

OHIO E.P.A.

JUL 26 2010

BEFORE THE

ENTERED DIRECTOR'S JOURNAL

OHIO ENVIRONMENTAL PROTECTION AGENCY

In the Matter of:

The City of Dayton : Director's Final Findings
 Advanced Wastewater Treatment Plant : and Orders
 2800 Guthrie Road :
 Dayton, Ohio 45418 :

I certify this to be a true and accurate copy of the official documents as filed in the records of the Ohio Environmental Protection Agency.

PREAMBLE

It is agreed by the parties hereto as follows:

By: [Signature] Date: 7-26-10

I. JURISDICTION

These Director's Final Findings and Orders ("Orders") are issued to The City of Dayton ("Respondent") pursuant to the authority vested in the Director of the Ohio Environmental Protection Agency ("Ohio EPA") under Ohio Revised Code ("ORC") §§ 3704.03 and 3745.01.

II. PARTIES BOUND

These Orders shall apply to and be binding upon Respondent and successors in interest liable under Ohio law. No change in ownership of the facility (as hereinafter defined) shall in any way alter Respondent's obligations under these Orders.

III. DEFINITIONS

Unless otherwise stated, all terms used in these Orders shall have the same meaning as defined in ORC Chapter 3704 and the rules promulgated thereunder.

IV. FINDINGS

The Director of Ohio EPA makes the following findings. Nothing in these Findings of the Director shall be considered to be an admission by Respondent of any matter of law or fact:

1. Respondent owns and operates the City of Dayton Advanced Wastewater Treatment Plant ("WWTP") located at 2800 Guthrie Road, Dayton, Ohio. Respondent also owns and operates the Broadway, Longworth and Westwood pump stations. (The Longworth pump station handles only stormwater.) The WWTP has the capacity to treat up to 72,000,000 gallons of wastewater on a daily basis and generally treats

between 40,000,000 and 60,000,000 gallons of wastewater per day.

2. On February 19, 2008, the City of Moraine filed a verified complaint with Ohio EPA under ORC § 3745.08. In this verified complaint, the City of Moraine alleged that Respondent was in violation of former Ohio Administrative Code ("OAC") Rules 3745-31-02 and 3745-35-02 for installing and operating air contaminant sources without first applying for and obtaining a Permit-to-Install ("PTI") and Permit-to-Operate ("PTO") for each source. The verified complaint also alleged that Respondent was causing a public nuisance due to odor emanating from the WWTP, in violation of OAC Rule 3745-15-07(A). The City of Moraine has received hundreds of odor complaints since 2002. Many documented complaints were received at times that Respondent states were periods of significant capital improvement construction resulting in operational disruptions at the WWTP. Beginning May of 2006, the City of Moraine began forwarding these complaints to Ohio EPA's Southwest District Office and the Regional Air Pollution Control Agency ("RAPCA"). RAPCA is the delegated representative of the Director in six southwestern Ohio counties, including Montgomery County.

3. There are or have been other sources of odors in the vicinity of the WWTP.

4. RAPCA conducted an investigation of the alleged violations specified in the verified complaint and prepared a final report dated May 20, 2008. Based on the reports of complainants, and the observations made by the staffs of Ohio EPA and RAPCA, objectionable odors were found to periodically emanate from various sources at the WWTP at varying levels of intensity ranging from detectable, to moderate or strong.

5. Some industrial operations discharge or have discharged odor-causing wastes to the WWTP. The wastewaters from these facilities are generally high in temperature, BOD (biochemical oxygen demand), and sulfates. By their nature and aided by conditions in the trunk sewer that conveys these waste streams, high concentrations of hydrogen sulfide ("H₂S") are generated as the wastewater progresses through the sewers. Pump stations through which this waste travels, in particular, the Broadway and Westwood pump stations, were also sources of odors.

6. Since 1986, Respondent reports making a number of efforts to directly or indirectly address odors from the WWTP, including:

a. In 1986, Respondent added four anaerobic digesters and four primary settling basins to better manage sewage sludge and associated odors;

b. In 1989, Respondent added a mist scrubber and covers over certain headworks areas where wastewater first enters the facility and over the north grit basin weirs;

- c. Over the period 1990-2005, Respondent conducted numerous trials and experiments to control and reduce odors, including, but not limited to, the addition of potassium permanganate to the wastewater stream at the Broadway pump station to reduce sulfide concentrations. Respondent worked with various industrial dischargers: an industrial discharger conducted a trial of a two-point application of a polymeric amine in its wastewater to react with the dissolved sulfides and increase pH; other industrial users eliminated or reduced the amount of sulfides in their wastewater streams and the industries have tried a variety of chemical additives over the past 17 years with limited success;
- d. In 1993, Respondent replaced a mist scrubber with a 25,000 cubic feet per minute ("cfm") packed tower scrubber. Respondent also added covers over the weirs (where wastewater would be agitated and likely to give off odors) in the primary settling basins, the primary basin distribution box, scum concentration tank in the primary sludge pumping buildings, and south primary scum concentration building. Air above these covered areas was ducted into the scrubber for treatment with a solution of water, sodium hydroxide and sodium hypochlorite;
- e. In 1993, Respondent began adding ferrous chloride to the anaerobic digesters to control H₂S at the biosolids facility;
- f. In 1995, Respondent began adding hydrogen peroxide at the Broadway and Westwood pump stations to control levels of dissolved sulfides in the wastewater stream before reaching the plant;
- g. In 1996, Respondent began recycling plant effluent over trickling filters to minimize odors generated from waters held in trickling filters that went anaerobic. This practice ceased with later improvements;
- h. In 1997, Respondent covered sludge storage and treatment areas to contain fugitive odors at the south end of the plant;
- i. In 1999, Respondent constructed a detritus dewatering facility, on the theory that dry detritus material is less subject to biological degradation and odor generation;
- j. In 2001, Respondent began a \$6 million capital improvement program that included: renovation of the trickling filters to equip them with down draft ventilation fans and high wastewater recirculation rates to reduce odor formation; replacing a collapsed duct pipe; and renovation of the air scrubber. These renovations were completed in 2007;
- k. In May of 2008, Respondent moved the point where it added hydrogen peroxide to the incoming wastewater two miles further up stream on the incoming line, from the Broadway pump station to a point in the sanitary sewer near the

Longworth pump station;

l. In October of 2008, a significant industrial user began a two-point application of lime to control H₂S formation in the wastewater line;

m. In March of 2009, Respondent began using detritus filter bags at headworks to dewater grit, screenings, scum and grease from primary treatment processes; and

n. In April of 2009, Respondent began installing and using odor misters at the WWTP. Installation of these misters was completed in July of 2009. Additional misters have been added since July 2009.

7. Over the period 2001-2008, Respondent reports that it spent \$27 million in plant upgrades, including measures to control and reduce odors emanating from the WWTP.

8. Actions referenced in Finding No. 6.k through 6.n of these Orders have reduced odors at the WWTP and pump stations since the filing of the verified complaint. Continued implementation of Respondent's actions referenced in Findings No. 6.k through 6.n of these Orders is important for the continued reduction of odors from the WWTP and pump stations.

9. OAC Rule 3745-15-07, provides in pertinent part, "the emission or escape into the open air from any source or sources whatsoever, of smoke, ashes, dust, dirt, grime, acids, fumes, gases, vapors, odors, or any other substances or combinations of substances, in such manner or in such amounts as to endanger the health, safety or welfare of the public, or cause unreasonable injury or damage to property, is hereby found and declared to be a public nuisance. It shall be unlawful for any person to cause, permit or maintain any such public nuisance." In order to prevent the odors from the WWTP from being a public nuisance prohibited by OAC Rule 3745-15-07, the Director concludes that Respondent must take the actions set forth in the Orders below.

10. The Director has given consideration to, and based his determination on, evidence relating to the technical feasibility and economic reasonableness of complying with the following Orders and their relation to benefits to the people of the State to be derived from such compliance.

11. These Orders constitute a final action on the above-referenced verified complaint pursuant to ORC § 3745.08.

V. ORDERS

The Director hereby issues the following Orders:

1. Respondent shall continue to investigate the cause of objectionable odors from its WWTP and shall continue to take reasonable efforts to reduce or eliminate odors that leave City Property, including at a minimum, but not limited to, the following measures:

a. Hydrogen peroxide application to the sanitary sewer near the Longworth pump station at such application rates and concentrations to minimize sulfide concentrations and hydrogen sulfide concentrations entering the WWTP at target concentrations of 1.0 part per million ("ppm") by weight or less for sulfides and 75.0 ppm by weight or less for hydrogen sulfide in the head space of the head works to the WWTP;

b. Control or require industrial users with wastewater discharges that contribute to odors to control the pH of the wastewater in the sewer line and thus inhibit the formation of hydrogen sulfide. The control shall include, at a minimum, the two-point application of lime at Point #1, which is at or near Needmore Road and Wagner Ford Road, and Point #2, which is at or near Dayton Park Road and Chuck Wagner Lane;

c. Except as provided in Order 2, the use of odor misters at the WWTP and Broadway pump station, at a minimum, at the locations identified in the attached map;

d. Use of detritus filter bags at the headworks to dewater grit, screenings, scum and grease from primary treatment processes;

e. Employment of covers over the headworks area, including the weirs of the grit basins and primary settling basins, the primary basin distribution box, scum concentration tank in the primary sludge pumping buildings, and south primary scum concentration building and continue to vent the captured emissions to the odor control device; and

f. Respondent shall maintain for five years all records relating to the abatement, detection, or causation of odors from the WWTP and pump stations, and other records necessary to verify compliance with Orders 1a through 1e, and shall provide such records upon request by Ohio EPA, RAPCA or the City of Moraine personnel during normal business hours.

2. Respondent may temporarily cease the actions set forth in Orders 1.a to 1.f for purposes of safety, repair and maintenance, and, in the case of the misters, where weather conditions prevent the efficient operation of the misters. Repairs, maintenance, or other corrective measures shall be done expeditiously and Respondent and any of its contractors shall exercise all reasonable efforts to maintain the operation of appropriate and necessary odor control systems, equipment and practices during maintenance, repair or replacement. Upon approval by Ohio EPA or RAPCA, and after

consultation with the City of Moraine, Respondent may also discontinue or modify the actions set forth in Orders 1.a to 1.f if such actions are found to be not necessary to control odors as required under these Orders or if alternative measures will adequately control odors.

3. In the event that Respondent takes any action that could reasonably be expected to result in an increase of odors from the WWTP or any of its components, including but not limited to, shutdowns for maintenance, repair or replacement; construction activities related to the WWTP; corrective measures; capital improvements; or any other activity, Respondent will notify Ohio EPA, RAPCA, and the City of Moraine of the activity a reasonable time in advance of commencing such work or activity.

4. Respondent shall cause all maintenance, repair or replacement, construction activities related to the WWTP, corrective measures and capital improvements, whether undertaken by Respondent's own employees or by outside contractors, to be undertaken in such fashion as to minimize interruption or downtime of operations and functions that directly and/or indirectly address and control odors from the WWTP and implement during such periods such additional reasonable measures as may be necessary to address and control such odors.

5. Respondent shall expeditiously notify Ohio EPA, RAPCA, and the City of Moraine in the event of any unforeseen occurrences that Respondent determines have caused, or are likely to lead to, increased odors from the WWTP or any of its components.

6. Respondent shall meet with the Ohio EPA, RAPCA, and the City of Moraine in September and November 2010 at a date, time and place to be determined to review and discuss the effectiveness of Respondent's odor control, reduction actions, plans and practices, notwithstanding these meetings, at the reasonable request of the City of Moraine, Ohio EPA, or RAPCA, Respondent shall meet with any or all of those entities to discuss the effectiveness of Respondent's odor control and reduction actions including the need for additional control activity.

VI. TERMINATION

These Orders shall terminate three years after the effective date, upon Respondent's certification in writing and demonstration to the satisfaction of Ohio EPA that Respondent has performed all obligations under these Orders and the Chief of Ohio EPA's Division of Air Pollution Control acknowledges, in writing, the termination of these Orders. If Ohio EPA does not agree that all obligations have been performed, then Ohio EPA will notify Respondent of the obligations that have not been performed, in which case Respondent shall have an opportunity to address any such deficiencies and seek termination as described above.

The certification shall contain the following attestation: "I certify that the

information contained in or accompanying this certification is true, accurate and complete."

This certification shall be submitted by Respondent to Ohio EPA and shall be signed by a responsible official of Respondent.

VII. OTHER CLAIMS

Nothing in these Orders shall constitute or be construed as a release from any claim, cause of action or demand in law or equity against any person, firm, partnership, or corporation, not a party to these Orders, for any liability arising from, or related to, the operation of Respondent's facilities.

VIII. OTHER APPLICABLE LAWS

All actions required to be taken pursuant to these Orders shall be undertaken in accordance with the requirements of all applicable local, state and federal laws and regulations. These Orders do not waive or compromise the applicability and enforcement of any other statutes or regulations applicable to Respondent.

IX. MODIFICATIONS

These Orders may be modified by agreement of the parties hereto. Modifications shall be in writing and shall be effective on the date entered in the journal of the Director of Ohio EPA.

X. NOTICE

All documents required to be submitted by Respondent pursuant to these Orders shall be addressed to:

Ohio EPA, Southwest District Office
401 East Fifth Street
Dayton, Ohio 45402
Attn: Jeff Hines

And copies sent to:

Regional Air Pollution Control Agency
117 South Main Street
Dayton, Ohio 45422
Attn: Jennifer S. Marsee

and:

Ohio Environmental Protection Agency
Lazarus Government Center
Division of Air Pollution Control
50 West Town Street, Suite 700
Columbus, Ohio 43216-1049
Attn: Thomas Kalman

or to such persons and addresses as may hereafter be otherwise specified in writing by Ohio EPA.

XI. RESERVATION OF RIGHTS

Ohio EPA and Respondent each reserve all rights, privileges, and causes of action except as specifically waived in Section XII of these Orders.

XII. WAIVER

In order to resolve disputed claims, without admission of fact, violation, or liability, and in lieu of further enforcement action by Ohio EPA for only the past conditions specifically cited in these Orders, Respondent consents to the issuance of these Orders and agrees to comply with these Orders. Compliance with these Orders shall be a full accord and satisfaction for Respondent's liability for the past conditions specifically cited herein.

Respondent hereby waives the right to appeal the issuance, terms and conditions, and service of these Orders, and Respondent hereby waives any and all rights Respondent may have to seek administrative or judicial review of these Orders either in law or equity.

Notwithstanding the preceding, Ohio EPA and Respondent agree that if these Orders are appealed by any other party to the Environmental Review Appeals Commission, or any court, Respondent retains the right to intervene and participate in such appeal. In such an event, Respondent shall continue to comply with these Orders notwithstanding such appeal and intervention unless these Orders are stayed, vacated, or modified.

XIII. EFFECTIVE DATE

The effective date of these Orders is the date these Orders are entered into the Ohio EPA Director's journal.

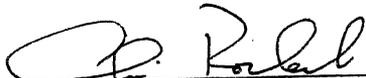
XIV. SIGNATORY AUTHORITY

Each undersigned representative of a party to these Orders certifies that he or she is fully authorized to enter into these Orders and to legally bind such party to these

Orders.

ORDERED AND AGREED:

Ohio Environmental Protection Agency

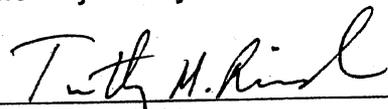


Chris Korleski
Director

7/9/10
Date

AGREED:

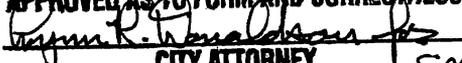
The City of Dayton



Signature

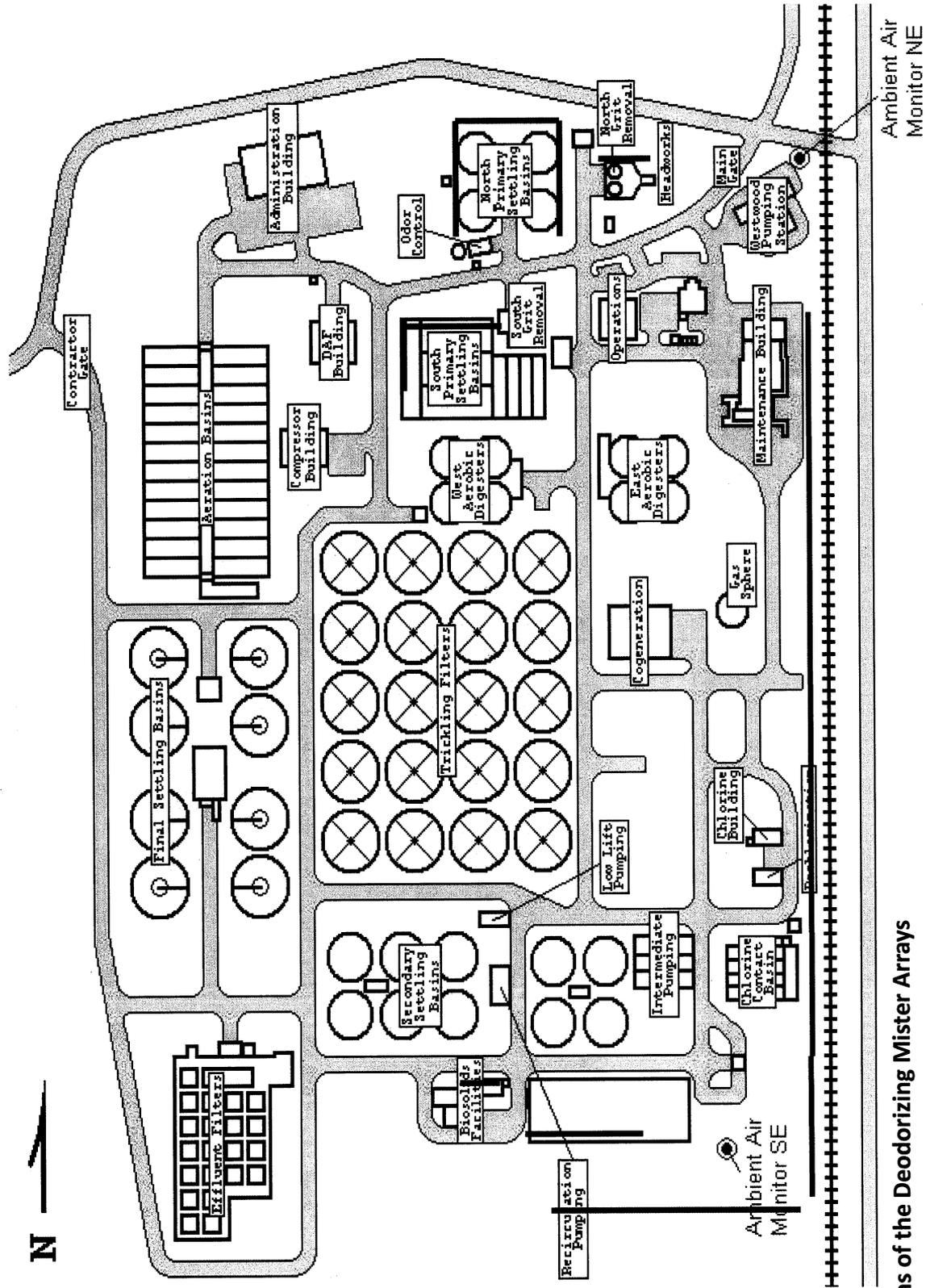
July 1, 2010
Date

TIMOTHY H. RIORDAN
Printed or Typed Name
CITY MANAGER
Title

APPROVED AS TO FORM AND CORRECTNESS


CITY ATTORNEY

SPB



Locations of the Deodorizing Mister Arrays

North and South Grit Facilities installation date: April & May, 2009

East Fenceline installation date: June, 2009

Synagro Storage Building and Surge Tank installation date: July, 2009

South and East Fenceline date: April 2010