallons each High-density Cross-linked Polyethylene dual-walled tanks
5. Capacity of spill storage space: Dual-walled tanks to provide 110% secondary containment volume
6. Chemical dosage: 4.2 GPH (average) and 7.9 GPH (during peak month)
7. Daily chemical consumption expected: 102 GPD (average) and 189 GPD (during peak month)
8. Rapid mix tank: N/A (Mixing to occur in pipes and splitter box upstream of secondary clarifiers and oxidation ditch)
9. Slow mixing equipment: N/A
10. Other facilities - describe: Orthophosphate analyzer [to get samples from the post aeration structure] for dosing rate adjustments, emergency eye wash/safety shower

UV Disinfection (Existing, two, closed channel units)

Post-aeration (Existing, 15,000 gallon diffused aeration tank)

Sludge Thickening (Existing, four, 62' x 16' x 13.75' SWD each gravity sludge thickeners)

Aerobic Digesters (Existing, two [70' x 22' x 15' SWD each] primary and two [44' diameter x 13.75' SWD each] secondary/final digesters)

Sludge Drying Beds (Existing, ten [6,000 SF each], reed beds)

Sludge Disposal (Existing, landfilled)

IV. MISCELLANEOUS

1. Laboratory equipment: Existing (New orthophosphate analyzer in Chemical Feed Building)
2. Safety equipment: Existing (Emergency eye wash/safety shower in Chemical Feed Building)
3. Plant site fence: Existing
4. Handrail for the tanks: Existing
5. Units, unit operation, and plant bypasses: Existing
6. Flood elevation (10, 25, or 100 year flood): 662.8 feet (100 year)
7. Provisions to maintain the same degree of treatment during construction: N/A (no impacts on existing processes)
8. Standby power equipment: Existing
9. Site inspection: Yes (by city staff)
10. Statement in the specifications as to the protection against any adverse environmental effect (e.g., dust, noise, soil erosion) during construction: Yes
11. Hoists for removing heavy equipment: Existing
12. Adequate sampling facilities: Yes
13. Hydraulic Gradient: Existing
14. Septage receiving facilities: Existing