



State of Ohio Environmental Protection Agency

STREET ADDRESS:

MAILING ADDRESS:

Lazarus Government Center
50 W. Town St., Suite 700
Columbus, Ohio 43215

TELE: (614) 644-3020 FAX: (614) 644-3184
www.epa.state.oh.us

P.O. Box 1049
Columbus, OH 43216-1049

October 20, 2009

Re: Avon Lake
Lorain County
Application No. 651154
Application for Sanitary Sewer Forcemain
and Pump Station for Avon Lake Municipal
Utilities/Lorain County Rural Wastewater
(LORCO) District, Phase 1, Contracts 4 and 5
Plans Received on March 14, 2008
Revised Plans Received August 21, 2009
From: GRW Engineers, Inc.
CERTIFIED MAIL

Avon Lake Municipal Utilities
Attn: John W. Kniepper, Chief Utilities Executive
201 Miller Road
Avon Lake, OH 44012

Ladies and Gentlemen:

Enclosed is the Ohio EPA Permit to Install which will allow you to install the described source in the manner indicated in the permit. Because this permit contains several conditions and restrictions, I urge you to read it carefully.

You are hereby notified that this action of the Director is final and may be appealed to the Environmental Review Appeals Commission pursuant to Section 3745.04 of the Ohio Revised Code. The appeal must be in writing and set forth the action complained of and the grounds upon which the appeal is based. The appeal must be filed with the Commission within thirty (30) days after notice of the Director's action. The appeal must be accompanied by a filing fee of \$70.00 which the Commission, in its discretion, may reduce if by affidavit you demonstrate that payment of the full amount of the fee would cause extreme hardship. Notice of the filing of the appeal shall be filed with the Director within three (3) days of filing with the Commission. Ohio EPA requests that a copy of the appeal be served upon the Ohio Attorney General's Office, Environmental Enforcement Section. An appeal may be filed with the Environmental Review Appeals Commission at the following address: Environmental Review Appeals Commission, 309 South Fourth Street, Room 222, Columbus, Ohio 43215

You should note that a general condition of your permit states that issuance of the permit does not relieve you of the duty of complying with all applicable federal, state, and local laws, ordinances, and regulations.

If you have any questions, please contact the Ohio EPA district office to which you submitted your application.

Sincerely,

Patti L. Smith, Supervisor
Permit Processing Unit
Division of Surface Water

PLS/sg

Enclosure

cc: Northeast District Office
Lorain County Rural Wastewater District (LORCO)
GRW Engineers, Inc.
City of Avon Lake
WenTong Lin - DEFA

Ted Strickland, Governor
Lee Fisher, Lieutenant Governor
Chris Korleski, Director



Ohio Environmental Protection Agency

Permit to Install

Application No: 651154

Applicant Name: Avon Lake Municipal Utilities
Address: 201 Miller Road
City: Avon Lake
State Zip: OH 44012

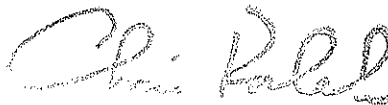
Person to Contact: John W. Kniepper, Chief Utilities Executive
Telephone: 440-933-6226

Description of Proposed Source: Sanitary Sewer Forcemain and Pump Station for Avon Lake
Municipal Utilities/Lorain County Rural Wastewater (LORCO) District,
Phase 1, Contracts 4 and 5, Avon Lake, Lorain County

Issuance Date: October 20, 2009
Effective Date: October 20, 2009

The above named entity is hereby granted a permit to install for the above described source pursuant to Chapter 3745-42 of the Ohio Administrative Code. Issuance of this permit does not constitute expressed or implied approval or agreement that, if constructed or modified in accordance with the plans included in the application, the above described source of environmental pollutants will operate in compliance with applicable state and federal laws and regulations. Issuance of this permit does not constitute expressed or implied assurance that, if constructed or modified in accordance with those plans and specifications, the above described source of pollutants will be granted the necessary operating permits. This permit is granted subject to the following conditions attached hereto.

Ohio Environmental Protection Agency



Chris Korleski
Director
P.O. Box 1049
50 West Town Street, Suite 700
Columbus, OH 43216-1049

This permit shall expire if construction has not been initiated by the applicant within eighteen months of the effective date of this permit. By accepting this permit, the applicant acknowledges that this eighteen month period shall not be considered or construed as extending or having any effect whatsoever on any compliance schedule or deadline set forth in any administrative or court order issued to or binding upon the permit applicant, and the applicant shall abide by such compliance schedules or deadlines to avoid the initiation of additional legal action by the Ohio EPA.

The director of the Ohio Environmental Protection Agency, or his authorized representatives, may enter upon the premises of the above named applicant during construction and operation at any reasonable time for the purpose of making inspections, conducting tests, examining records, or reports pertaining to the construction, modification, or installation of the above described source of environmental pollutants.

Issuance of this permit does not relieve you of the duty of complying with all applicable federal, state, and local laws, ordinances, and regulations.

Any well, well point, pit, or other device installed for the purpose of lowering the ground water level to facilitate construction of this project shall be properly abandoned in accordance with the provisions of this plan or as directed by the director or his representative.

Any person installing any well, well point, pit or other device used for the purpose of removing ground water from an aquifer shall complete and file a Well Log and Drilling Report form with the Ohio Department of Natural Resources, Division of Water, within 30 days of the well completion in accordance with the Ohio Revised code Section 1521.01 and 1521.05. In addition, any such facility that has a capacity to withdraw waters of the state in an amount greater than 100,000 gallons per day from all sources shall be registered by the owner with the chief of the Division of Water, Ohio Department of Natural Resources, within three months after the facility is completed in accordance with Section 1521.16 of the Ohio Revised Code. For copies of the necessary well log, drilling report, or registration forms, please contact:

Ohio Department of Natural Resources
2045 Morse Road Bldg. E
Columbus, OH 43229-6693
(614) 265-6717

The proposed wastewater disposal system shall be constructed in strict accordance with the plans and application approved by the director of the Ohio Environmental Protection Agency. There shall be no deviation from these plans without the prior express, written approval of the agency. Any deviations from these plans or the above conditions may lead to such sanctions and penalties as provided for under Ohio law. Approval of these plans and issuance of this permit does not constitute an assurance by the Ohio Environmental Protection Agency that the proposed facilities will operate in compliance with all Ohio laws and regulations. Additional facilities shall be installed upon orders of the Ohio Environmental Protection Agency if the proposed sources are inadequate or cannot meet applicable standards.

If the construction area for this project is one acre or more, or is part of a larger development that is one acre or more, the applicant must submit a Notice of Intent (NOI) for coverage under the general construction stormwater permit to Ohio EPA at least 21 days prior to the start of construction of this project.

For projects involving construction or placement of fill in a stream or wetland, the applicant shall contact the appropriate district of the U.S. Army Corps of Engineers for a determination regarding potential impacts to water of the state as well as the requirements for obtaining, if necessary, certification. The applicant shall acquire a Section 404 permit and 401 water quality certification, if needed, before impacting any waters of the state as part of this project.

The City of Avon Lake (owner) shall be responsible for proper operation and maintenance of the sewerage system.

For parallel installation, a minimum horizontal separation of 10 feet between gravity sanitary sewers and any existing or proposed potable water mains shall be maintained. The distance shall be measured edge to edge.

Where gravity sewer lines cross existing or proposed water mains, the gravity sewer lines shall be laid below the water mains to provide a separation of at least 18 inches between the invert of the water main and the crown of the gravity sewer. The lines shall be laid so that the gravity sewer line joints are as far as possible from the water main joints.

For parallel installation where a minimum horizontal separation of 10 feet between gravity sanitary sewers and any existing or proposed potable water mains cannot be maintained, the water main and gravity sewer line should be laid in separate trenches and the bottom of the water main should be at least 18 inches above the crown of the gravity sewer. If the vertical separation distance cannot be maintained, both the water main and gravity sewer line must be constructed of slip-on or mechanical joint pipe complying with public water supply design standards of the agency and be pressure tested to 150 psi (1034 kPa) to assure water-tightness. The pipe material shall remain the same from manhole to manhole where the separation distance cannot be maintained. If the gravity sewers and water main must be placed in the same trench, the water main shall be placed on a shelf of undisturbed earth with the invert of the water main at least 18 inches above the crown of the gravity sewer. Additionally, there shall be a minimum of 5 feet of horizontal separation measured edge to edge between the water main and the gravity sewer. The gravity sewer shall be constructed of slip-on or mechanical joint pipe complying with public water supply design standards of the agency from sewerage manhole to sewerage manhole at the locations where the separation distance cannot be maintained and be pressure tested to 150 psi (1034 kPa) to assure water-tightness.

Gravity sewer lines crossing existing or proposed water mains shall be laid below the water mains to provide a separation of at least 18 inches between the invert of the water main and the crown of the gravity sewer. If the vertical separation cannot be maintained the gravity sewers shall be constructed by one of the following methods: these gravity sewers shall be standard gravity-sewer material encased in concrete or in a one quarter-inch thick continuous steel, ductile iron, or pressure rated PVC pipe with a dimension ratio (DR) (the ratio of the outside diameter to the pipe wall thickness) of 18 or less for a distance of 10 feet on both sides of the crossing with all voids pressure-grouted with sand-cement grout or bentonite; or the gravity sewer line shall be constructed of slip-on or mechanical joint pipe from sewerage manhole to sewerage manhole complying with public water supply design standards of the agency and be pressure tested to 150 psi (1034 kPa) to assure water-tightness. The length of gravity sewer pipe shall be centered at the point of crossing so that the joints will be equidistant and as far as possible from the water main. The gravity sewer pipe shall be the longest standard length available from the manufacturer.

If water mains must be installed beneath gravity sewers, the water mains shall be protected by providing a vertical separation of at least 18 inches between the invert of the gravity sewer and the crown of the water main. Construction of the gravity sewer lines shall follow one of the two following methods: gravity sewers shall be encased in concrete or in a one quarter-inch thick continuous steel, ductile iron, or pressure rated PVC pipe with a dimension ratio (DR) (the ratio of the outside diameter to the pipe wall thickness) of 18 or less for a distance of 10 feet on both sides of the crossing with all

voids pressure-grouted with sand-cement grout or bentonite; or the gravity sewer line shall be constructed of slip-on or mechanical joint pipe complying with public water supply design standards of the agency from sewerage manhole to sewerage manhole and be pressure tested to 150 psi (1034 kPa) to assure water-tightness. Adequate structural support such as compacted soil, manholes on both sides of the crossing, or another Ohio EPA approved method shall be provided for the gravity sewers to prevent excessive deflection of joints and settling on and breaking of the water lines. The length of gravity sewer pipe shall be centered at the point of crossing so that the joints will be equidistant and as far as possible from the water line. The gravity sewer pipe shall be the longest standard length available from the manufacturer.

For parallel installation, a minimum horizontal separation of 10 feet between pressure sewers and any existing or proposed potable water mains shall be maintained. The distance shall be measured edge to edge. Where pressure sewer lines cross existing or proposed water mains, the pressure sewer lines shall be laid below the water mains to provide a separation of at least 18 inches between the invert of the water main and the crown of the pressure sewer.

The operation of the sewerage system shall be under the responsible charge of a certified operator having the proper certificate issued under Chapter 3745-7-05 of the Ohio Administrative Code.

Provisions shall be made for proper operation of the wastewater pumping facilities.

Roof drains, foundation drains, and other clean water connections to the disposal system are prohibited.

No liquids, sludges, or toxic or hazardous substances other than those set forth in the approved permit shall be accepted for disposal without the prior written approval of the Ohio Environmental Protection Agency.

Sewer and manhole construction joints shall conform to standards of the Ohio Environmental Protection Agency.

When flexible pipe (PVC, ABS, HDPE, etc.) is used it must be tested for maximum deflection of 5 percent after the final backfill has been in place no less than 30 days to permit stabilization of the soil-pipe system. Pipe with a stiffness of 200 p.s.i. or greater need not be tested for deflection if all pipe between manholes is less than 12 feet below final grade.

The rigid ball or mandrel used for the deflection test shall have a diameter not less than 95 percent of the base inside diameter or average inside diameter of the pipe depending on which is specified in the ASTM specification, including the appendix, to which the pipe is manufactured. The test shall be performed without mechanical pulling devices.

All pipe, flexible and rigid, shall be subject to a leakage test. The leakage exfiltration/infiltration test shall be a hydrostatic or air test. The hydrostatic leakage test shall not exceed 100 gallons per inch of pipe diameter per mile per day for any section of the system. If an air test is used, the test shall conform to the test procedure outlined in the ASTM standards for the material of pipe used.

The leakage and deflection test shall be conducted under the supervision of a professional engineer. A representative of the professional engineer may supervise the deflection and leakage tests, but the professional engineer must sign off on the results of the deflection and leakage tests. Results of the deflection and leakage tests shall be kept on file at least 180 days by the entity responsible for the sewerage system, and shall be available upon request by the Ohio Environmental Protection Agency. Any lines which fail the deflection or leakage test must be repaired and retested until they meet the requirements which have been set forth within this condition.

The City of Avon Lake Publicly Owned Treatment Works (POTW) officials shall be notified of any spills and unusual discharges to the sewer system immediately after discovery of such an occurrence.

Any well, well point, pit or other device installed for the purpose of lowering the ground water level to facilitate construction of this project shall be properly abandoned in accordance with the provisions of Section 3745-9-10 of the Ohio Administrative Code or in accordance with the provisions of this plan or as directed by the Director or his representative. Division of Drinking and Ground Water - Lazarus Government Center, 50 West Town Street, Suite 700, Columbus, Ohio 43215 (614) 644-2752.

The Northeast District office of the Ohio Environmental Protection Agency shall be notified in writing as to (a) the construction starting date; (b) the construction completion date; and (c) the date the wastewater disposal system was placed into operation.

Special Condition:

Sanitary sewers approved in this Permit-to-Install shall not serve any entities or residences outside of the Facilities Planning Area approved for this project by NOACA.