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January 23, 2009

VIA HAND DELIVERY

Ms. Renee Jenkins
Public Utilities Commission of Ohio
Administration/Docketing
180 East Broad Street, 13th Floor
Columbus, OH 43215-3793

RECEIVED-DOCKETING DIV
2009 JAN 23 PM 3:47
PUCO

Re: Case No. 08-1233-WS-UNC
Ohio American Water Company
Stipulation Page Nos. 15-16, ¶18A

Dear Ms. Jenkins:

Pursuant to the Commission's November 12, 2008 Opinion and Order in Case No. 07-1112-WS-AIR, and to the Stipulation and Recommendation, page 16, paragraph 18A pertaining to the preparation of a contingency emergency plan for making improvements to the Bunker Hill storage tan in the even of a catastrophic failure. The purpose of this letter is to inform the Commission that a contingency emergency plan for the Ashtabula Bunker Hill Storage Tank was provided to Staff on January 14, 2009.

Since the report contains critical infrastructure information, it has been deemed confidential. Congress passed the Homeland Security Act of 2002, which included provisions pertaining to confidential infrastructure information (*see*, 6 USCS Sections 131 and 133). Pursuant to the provisions of the Homeland Security Act and its subpart, the Critical Infrastructure Information Act of 2002, information, such as construction plans, plant specifications and blueprints, can be classified as "protected critical infrastructure information" ("PCII"). In the case of the American Water Works companies, designation of this type of information as PCII was obtained pursuant to the Act and to the regulations affecting the Act. This information is now considered PCII and in accordance with the Act and regulations promulgated pursuant to it, PCII "shall not be used by an agency of the state and, if provided by a state agency, may not be used for any purpose other than protecting the critical infrastructure of protected systems of a utility supplying the information."

Thus a redacted copy of the report is being filed. The parties of record are being served the redacted copy of the report and may review the entire report in accordance with the executed protective agreement in Case No. 07-1112-WS-AIR.

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Technician _____ Date Processed JAN 23 2009

Ohio American Water Company submits that it has fulfilled its responsibilities with respect to paragraph 18A, pages 15-16 of the stipulation.

If there are any questions, please call me at the number listed above.

Sincerely,

Sally W. Bloomfield

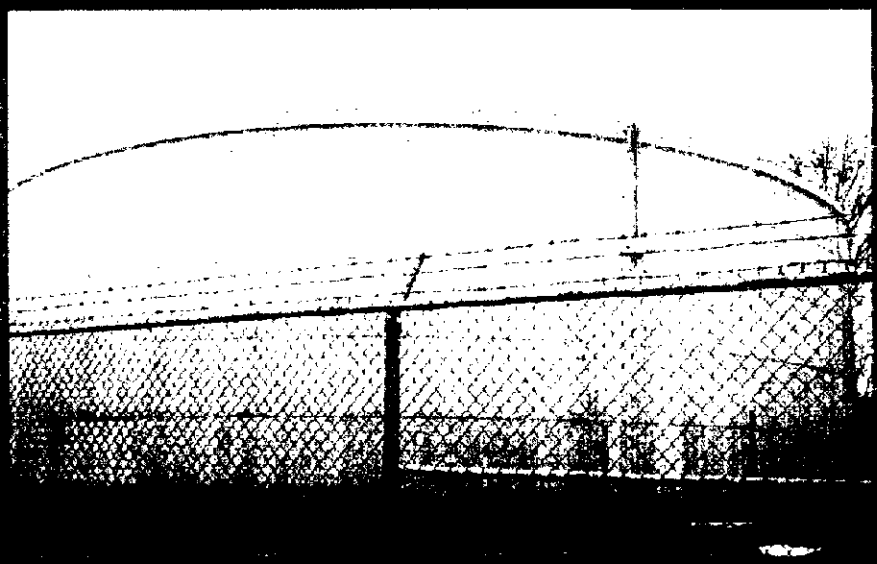
Attachment

cc: Attorney Examiner Dick Bulgrin (w/Attachment)
Parties of Record (w/Attachment via regular U.S. Mail)

Ashtabula District

Bunker Hill Storage Tank

Emergency Contingency Plan



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Executive Summary

- This report is prepared in response to PUCO Stipulation Paragraph 18A as related to Ohio American Water Rate Case No. 07-1112-WS-AIR (see Appendix D).

- Recent inspections in 2006 and 2008 have confirmed that the Bunker Hill Tank does not appear to be in any imminent danger of catastrophic structural failure.

- Ohio American Water Company commits to incorporating variable frequency drive units (VFDs) into the design and construction of Ashtabula Water Treatment Plant Improvement Project. These units will be installed prior to the summer of 2010.

- The VFDs will allow the plant to supply water to the system with the Bunker Hill Tank out of service by matching instantaneous customer demands at a constant and acceptable plant discharge pressures. Installation of the VFDs addresses PUCO Stipulation Item 18B.

- The 2006 and 2008 inspections of the Bunker Hill Tank have shown that painting and minor non-structural repairs will be needed in the near future.

- Because the VFDs will allow the system to adequately operate with the Bunker Hill Tank out of service and because catastrophic failure of the tank does not appear imminent, it is recommended that the painting and minor repairs be delayed until the summer of 2010.

- In the event of a catastrophic failure of the tank before the VFDs are installed, Appendices A and B of this report outline steps for operation of the Ashtabula Water System, in its current configuration, with the tank out of service. These Appendices and associated information address PUCO Stipulation Paragraph 18A.

Purpose of Report

The purpose of this report is to outline a plan for operation of the Ashtabula District Water System in the event that the Bunker Hill Storage Tank is removed from service. The plan is prepared in response to Stipulation Paragraph 18 as entered into by the PUCO and Ohio American Water as a part of Rate Case No. 07-1112-WS-AIR.

Background

System Description

The Ashtabula District of Ohio American Water provides water to the City of Ashtabula and portions of surrounding Ashtabula County. Average day demand for the District is 6.5 mgd while peak day demands are approximately 9.1 mgd. Water is treated at the District's plant and is pumped into the Main Service Pressure System. Approximately 50% of the water pumped from the plant is utilized by customers in the Main Service System; the remainder is boosted into several higher pressure districts or is sold through master-metered connections to other suppliers.

The Main Service System has a single storage facility known as the Bunker Hill Ground Storage Tank. It is a circular, welded steel structure 120 feet in diameter, 35 feet high with a capacity of 2.96 million gallons. It was constructed in the mid 1950s.

The tank has been inspected recently and results of the inspection indicate that it will need to be removed from service and cleaned and painted in the near future. Minor, non-structural repairs are also needed. Because it serves as the only storage facility in the Main Service System, there is concern about how the system would be operated if the tank were removed from service for planned maintenance or because of some catastrophic failure of the tank.

Operational Characteristics

[redacted]. The Plant contains a bank of three electrically-powered high-service pumps all of which operate at constant speeds. The units are numbered 12, 13 and 14. It also contains one diesel-driven unit (No. 15), the speed of which can be varied. As a result of its age and lack of reliability, the diesel-driven unit was not considered as "usable" during an outage of the Bunker Hill Tank. Because of the constant speeds of the three electrically-powered units, any pump operating alone delivers a relatively constant flow of water into the Main Service System, variations on the pump curve notwithstanding. In turn, each combination of pumps would deliver a relatively constant flow into the Main Service System.

The amount of water being used in the Main Service System (demand), however, varies moment by moment. With the Bunker Hill Tank in service, the difference between demand and Plant pumpage is made up by the tank. When demand is greater than pumpage (usually during the day), the tank contributes water to make up the difference. When demand drops below Plant pumpage (usually at night), the tank stores the extra water.

[redacted]

Planned System Improvements

Ohio American Water is in the process of accomplishing two separate projects that will affect system operations if the Bunker Hill Tank should be out of service. First, the Ashtabula Water Treatment Plant is scheduled for renovations. Planned improvements include equipping two of the four new high service pumps with variable frequency drive units (VFDs). These units will allow the pumps to be operated at varying speeds such that momentary demands can be met while maintaining a constant and acceptable discharge pressure at the plant. Once these units are installed, it will be possible to operate the plant with the Bunker Hill Tank out of service. Design of the Plant improvement package is scheduled to begin in January of 2009. All work is to be complete by mid 2011.

Second, a pressure regulation valve is being designed for installation at the Bunker Hill Booster Station. The booster sits adjacent to the Bunker Hill Storage Tank and draws water from the tank and pumps it into the Austinburg Boosted District. The new valve will monitor pressures on the Main Service System side of the booster station. If pressures drop because the Bunker Hill Tank goes out of service, the valve will open and allow water to flow from Austinburg back into the Main Service System. This will allow a short period of time for Plant operators to make pumping adjustments should the Bunker Hill Tank go out of service. The valve project went to design in October of 2008 and construction is scheduled for completion in the spring of 2009.

Short Term/Long Term Implications

As previously noted, once the VFDs are installed at the plant, it will be relatively easy to operate the system with the Bunker Hill Tank out of service.

The Bunker Hill Tank was partially drained (drawn down) and inspected in December of 2006. While the 2006 inspection indicated the need for interior/exterior painting and minor repairs, there was no indication that the tank was in any imminent danger of catastrophic failure. Subsequent inspection by SCUBA divers in September of 2008 verified that there was no reason to suspect any type of catastrophic failure of the tank structure.

Based on the results of these inspections, **it is hereby proposed and recommended that the routine painting and minor repairs to the tank be delayed until after the pump/VFD work is completed at the Plant.** All Plant renovations are scheduled to be completed by mid 2011. Therefore, the latest implementation for the painting and minor repairs would occur in the summer/fall of 2011.

It is possible, however, that the new high service pumps and the VFDs may be installed and in-service prior to that date. Because of the nature of the work, the Tank painting and repairs must be accomplished during the warm-weather months of the year. Therefore, the question becomes whether or not the pump/VFD work can be accelerated so as to be on-line by mid-summer of 2009 or 2010. Because of lead times in ordering the equipment, it is unreasonable to assume that the work could be completed by mid-summer of 2009. It is, however, possible that it could be done in time to allow the Tank repair and painting to occur during the summer of 2010. OAWC has already committed to accelerating the pump/VFD portion of the Plant work so as to allow the tank painting and repair work to commence by mid-summer of 2010.

The tank will be removed from service, with the VFDs installed and operating, during the spring of 2010 for inspection. Based on the results of the inspection, plans and specifications will be devised to paint and make minor repairs to the tank during the summer of 2010.

Emergency Action Plan

Even if the routine painting and repair of the Tank is delayed until the pump/VFD work is completed at the Plant, it may still be necessary to operate the system, in its current configuration, with the Bunker Hill Tank out of service. Appendix A outlines a set of steps that Ohio American will undertake immediately in order to make advance preparations in the event of a catastrophic failure of the Bunker Hill Tank. Appendix B lays out a set of steps for operation of the Water System during an actual catastrophic failure of the tank.

Appendix A

Pre-Emergency Preparations

1. Hold a meeting with the Ashtabula District plant operations and field-service personnel to educate them on the execution of this plan. **Completion Date: February 13, 2009.**

2. Provide all personnel with a copy of this plan and place copies in the Ashtabula District's Emergency Operations notebooks. **Completion Date: February 13, 2009.**

3. Continue with the design and construction of the Bunker Hill Booster Station Pressure Regulation Valve. This is a hydraulically-actuated pressure regulation valve between the Main Service System and the Austinburg System. The valve would be located on the discharge side of the Bunker Hill Booster Station. **Completion Date: May 30, 2009.**

4. Test the Ashtabula District's two existing portable pressure relief valves. Confirm that the valves are rated for a pressure that will allow them to open when plant discharge pressures reach 125 psi. **Completion Date: February 27, 2009.** Additional units are available from USA Bluebook at a cost of $1,050 each. Delivery time is usually 48 hours.

5. Acquire a third valve with characteristics that allow it to be open when the discharge pressure at the plant reaches 125 psi (see Appendix C). **Completion Date: February 27, 2009.**

6. Install one pressure relief valve on hydrant [redacted] to remain in service permanently until the Emergency Plan is no longer needed. It should be tested and set such that it will open when Plant discharge pressure reaches 125 psi. In the event of an emergency, an operator could quickly open the hydrant and bring the valve on-line. Special precautions may be needed to prevent the hydrant and pressure relief valve from freezing should they be needed during the winter. Advance arrangements will be made to provide for appropriate disposal of any water discharged through the valve. **Completion Date: March 13, 2009.**

7. Make advance arrangements at hydrant [redacted] and hydrant [redacted] for appropriate disposal of discharge water from portable pressure relief valves. **Completion Date: March 13, 2009.**

8. [redacted]

9. [redacted]

10. Provide a copy of this plan to all surrounding Fire Departments. **Completion Date: February 13, 2009.**

11. Provide a copy of this plan to Superintendent Larry Meaney of the Ashtabula County Water System. **Completion Date: February 13, 2009.**

12. Provide a copy of this plan to OAWC External Affairs in the event that it is necessary to prepare a press release during an actual emergency. **Completion Date: February 13, 2009.**

Appendix B

Emergency Action Steps
(to be accomplished during an actual emergency)

1. Dispatch a utility crew with a hydraulic valve operator to close the [redacted] valve [redacted] to isolate the Bunker Hill Tank and minimize any local damage. Responsibility for dispatching crew is as follows:

   First- Sean Adams, Network Operations Supervisor
   Second- Larry Colby, Operations Supervisor, Production
   Third- Bill Dingledine, Operations Superintendent

2. In the event that valve [redacted] is unavailable, dispatch a utility crew to close valve [redacted] and valve [redacted]. Responsibility for dispatching crew is same as No. 1 above.

3. Dispatch a Plant operator to open hydrant [redacted] and put the pre-installed portable pressure relief valve into service. Inspect this valve every four hours during an actual emergency to ensure that it is operating properly and that there are no unanticipated problems. Responsibility for dispatching operator is as follows:

   First- Larry Colby, Operations Supervisor, Production
   Second- Sean Adams, Network Operations Supervisor
   Third- Bill Dingledine, Operations Superintendent

4. Immediately switch high service pumping operations such that pump No. 14 is operating alone. It provides the highest probability of matching total system demand while maintaining Plant discharge pressures at acceptable levels.

5. If Plant discharge pressures are at 100 psi or lower with No. 14 operating alone, add pump No. 12.

6. If plant discharge pressures are continually at 125 psi while pump No. 14 is operating alone and the portable pressure relief valve at the Plant is discharging, switch to pump No. 13 alone.

7. If plant discharge pressures are continually at 125 psi while pump No. 13 is operating alone and the portable pressure relief valve at the Plant is discharging, switch to pump No. 12 alone.

8. Dispatch a utility crew to install a portable pressure relief valve on hydrant [redacted]. Upon installation of the relief valve, open the hydrant and place the relief valve into service. Inspect this valve every four hours during an actual emergency to ensure that it is operating properly and that there are no unanticipated problems. Responsibility for dispatching crew is as follows:

   First- Sean Adams, Network Operations Supervisor
   Second- Bill Dingledine, Operations Superintendent
   Third- Larry Colby, Operations Supervisor, Production

9. Dispatch a utility crew to install a portable pressure relief valve on hydrant [redacted]. Upon installation of the relief valve, open the hydrant and place the relief valve into service. Inspect this valve every four hours during an actual emergency to ensure that it is operating properly and that there are no unanticipated problems. Responsibility for dispatching crew is same as No. 8 above.

10. Contact Larry Meaney of the Ashtabula County Water System (440-576-3725) and request that their operators provide at least 10 minutes of advance notice of any pumping changes to the operators of the Ashtabula Plant. Responsibility for making this call is as follows:

    First- Bill Dingledine, Operations Superintendent
    Second- Larry Colby, Operations Supervisor, Production
    Third- Sean Adams, Network Operations supervisor

11. Contact surrounding Fire Departments and request that Ashtabula Plant operators be notified immediately in the event of a fire so that additional high service pumps can be brought on line. Responsibility for making these contacts is as follows:

    First- Larry Colby, Operations Superintendent, Production
    Second- Sean Adams, Network Operations Supervisor
    Third- Bill Dingledine Operations Superintendent

Surrounding Fire Departments Contact List

Contact Name	Position	Phone Number
Ron Pristera	Chief, Ashtabula City Fire Department	440-992-7109
Mike Fitchet	Chief, Ashtabula Twp. Fire Department	440-997-4641
John Jyurovat	Chief, Saybrook Twp. Fire Department	440-969-1179
Neal Stewart	Acting Chief, Kingsville Twp. Fire Department	440-997-4641
Dave Kray	Chief, Sheffield Twp. Fire Department	440-224-0511
Brian Lehtonen	Chief North Kingsville Fire Department	440-997-4641

Appendix C

Equipment/Vendor List

Item	Vendor	Contact Info	Approx Delivery Time
Portable Pressure Relief Valve Brand: Watts Model No: MC-17140	USA Bluebook	(800) 548-1234 www.usabluebook.com	48 hrs

Appendix D

PUCO Stipulation and Recommendation
Ohio American Water Rate Case No. 07-1112-WS-AIR

18. Ashtabula Commitment:

A. Within two (2) months of the Order in this proceeding, the Company will provide to Staff for approval a contingency emergency plan for making improvements to the Bunker Hill tank, in the event of a catastrophic failure of the tank, that will include a detailed list of equipment along with the specific vendor(s) of each piece of equipment that might be required, a timetable for obtaining the equipment from each vendor and a plan for managing the distribution system so that water will be available throughout the Ashtabula system during the full or partial outage of the Bunker Hill storage tank.

B. The Parties recognize that the Company has undertaken planning for an upgraded Ashtabula Water Treatment Plant and that engineering studies are well underway. The planning shall include a permanent solution for inspection and maintenance of the Bunker Hill storage tank. Within three (3) months from the Order in this proceeding, Ohio American will meet with the Staff and OCC with a preliminary report of its plans to upgrade the Ashtabula plant. The report will address the plan to update the pump pressure and controls to facilitate the inspection/maintenance of the Bunker Hill Storage tank and will include start and completion dates for

improvements related to the tank with a permanent solution completion date of not later than June 30, 2011.

VALVE SCHEMATIC AT THE BUNKER HILL STORAGE TANK

CONFIDENTIAL

Portable Pressure Relief Valve Proposed Locations

CONFIDENTIAL